



PLANNING & ZONING COMMISSION REGULAR MEETING

City of Dripping Springs
Council Chambers, 511 Mercer St, Dripping Springs, TX
Tuesday, April 27, 2021 at 6:30 PM

VIDEOCONFERENCE MEETING

This meeting will be held via videoconference and the public is encouraged and welcome to participate. Public comment may be given during the videoconference by joining the meeting using the information below. Public comment for this meeting may also be submitted to the City Secretary at acunningham@cityofdrippingsprings.com no later than 4:00 PM on the day the meeting will be held.

The Planning & Zoning Commission respectfully requests that all microphones and webcams be disabled unless you are a member of the Commission. City staff, consultants and presenters, please enable your microphone and webcam when presenting to the Commission.

Agenda

MEETING SPECIFIC VIDEOCONFERENCE INFORMATION

Join Zoom Meeting

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CALL TO ORDER AND ROLL CALL

Commission Members

Mim James, Chair

James Martin, Vice Chair

Christian Bourguignon

John McIntosh

Roger Newman

Evelyn Strong

Tammie Williamson

Staff, Consultants & Appointed/Elected Officials

City Administrator Michelle Fischer
Deputy City Administrator Ginger Faught
City Attorney Laura Mueller
City Secretary Andrea Cunningham
Senior Planner Amanda Padilla
City Engineer Chad Gilpin
Planning Consultant Robyn Miga

PLEDGE OF ALLEGIANCE

PRESENTATION OF CITIZENS

A member of the public who desires to address the Commission regarding any item on an agenda for an open meeting may do so at presentation of citizens before an item or at a public hearing for an item during the Commission’s consideration of that item. Citizens wishing to discuss matters not contained within the current agenda may do so, but only during the time allotted for presentation of citizens. Speakers are allowed two (2) minutes to speak during presentation of citizens or during each public hearing. Speakers may not cede or pool time. Members of the public requiring the assistance of a translator will be given twice the amount of time as a member of the public who does not require the assistance of a translator to address the Commission. It is the request of the Commission that members of the public wishing to speak on item(s) on the agenda with a noticed Public Hearing hold their comments until the item(s) are presented for consideration. Speakers are encouraged to sign in. Anyone may request a copy of the City’s policy on presentation of citizens from the city secretary. By law no action may be taken during Presentation of Citizens.

CONSENT AGENDA

The following items are anticipated to require little or no individualized discussion due to their nature being clerical, ministerial, mundane or routine. In an effort to enhance the efficiency of Planning & Zoning Commission meetings, it is intended that these items will be acted upon by the Planning & Zoning Commission with a single motion because no public hearing or determination is necessary. However, a Planning & Zoning Commission Member or citizen may request separate deliberation for a specific item, in which event those items will be removed from the consent agenda prior to the Planning & Zoning Commission voting on the consent agenda as a collective, singular item. Prior to voting on the consent agenda, the Planning & Zoning Commission may add additional items that are listed elsewhere on the same agenda.

- 1. Approval of the March 23, 2021 Planning & Zoning Commission regular meeting minutes.**
- 2. Recommendation of Approval of the Heritage TIA and required Transportation Improvements listed in the HDR technical memo. Applicant: Alex Granados, P.E. Kimley-Horn & Associates**
- 3. Disapproval of a plat for the reasons set forth in the item SUB2020-0040: a Final Plat for Esperanza Subdivision Phase 2 an approximately 52.40 acre tract of land located at 4900 Bell Springs Road, Dripping Springs, Hays County, Texas. Applicant: Adrian Rosas, PE**

- 4.** Approval of a plat with conditions set forth in the item SUB2021-0017: a Final Plat and Plat Vacation for Driftwood Subdivision Phase 1, Section 1, Lot 1, Block F an approximately 6.8292 acre tract of land located at 214 Thurman Roberts Way, generally located north of FM 1826, east of FM 150, and south of Onion Creek, Driftwood, Hays County, Texas. *Applicant: Stephen Delgado, Atwell, LLC.*
- 5.** Disapproval of a plat for the reasons set forth in the item SUB2021-0019: a Final Plat and Plat Vacation for Bunker Ranch Phase 3 Block 3 Lots 15-19 an approximately 5.14 acre tract of land located off Bunker Ranch Blvd (R15053), generally located south of the intersection of Bunker Ranch Blvd and Stockman Dr., Dripping Springs, Hays County, Texas. *Applicant: Brian Estes, PE*
- 6.** Disapproval of a plat for the reasons set forth in the item SUB2021-0020: a Preliminary Plat for the Overlook at Bunker Ranch an approximately 18.250-acre tract of land located at 2004 Creek Road, south of Highway 290, north of Creek Road (R143390), Dripping Springs, Hays County, Texas. *Applicant: Brian Estes, PE*

BUSINESS

- 7.** Public hearing and consideration of possible action regarding VAR2021-0005: an application for a variance to Chapter 28, Exhibit A, Section 14.2 Frontage and Section 14.7 Minimum Lot Sizes. The property is located at 102 Rose Drive, Dripping Springs, TX (R15132). The applicant is requesting a variance to provide lot frontage on an access easement and to have a lot size of 0.748 acres. *Applicant: Jon Thompson*
 1. Presentation
 2. Staff Report
 3. Public Hearing
 4. Variance
- 8.** Public hearing and consideration of possible action regarding VAR2021-0008: an application for a variance to Ordinance 30, Section 14 Standards and Specification Section J (5) Lot Frontage. The property is located at 823 Post Oak Drive, Dripping Springs, TX (R97685). The applicant is requesting a variance to provide lot frontage on an access easement. *Applicant: Jon Thompson*
 1. Presentation
 2. Staff Report
 3. Public Hearing
 4. Variance
- 9.** Public hearing and consideration of possible action regarding SUB2021-0021: an application to consider a Replat for lots 1B, 1C, and 1 D of the Caliche Hill Section 1 Subdivision for property located at 245 and 264 American Way, Dripping Springs, Texas 78620 (R103064 and R103066) and 200 S Canyonwood Drive, Dripping Springs Texas 78620 (R103065). The applicant is proposing to replat three (3) lots into two (2) lots. *Applicant: Joel Bock, Sunland Group*
 1. Presentation
 2. Staff Report

3. Public Hearing
4. Replat

10. Public hearing and consideration of a recommendation regarding ZA2021-0002: an application for a Zoning Amendment to consider a proposed zoning map amendment from Agriculture (AG) to Single-Family Residential District - Moderate Density (SF-2) for an approximately 52.88-acre tract of land and Multiple-Family Residential District (MF) for an approximately 27.269-acre tract of land situated in Benjamin F. Hanna Survey, No. 28, Abstract No. 222. This property is located at 2901 W US Highway 290, Dripping Springs, TX (R15103). Applicant: Brian Estes, Civil and Environmental Consultants Inc.

1. Presentation
2. Staff Report
3. Public Hearing
4. Zoning Amendment

11. Discuss and consider recommendation regarding amendments for the Certificate of Appropriateness Process and Mobile Food Vendors in the Mercer Street Historic District.

12. Discuss and consider recommendation related to adding an additional monthly meeting for the consideration of plats for a total of two meetings a month.

PLANNING & DEVELOPMENT REPORTS

13. April 2021 Planning Report

14. Unified Development Code Update Monthly Report

EXECUTIVE SESSION

The Planning & Zoning Commission for the City of Dripping Springs has the right to adjourn into executive session at any time during the course of this meeting to discuss any matter as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 Deliberations about Gifts and Donations), 551.074 Personnel Matters), 551.076 (Deliberations about Security Devices), and 551.086 (Economic Development). The Planning & Zoning Commission for the City of Dripping Springs may act on any item listed in Executive Session in Open Session or move any item from Executive Session to Open Session for action.

UPCOMING MEETINGS

Planning & Zoning Commission Meetings

May 25, 2021 at 6:30 p.m.

June 22, 2021 at 6:30 p.m.

July 27, 2021 at 6:30 p.m.

City Council Meetings

May 11, 2021 at 6:00 p.m.

May 18, 2021 at 6:00 p.m.

June 8, 2021 at 6:00 p.m.
June 15, 2021 at 6:00 p.m.

ADJOURN

TEXAS OPEN MEETINGS ACT PUBLIC NOTIFICATION & POSTING OF MEETING

All agenda items listed above are eligible for discussion and action unless otherwise specifically noted. This notice of meeting is posted in accordance with Chapter 551, Government Code, Vernon's Texas Codes. Annotated. In addition, the Commission may consider a vote to excuse the absence of any Commissioner for absence from this meeting.

Due to the current Public Health Emergency and guidance from the Texas Governor including the current Disaster Declarations by the Governor and the City of Dripping Springs, and Center for Disease Control guidelines related to COVID-19, the City will continue with meetings conducted through videoconferencing. Texas Government Code Sections 551.045; 551.125; and 551.127.

*I certify that this notice of meeting was posted at the City of Dripping Springs City Hall and website, www.cityofdrippingsprings.com, on **April 23, 2021 at 2:30 p.m.***

City Secretary

This facility is wheelchair accessible. Accessible parking spaces are available. Requests for auxiliary aids and services must be made 48 hours prior to this meeting by calling (512) 858-4725.



PLANNING & ZONING COMMISSION REGULAR MEETING

City of Dripping Springs
Council Chambers, 511 Mercer St, Dripping Springs, TX
Tuesday, March 23, 2021 at 6:30 PM

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Meeting ID: 895 7660 2958

Passcode: 370847

Dial Toll Free:

877 853 5257 US Toll-free

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Find your local number: <https://us02web.zoom.us/j/89576602958>

Join by Skype for Business: <https://us02web.zoom.us/skype/89576602958>

CALL TO ORDER AND ROLL CALL

Commission Members present were:

Mim James, Chair

James Martin, Vice Chair

John McIntosh

Roger Newman

Tammie Williamson

Commission Members absent were:

Christian Bourguignon
Evelyn Strong

Staff, Consultants & Appointed/Elected Officials

City Administrator Michelle Fischer
City Attorney Laura Mueller
City Secretary Andrea Cunningham
Senior Planner Amanda Padilla
City Engineer Chad Gilpin
Planning Consultant Robyn Miga

With a quorum of the Commission present, Chair James called the meeting to order at 6:01 p.m.

PLEDGE OF ALLEGIANCE

Commissioner McIntosh led the Pledge of Allegiance to the Flag.

PRESENTATION OF CITIZENS

A member of the public who desires to address the Commission regarding any item on an agenda for an open meeting may do so at presentation of citizens before an item or at a public hearing for an item during the Commission's consideration of that item. Citizens wishing to discuss matters not contained within the current agenda may do so, but only during the time allotted for presentation of citizens. Speakers are allowed two (2) minutes to speak during presentation of citizens or during each public hearing. Speakers may not cede or pool time. Members of the public requiring the assistance of a translator will be given twice the amount of time as a member of the public who does not require the assistance of a translator to address the Commission. It is the request of the Commission that members of the public wishing to speak on item(s) on the agenda with a noticed Public Hearing hold their comments until the item(s) are presented for consideration. Speakers are encouraged to sign in. Anyone may request a copy of the City's policy on presentation of citizens from the city secretary. By law no action may be taken during Presentation of Citizens.

No one spoke during the Presentation of Citizens.

CONSENT AGENDA

The following items are anticipated to require little or no individualized discussion due to their nature being clerical, ministerial, mundane or routine. In an effort to enhance the efficiency of Planning & Zoning Commission meetings, it is intended that these items will be acted upon by the Planning & Zoning Commission with a single motion because no public hearing or determination is necessary. However, a Planning & Zoning Commission Member or citizen may request separate deliberation for a specific item, in which event those items will be removed from the consent agenda prior to the Planning & Zoning Commission voting on the consent agenda as a collective, singular item. Prior to voting on the consent agenda, the Planning & Zoning Commission may add additional items that are listed elsewhere on the same agenda.

Via unanimous consent, the Commission consider Consent Agenda Item 1 separate from Items 2 – 5.

- 1. Approval of the February 22, 2021 Planning & Zoning Commission regular meeting minutes.**

A motion was made by Vice Chair Martin to approve the February 22, 2021 Planning & Zoning Commission regular meeting minutes. Commissioner McIntosh seconded the motion which carried unanimously 5 to 0.

Amanda Padilla presented the staff reports for items 2 – 5, which are on file. Items 2, 3 and 4 and recommended for denial due to unmet comments, and item 5 is recommended for approval.

2. **Disapproval of a plat for the reasons set forth in the item SUB2021-0011: a Preliminary Plat for Double L Ranch Subdivision Phase 1 an approximately 217.97 acre tract of land located off Ranch Road 12, Dripping Springs, Hays County(Legal Description: MD Raper Sur 37 Abs 394 & EW Brown Sur 136 Abs 44, A Davy & Brown Sur Abs 148, Phillip A Sur Abs 415; R168172). The applicant is proposing to subdivide the tract into 258 lots. Applicant: Pablo Martinez, BGE, Inc.**
3. **Disapproval of a plat for the reasons set forth in the item SUB2021-0012: a Final Plat for Caliterra Phase 4 Section 12 Subdivision an approximately 65.172 acre tract of land located off Premier Park Loop, Dripping Springs, Hays County(Legal Description: A0415 Philip A Smith Survey, AC 158.048; R17804). The applicant is proposing to subdivide the tract into 47 lots. Applicant: Bill Couch, Carlson Brigrance and Doering, Inc.**
4. **Disapproval of a plat for the reasons set forth in the item SUB2020-0022: a Preliminary Plat for Big Sky Ranch at Dripping Springs Tract 2 an approximately 12.23 acre tract of land situated in the Philip A. Smith League Survey, Abstract NO. 415 and LV Davis Jr. Preemption Survey, Abstract NO. 673, the City of Dripping Springs, Hays County, Texas. The property is generally located off Lone Peak Way. Applicant: Christopher Reid, P.E., Doucet & Associates, Inc.**
5. **Approval of SUB2020-0042: a Final Plat and a Plat Vacation for Tractor Supply Subdivision Lot 2 for property located at 1711-A Highway 290, Dripping Springs Texas (Tax ID: R15135) Applicant: Jon Thompson**

A motion was made by Vice Chair Martin to approve Consent Agenda Items 2 – 5. Commissioner McIntosh seconded the motion which carried unanimously 5 to 0.

BUSINESS

6. **Public hearing and consideration of possible action regarding SUB2021-0015: an application to consider a Replat for Block B Lot 3G-1 and 3H of the Resubdivison No. 3 of North Belterra Commercial Subdivision for property located off US Highway 290 (R161532.) The applicant is proposing to combine lots 3G-1 and 3H into 1 lot. Applicant: Natalia Garau, PE, Kimley Horn**

a) *Presentation* – No presentation was given.

b) *Staff Report*

Robyn Miga presented the staff report which is on file. Staff is recommending approval of the replat, as the applicant has adequately met all comments that were not addressed prior to the agenda posting.

c) Public Hearing

Graham Westbrook spoke regarding concerns for noise, and the possibility of additional landscape screening.

d) Replat

A motion was made by Vice Chair Martin to approve SUB2021-0015: an application to consider a Replat for Block B Lot 3G-1 and 3H of the Resubdivision No. 3 of North Belterra Commercial Subdivision for property located off US Highway 290 (R161532.) The applicant is proposing to combine lots 3G-1 and 3H into 1 lot. Commissioner Williamson seconded the motion which carried unanimously 5 to 0.

7. Public hearing and consideration of possible action regarding SUB2021-0010: an application to consider a Replat for Lot 2 of the Rancho Bella Subdivision for property located at 340 Horse Trail Drive, Dripping Springs, Texas 78620 (R132491.) The applicant is proposing to subdivide lot 2 into 2 lots. Applicant: Jon Thompson

a) Presentation

Applicant Jon Thompson was available for questions from the Commission.

b) Staff Report

Amanda Padilla presented the staff report which is on file. Staff recommends approval of the replat.

c) Public Hearing

Jason O’Gorman spoke regarding concerns with use of the existing easement and the potential for increased traffic and maintenance.

d) Replat

A motion was made by Vice Chair Martin to approve SUB2021-0010: an application to consider a Replat for Lot 2 of the Rancho Bella Subdivision for property located at 340 Horse Trail Drive, Dripping Springs, Texas 78620 (R132491). Commissioner McIntosh seconded the motion which carried unanimously 5 to 0.

8. Public hearing and consideration of possible action regarding SUB2021-0014: an application to consider a Replat for Block C Lot 902 of the Headwaters at Barton Creek Phase 4 Section 2 Subdivision for property located at the intersection of Headwaters Blvd and Sage Thrasher Circle (R111877.) The applicant is proposing to subdivide lot 902 into 12 lots, 11 residential and 1 non-residential. Applicant: WFC HEADWATERS OWNER VII, L.P.

a) Presentation

Applicant representative Matt Matthews presented the item.

b) Staff Report

Amanda Padilla presented the staff report which is on file. Staff is recommending approval with the condition that the applicant first receive a 1445 approval letter from Hays County.

c) Public Hearing – No one spoke during the Public Hearing.

d) Replat

A motion was made by Vice Chair Martin to approve SUB2021-0014: an application to consider a Replat for Block C Lot 902 of the Headwaters at Barton Creek Phase 4 Section 2 Subdivision for property located at the intersection of Headwaters Blvd and Sage Thrasher Circle (R111877), with the condition that the applicant receive a 1445 approval letter from Hays County. Commissioner McIntosh seconded the motion which carried unanimously 5 to 0.

9. Public hearing and consideration of a recommendation regarding CUP2021-0001: an application to consider a conditional use permit to allow for an accessory dwelling at the property located at 2303 W Highway 290, Dripping Springs, Texas 78620. Applicant: Jon Thompson

a) Presentation

Applicant Jon Thompson was available for questions from the Commission.

b) Staff Report

Amanda Padilla presented the staff report which is on file. Staff recommends approval with the following conditions as outlined in the Conditional Use Permit:

1. There can only be one Main Residence and one Accessory Dwelling Unit. The other existing buildings cannot be converted for residential dwelling purposes.
2. The ADU shall be connected to a City approved on-site septic system or City Sewer prior to occupancy.
3. An engineer will need to delineate and dedicate the Water Quality Buffer Zone and local floodplain via a separate Instrument.
4. The siting of the ADU shall not be allowed in Water Quality Buffer Zones or designated floodplain, unless otherwise permissible under the City's Water Quality Protection Ordinance.
5. No additional Driveways shall be permitted.
6. The applicant shall provide a 10' Trail/Sidewalk easement along the front of the lot.
7. If the use changes from a residential use to commercial use the property shall come into conformance and comply with all City Ordinances applicable to

commercial development (i.e. Site Development, Zoning, Landscaping, etc.).

c) *Public Hearing* – No one spoke during the Public Hearing.

d) *Conditional Use Permit*

A motion was made by Vice Chair Martin to approve CUP2021-0001: an application to consider a conditional use permit to allow for an accessory dwelling at the property located at 2303 W Highway 290, Dripping Springs, Texas 78620 with staff recommendation of the seven conditions as presented. Commissioner McIntosh seconded the motion which carried 4 to 1, with Chair James opposed.

10. Discuss and consider possible action on initiating zoning amendment for the Certificate of Appropriateness Process and Mobile Food Vendors in Historic Districts.

Chair James introduced the item, and Laura Mueller presented the staff report which is on file.

A motion was made by Vice Chair James to direct staff to examine the Mobile Food Vendor Ordinance and Certificate of Appropriateness process for historic districts. Commissioner Williamson seconded the motion which carried unanimously 4 to 0 to 1, with Commissioner McIntosh abstaining.

PLANNING & DEVELOPMENT REPORTS

Report is on file and available upon request.

11. March 2021 Planning Report

EXECUTIVE SESSION

The Planning & Zoning Commission for the City of Dripping Springs has the right to adjourn into executive session at any time during the course of this meeting to discuss any matter as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 Deliberations about Gifts and Donations), 551.074 Personnel Matters), 551.076 (Deliberations about Security Devices), and 551.086 (Economic Development). The Planning & Zoning Commission for the City of Dripping Springs may act on any item listed in Executive Session in Open Session or move any item from Executive Session to Open Session for action.

The Commission did not meet in Executive Session.

UPCOMING MEETINGS

Planning & Zoning Commission Meetings

April 27, 2021 at 6:30 p.m.

May 25, 2021 at 6:30 p.m.

June 22, 2021 at 6:30 p.m.

City Council & BOA Meetings

April 13, 2021 at 6:00 p.m. (BOA)

April 20, 2021 at 6:00 p.m.

May 11, 2021 at 6:00 p.m. (BOA)
May 18, 2021 at 6:00 p.m.

ADJOURN

A motion was made by Vice Chair James to adjourn the meeting. Commissioner Williamson seconded the motion which carried unanimously 5 to 0.

This regular meeting adjourned at 7:58 p.m.



Planning and Zoning Commission

Planning Department Staff Report

Item 2.

Planning and Zoning Commission Meeting: April 27, 2021
Project No: SUB2020-0011
Agenda Item Report from: Chad Gilpin, City Engineer

Item Details

Project Name: Heritage Traffic Impact Analysis (TIA)
Property Location: Sportsplex Dr, Dripping Springs Texas
Legal Description: Being 190.317 Acres of Land out of the Philip Smith Survey, Abstract No. 415, The City of Dripping Springs, Hays County, Texas
Applicant: Alex Granados, P.E. Kimley-Horn & Associates
Property Owner: SLF IV- Dripping Springs JV, L.P. & Bob White Investments, LP
Request: Applicant is requesting approval of the TIA and resulting Transportation Improvements listed in the attached technical memo from the City's transportation consultant HDR.
Staff Recommendation: Staff is recommending approval of the TIA with the condition that the Transportation Improvements listed in the attached technical memo from the City's transportation consultant HDR are constructed by the Developer.

Overview

The Heritage Preliminary Plat (approximately 190.317 acres) was approved by P&Z on September 22, 2020 with the condition that Construction plans shall not be approved until a TIA is completed and approved.

The property is generally located North of US Hwy 290 and West of Ranch Road 12 within the City's City Limits (East of the Dripping Springs High School). The property is zoned Planned Development District 5. The property is currently undeveloped. The project Plans to develop a total of 595 Single Family lots.

Review of the construction plans for Phase 1 as well as construction plans for the Roger Hanks Parkway extension are currently in process. City Staff and the City's transportation engineering consultant have completed review of the TIA for the Heritage property. The final technical memo including required Transportation Improvements resulting from the TIA is attached. The following is a summary of the required Transportation Improvements:

- Extension of Roger Hanks Parkway as a two-lane roadway from its existing terminus north of US 290 to RM 12 (Dripping Springs Offsite Road and Trail Agreement)
- Signalization of RM 12 and Roger Hanks Parkway/Brookside Street (TxDOT agreement)
- Construction of a channelized southbound right-turn movement on RM 12 at Roger Hanks Parkway/Brookside Street (TxDOT agreement)
- Construction of an eastbound right-turn lane on Roger Hanks Parkway at RM 12 to provide a two-lane approach with a 75' storage length and 50' taper length

Planning Department Staff Report

- Construction of a westbound right-turn lane on Sportsplex Drive at Baird Lane with a 70' storage length and 50' taper length
- Construction of a southbound left-turn lane on Baird Lane at Sportsplex Drive with a 175' storage length and 50' taper length
- Construction of a 10' concrete off-site trail connecting the Heritage on-site trail system on the south side of the property line to Mercer Street (Dripping Springs Offsite Road and Trail Agreement)

Recommendation:

Staff is recommending *approval of the TIA and required Transportation Improvements listed in the HDR technical memo.*

Meetings Schedule

April 27, 2021 Planning and Zoning Commission

Attachments

Attachment 1 – HDR – Final TIA Technical Memo

Attachment 2 – Kimley Horne – Heritage TIA

Recommended Action	Approve the TIA with the condition that the Transportation Improvements listed in the attached technical memo from the City's transportation consultant HDR are constructed by the Developer.
Alternatives/Options	Deny the TIA with comments
Budget/Financial impact	N/A
Public comments	None received at this time
Enforcement Issues	N/A
Comprehensive Plan Element	N/A

Memo

Date: Tuesday, March 23, 2021

Project: Heritage TIA

To: Chad Gilpin, P.E., City of Dripping Springs

From: Leslie Pollack, P.E., PTOE, HDR Engineering, Inc.

Subject: Heritage TIA Review

Site Land Use and Access

HDR has completed a review of the Heritage Traffic Impact Analysis (TIA) dated November 19, 2020, for the development located northwest of the intersection of US 290 and RM 12. The development is expected to be constructed by 2026 and is proposed to consist of Single-Family Detached Housing and Multifamily Housing (Mid-Rise). Table 1 provides a summary of the land use sizes and trips generated by the development.

Table 1. Summary of Daily and Peak Hour Trip Generation

Land Use	Size	24-Hour Two-Way Volume	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Single-Family Detached Housing	595 DU	5,366	107	320	355	208
Multifamily Housing (Mid-Rise)	105 DU	572	10	28	28	18
Total		5,938	117	348	383	226

Access to the development is proposed at US 290 and at RM 12 via the extension of Roger Hanks Parkway through the development. One additional access point is proposed via the extension of Baird Lane into the development.

Traffic Analysis and Recommendations

Traffic conditions were analyzed for 2020 existing conditions and 2026 No Build and Build Conditions. The intersections analyzed as part of this TIA were the following:

- US 290 and RM 12 (signalized)
- US 290 and Sportsplex Drive (signalized)
- RM 12 and Old Fitzhugh Road (unsignalized)
- RM 12 and Brookside Street (unsignalized)
- Baird Lane and Sportsplex Drive (unsignalized)
- US 290 and Roger Hanks Parkway (signalized)

- Roger Hanks Parkway (extension) at Internal Intersection (unsignalized)
- Roger Hanks Parkway (extension) at Internal Roundabout (unsignalized)

Table 2 summarizes the analysis results for the study intersections for all traffic conditions. Delay and level-of-service (LOS) for both signalized and unsignalized intersections are provided in Table 2. The highest minor street approach delay and LOS are provided for unsignalized intersections.

Table 2. Intersection Level of Service and Delay (sec/veh)

Location	2020 Existing		2026 Forecasted No Build		2026 Forecasted Build		2026 Forecasted Build w/Mitigation	
	AM	PM	AM	PM	AM	PM	AM	PM
US 290 and RM 12	E (60.7)	E (61.1)	F (157.0)	F (143.9)	F (197.6)	F (193.5)	F (114.7)	F (124.7)
US 290 and Sportsplex Drive	A (8.2)	D (35.8)	B (13.2)	F (83.6)	C (26.1)	F (124.3)	B (14.8)	E (62.8)
RM 12 and Old Fitzhugh Road*	F (94.4) (EB)	F (206.8) (EB)	F (712.3) (EB)	F (1253) (EB)	F (1300) (EB)	F (2253) (EB)	F (1300) (EB)	F (2253) (EB)
RM 12 and Brookside Street*	C (21.2) (WB)	C (17.8) (WB)	D (33.7) (WB)	C (24.5) (WB)	F (1710) (WB)	F (1027) (EB)	C** (27.6)	B** (19.8)
Baird Lane and Sportsplex Drive*	C (16.8) (SB)	C (20.2) (SB)	C (21.9) (SB)	D (28.9) (SB)	F (384.8) (SB)	F (401.3) (SB)	F (90.4) (SB)	F (59.8) (SB)
US 290 and Roger Hanks Parkway	C (22.2)	B (18.4)	C (28.9)	C (26.9)	C (31.5)	C (29.2)	C (26.5)	C (34.4)
Roger Hanks Parkway (extension) at Internal Intersection*	-	-	-	-	A (9.0) (SB)	A (9.0) (SB)	A (9.0) (SB)	A (9.0) (SB)
Roger Hanks Parkway (extension) at Internal Roundabout*	-	-	-	-	A (3.2)	A (3.5)	A (3.2)	A (3.5)

*Unsignalized

**Signalization proposed as mitigation

As shown in Table 2, the following study intersections are expected to operate with an unacceptable LOS in the AM and/or PM peak periods at the build out of the development in 2026 after mitigation:

- US 290 and RM 12
- US 290 and Sportsplex Drive
- RM 12 and Old Fitzhugh Road
- Baird Lane and Sportsplex Drive

The following improvements were proposed to improve traffic operations:

- US 290 at RR 12
 - Adjust signal timing
 - Install a 275' westbound right-turn lane with a 100' taper
 - Install a 275' eastbound right-turn lane with a 100' taper
 - Install 150' eastbound dual left-turn lanes with a 25' taper
 - Install 150' westbound dual left-turn lanes with a 25' taper
 - Install 150' northbound dual left-turn lanes with a 100' taper
 - Install 130' southbound dual left-turn lanes with a 100' taper
- US 290 at Sportsplex Drive
 - Adjust signal timings
 - Install a 275' westbound right-turn lane with a 100' taper
 - Install 250' southbound dual left-turn lanes with a 50' taper
- RR 12 at Brookside Street
 - Install traffic signal
 - Install a 400' southbound right-turn deceleration lane
- Sportsplex Drive at Baird Lane
 - Install 100' eastbound left turn lane and 50' taper
 - Install 175' southbound left turn lane and 50' taper
 - Install 100' southbound right turn lane and 50' taper
 - Install 150' westbound right turn lane and 25' taper
- US 290 at Roger Hanks
 - Signal head modifications
 - Adjust signal timing

The operations at the intersection of US 290 and RM 12 and the intersection of US 290 and Sportsplex Drive could not be improved to acceptable LOS due to heavy volumes at the intersections, but operations were mitigated to 2026 Forecasted conditions, mitigating the impacts of the development.

The operations at the intersection of RM 12 and Old Fitzhugh Road could not be mitigated to acceptable LOS due to the unsignalized traffic control. The intersection is not expected to meet peak hour signal warrants at the time of construction. Furthermore, a signal exists at RM 12 and Mercer Street and another signal is recommended at RM 12 and Roger Hanks Parkway/Brookside Street as part of this TIA. The development will include a stub out for Old Fitzhugh Road to be realigned in the future, which is expected to reduce traffic delays at the intersection of RM 12 and Old Fitzhugh Road.

The operations at the intersection of Baird Lane and Sportsplex Drive could not be mitigated to acceptable LOS due to the unsignalized traffic control. The intersection is not expected to meet peak hour signal warrants at the time of construction.

A mitigation agreement was formed between TxDOT and the developer, and the developer has also agreed to construct additional improvements to meet the City's TIA requirements. The following transportation improvements will be constructed by the developer:

- Extension of Roger Hanks Parkway as a two-lane roadway from its existing terminus north of US 290 to RM 12 (Dripping Springs Offsite Road and Trail Agreement)
- Signalization of RM 12 and Roger Hanks Parkway/Brookside Street (TxDOT agreement)
- Construction of a channelized southbound right-turn movement on RM 12 at Roger Hanks Parkway/Brookside Street (TxDOT agreement)
- Construction of an eastbound right-turn lane on Roger Hanks Parkway at RM 12 to provide a two-lane approach with a 75' storage length and 50' taper length
- Construction of a westbound right-turn lane on Sportsplex Drive at Baird Lane with a 70' storage length and 50' taper length
- Construction of a southbound left-turn lane on Baird Lane at Sportsplex Drive with a 175' storage length and 50' taper length
- Construction of a 10' concrete off-site trail connecting the Heritage on-site trail system on the south side of the property line to Mercer Street (Dripping Springs Offsite Road and Trail Agreement)

Summary

- Acceptable LOS (LOS C) was not able to be reached through mitigation at all study intersections as part of this TIA; however, the TIA considered feasible improvements at study intersections and recommended improvements that mitigated the impact of the development traffic.
- The Heritage Development has agreed to construct improvements comparable with the development's impact.
- The City should continue to work towards realigning the northern terminus of Old Fitzhugh Road from its existing intersection at RM 12 to Roger Hanks Parkway through the development to improve future traffic operations.



Traffic Impact Analysis

Heritage TIA

Dripping Springs, Hays County, Texas

Prepared for:
M/I Homes of Austin, LLC



Santiago A. Araque Rojas

11/19/2020

Prepared by:

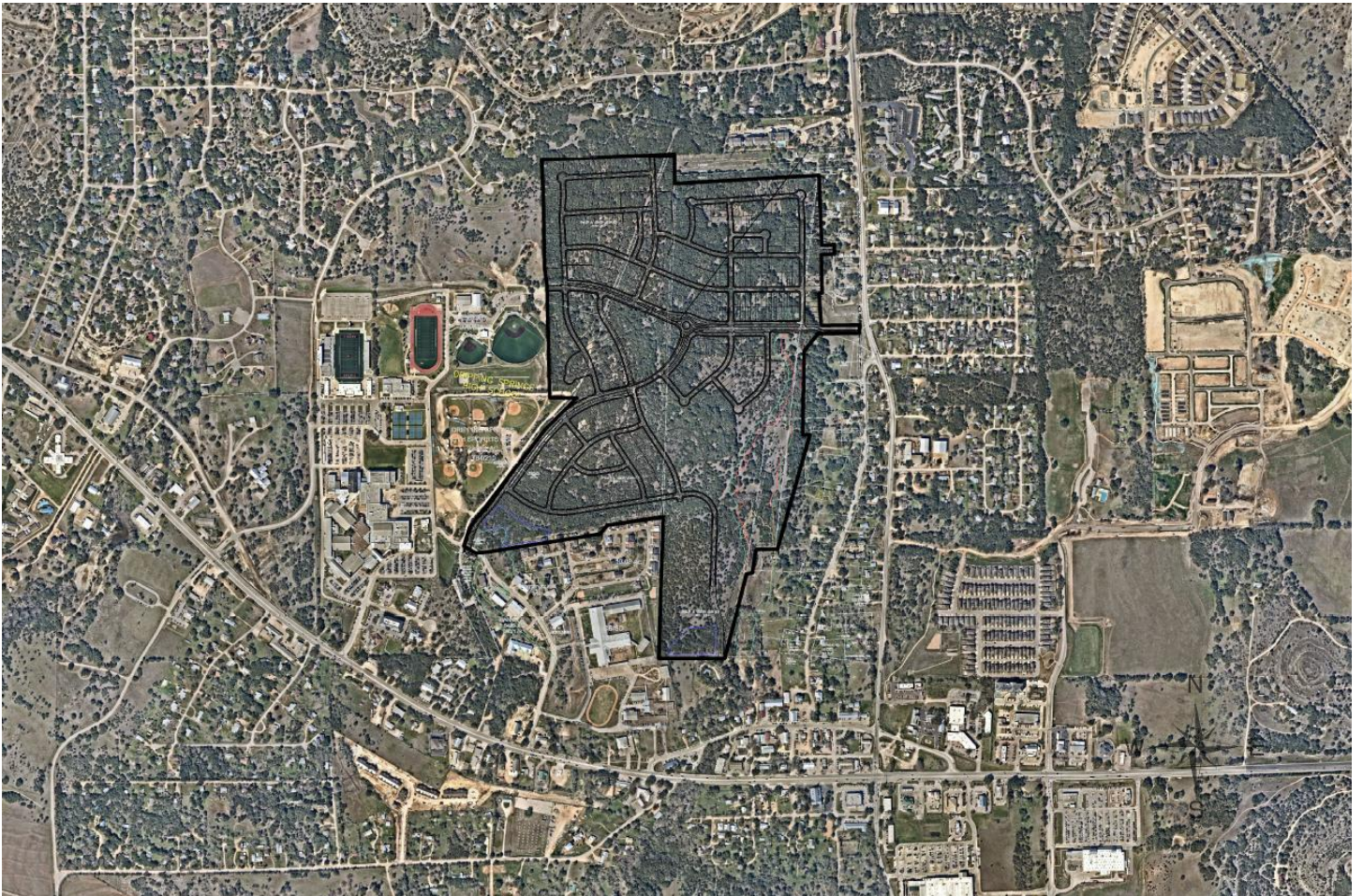
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November 19, 2020

Heritage TIA



NOVEMBER 19, 2020

Prepared By:

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EXECUTIVE SUMMARY

The proposed Heritage development is 187-acre site northwest of the intersection of US 290 and RR 12 in the City of Dripping Springs, Hays County, Texas. The site is anticipated to contain 595 single-family and 105 multi-family dwelling units. The project is assumed to be completed in 2026. A previous traffic impact analysis was approved for this development in 2015. This study updates the previous study by determining traffic generation characteristics, analyzing potential traffic impacts on the adjacent road network, and identifying mitigations required for identified impacts.

Three new connections will be constructed as part of the project. The connections completed as part of this project include RR 12 at Brookside, US 290 at Roger Hanks via the Brookside extension, and Sportsplex Drive at Baird Lane. Three additional connections may be completed by others. Intersections to be analyzed were determined after discussion with City staff and are listed below.

- US 290 at RR 12
- US 290 at Sportsplex Drive
- RR 12 at Old Fitzhugh Road
- RR 12 at Brookside Street
- Sportsplex Drive at Baird Lane
- US 290 at Roger Hanks Parkway
- Internal intersection along Brookside Street extension
- Internal roundabout along Brookside Street extension

Existing turning movement counts were collected at the above intersections during weekday AM and PM peak demand periods. Traffic operations were analyzed at the study intersections for existing conditions, 2026 no-build, and 2026 site build-out. Background traffic was projected to 2026 by applying a four percent (4.0%) annual growth rate that was determined by using historical traffic counts in the area.

For the proposed land uses, projected site traffic is calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* 10th Edition. The development is anticipated to generate approximately 465 new trips during the AM peak-hour and 609 new trips during PM peak-hour.

Analysis of the 2026 Build-Out scenario showed some study intersections operate below acceptable LOS C. To restore operating conditions to acceptable LOS, the following mitigations are:

1. US 290 at RR 12
 - a. Adjust signal timing
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install a 275' eastbound right-turn lane with a 100' taper
 - d. Install 150' eastbound dual left-turn lanes with a 25' taper
 - e. Install 150' westbound dual left-turn lanes with a 25' taper
 - f. Install 150' northbound dual left-turn lanes with a 100' taper
 - g. Install 130' southbound dual left-turn lanes with a 100' taper
2. US 290 at Sportsplex Drive
 - a. Adjust signal timings
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install 250' southbound dual left-turn lanes with a 50' taper

3. RR 12 at Brookside Street
 - a. Install traffic signal
 - b. Install a 400' southbound right-turn deceleration lane
4. Sportsplex Drive at Baird Lane
 - a. Install 100' eastbound left turn lane and 50' taper
 - b. Install 175' southbound left turn lane and 50' taper
 - c. Install 100 southbound right turn lane and 50' taper
 - d. Install 150 westbound right turn lane and 25' taper
5. US 290 at Roger Hanks
 - a. Signal head modifications
 - b. Adjust signal timing

A mitigation agreement with TxDOT was agreed upon. The developer is responsible for design and construction of a new traffic signal at the intersection of RR 12 and Brookside Street. No other improvements on TxDOT roadways are required. The intersection is to be built with channelized right turns for the eastbound and southbound approaches.

Per discussion with City staff, the developer is responsible for design and construction of a southbound left-turn lane and westbound right-turn lane at the intersection of Sportsplex Drive and Baird Lane.

INTRODUCTION

A. PURPOSE

Kimley-Horn and Associates, Inc. (K-H) was retained to conduct a Traffic Impact Analysis (TIA) of future traffic conditions associated with the Heritage development. This TIA is an update to a previously approved TIA for the same development conducted in 2015 by Bury, Inc. The proposed development is located northwest of the intersection of US 290 and RR 12 in the City of Dripping Springs, Hays County, Texas. A site vicinity map is provided in *Figure 1*.

This study addresses potential traffic impacts of the proposed development on the surrounding roadway network and intersections. This traffic impact study was prepared based on criteria set forth by City of Dripping Springs (“the City”), Texas. The specific objectives of this study are to determine the future operational levels-of-service (LOS) at the various study intersections and to identify capacity related improvements.

B. GENERAL PROJECT DESCRIPTION

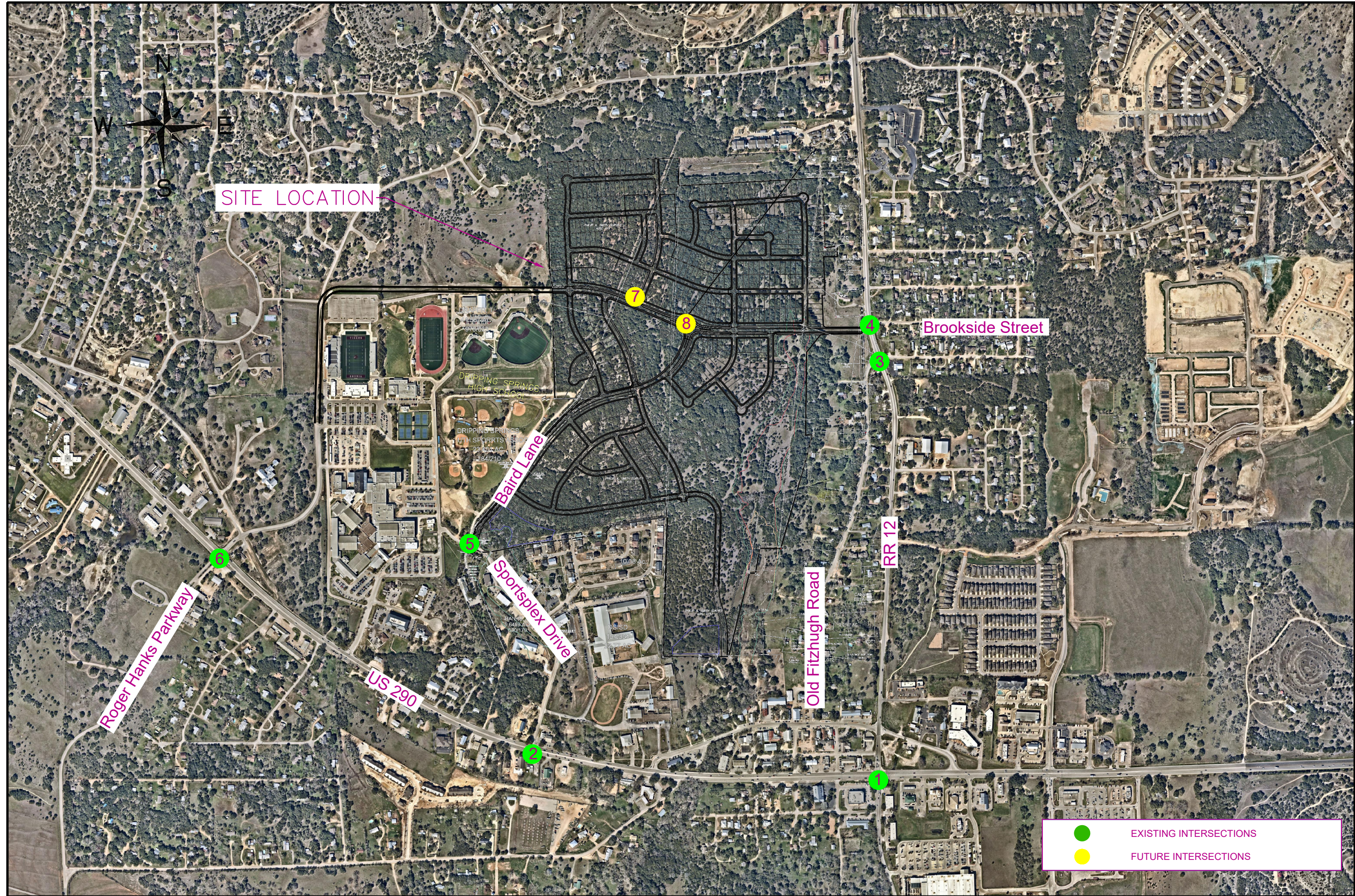
This 187-acre development will consist of 595 single-family dwelling units and 105 multi-family (mid-rise) dwelling units. The scope of analysis for this study was prepared in consultation with Dripping Springs City staff and is provided in *Appendix A*. The development is anticipated to be completed by 2026. The following scenarios were analyzed in this study:

- 2020 Existing Conditions
- 2026 No Build
- 2026 Site Build-Out

For the above scenarios, the intersections studied are listed below. *Figure 1* shows the study intersections.

- US 290 at RR 12
- US 290 at Sportsplex Drive
- RR 12 at Old Fitzhugh Road
- RR 12 at Brookside Street
- Sportsplex Drive at Baird Lane
- US 290 at Roger Hanks Parkway
- Internal intersection along Brookside Street extension
- Internal roundabout along Brookside Street extension

Analysis periods for this study included AM and PM peak hours for each study intersections.



SITE LOCATION

Brookside Street

Roger Hanks Parkway

US 290

Sportsplex Drive

Baird Lane

Old Fitzhugh Road

RR 12

● EXISTING INTERSECTIONS
● FUTURE INTERSECTIONS

EXISTING AND FUTURE AREA CONDITIONS

A. EXISTING & BACKGROUND DEVELOPMENT

The proposed site is currently vacant and undeveloped. In the approved scope and study area, The City of Dripping Springs identified one (1) development to be included in the analysis. Details of the approved development are listed in **Table 1**.

Table 1 – Approved Background Projects

Project Name	Land Use(s)	Size	% Build-Out
Big Sky Ranch	Single-Family Housing	772 DU	100%

Traffic generation for Big Sky Ranch was included in the background growth. Estimated construction start year and full Build-Out year were 2019 and 2025, respectively. Trip generation in 2026 was assumed to be 100% of full Build-Out volume.

B. PROPOSED LAND USES

Land-uses for the development are summarized in **Table 2**.

Table 2 – Proposed Land-Uses

Land Uses	Size	ITE Code
Single-family detached	595 DU	210
Multifamily Housing (Mid-Rise)	105 DU	221

C. ROADWAY CHARACTERISTICS

The major study area roadways are described below:

US 290 – is currently a four (4) lane roadway divided by a center two-way left turn lane, with two (2) lanes in each direction of travel. It is classified as a Major Arterial Divided (MAD 4) roadway in the Hays County Transportation Plan. It runs generally in the east-west direction. Currently, there are no sidewalks or designated bike lanes along either side of US 290. There is a posted speed limit of 45 mph in the project vicinity.

RR 12 – is currently a two (2) lane roadway divided by a center two-way left turn lane between Grand Prairie Circle and Glosson Road. RR 12 south of Grand Prairie Circle is a two (2) lane undivided roadway with one (1) lane in each direction of travel. It is classified as a Major Arterial Undivided (MAU 2) roadway in the Hays County Transportation Plan. It runs generally in the north-south direction. Sidewalks and designated bike lanes are not provided on either side of RR 12. There is a posted speed limit of 45 mph in the project vicinity.

Old Fitzhugh Road – is currently a two (2) lane undivided roadway with one (1) lane in each direction of travel. The road runs generally in the north-south direction with a posted speed limit of 30 mph. It is not included in the Hays County Transportation Plan. Currently, there are not sidewalks or designated bike lanes along either side of Old Fitzhugh Road.

Brookside Street – is currently a two (2) lane undivided roadway with one (1) lane in each direction of travel. The road runs generally in the east-west direction with a posted speed limit of 25 mph and currently ends at RR 12. It is not included in the Hays County Transportation Plan. Sidewalks and designated bike lanes are not provided on either side of Brookside Street.

Sportsplex Drive – is currently a two (2) lane roadway with one (1) lane in each direction of travel divided by one (1) fire lane in the center between Parade Way and the North Hays County Fire Department. The road runs generally in the north-south direction near US 290 and generally in an east-west direction near Baird Lane. It is not included in the Hays County Transportation Plan. Sportsplex Drive has a posted speed limit of 30 mph. Currently, there is a sidewalk on the west side of Sportsplex Drive between Baird Lane and Hanks Way but no designated bike lanes along either side of the roadway.

Baird Lane – is currently a two (2) lane undivided roadway with one (1) lane in each direction of travel. The road runs generally in the north-south direction with a posted speed limit of 30 mph on the north side of US 290 and 35 mph on the south side of US 290. It is not included in the Hays County Transportation Plan. Sidewalks and designated bike lanes are not provided on either side of Baird Lane.

Roger Hanks Parkway – is currently a two (2) lane roadway divided by a center two-way left turn lane, with one (1) lane in each direction of travel. The road runs generally in the north-south direction with a posted speed limit of 30 mph on the north side of US 290 and 35 mph on the south side of US 290. Currently, there are no sidewalks or designated bike lanes along either side of Roger Hanks Parkway. The roadway will be extended through the Heritage development to connect with Brookside Drive. The offsite extension is assumed that the extension will have the same cross-section as the existing roadway, per the Hays County

Transportation Plan (MAD 2). Throughout the site the extension is proposed to be a two (2) lane undivided roadway with bike lanes.

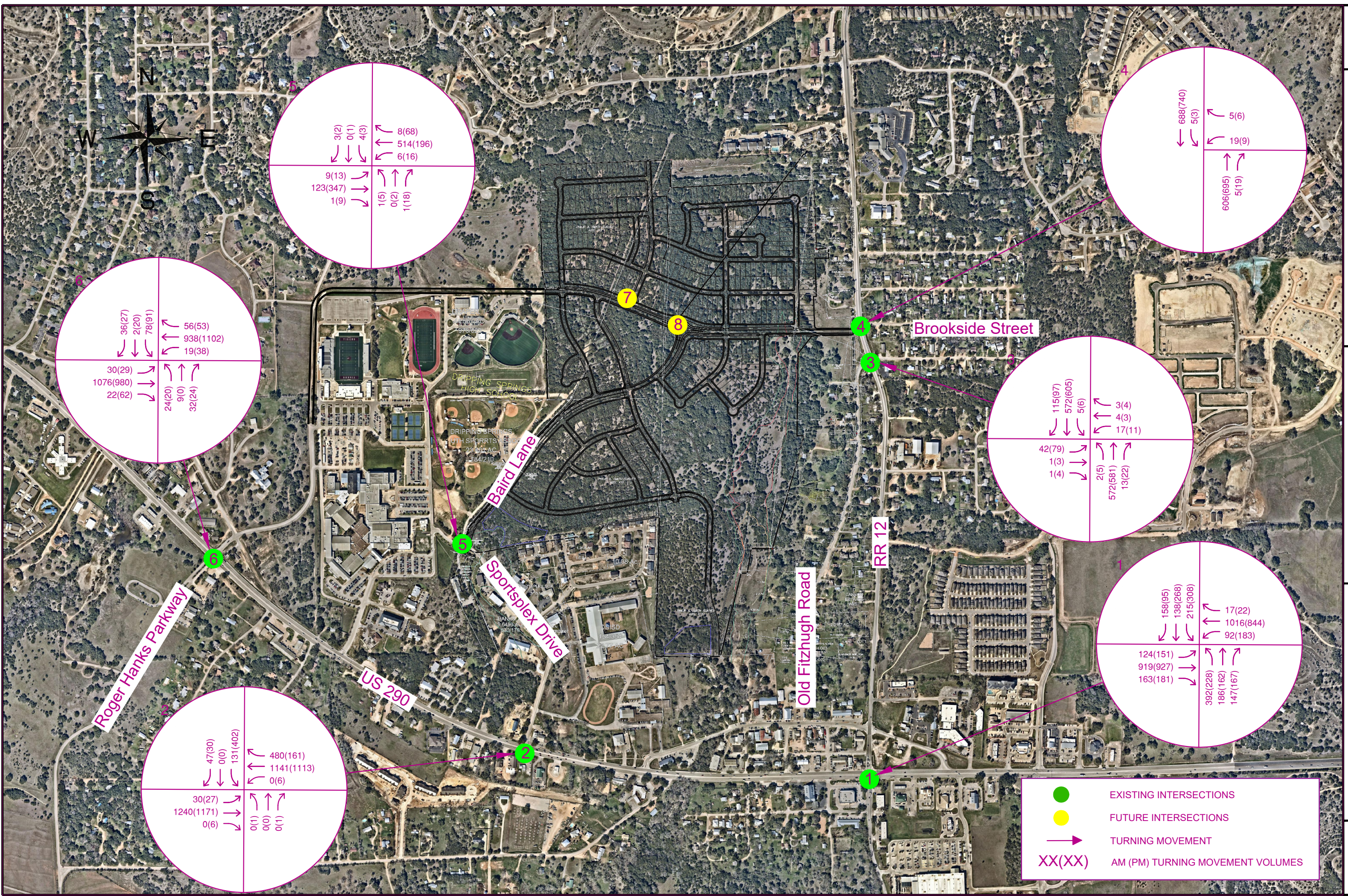
Timberline Road – is currently a two (2) lane undivided roadway with one (1) lane in each direction of travel. The road generally in the east-west direction with a posted speed limit of 25 mph. There are no sidewalks or designated bike lanes on either side of Timberline Road.

Proposed Site Access

The proposed site will have six (6) total access points, including three constructed as part of the project. The connections completed as part of this project include one off RR 12 at Brookside, one off US 290 at Roger Hanks via the Brookside extension, and one off Sportsplex Drive at Baird Lane. The connections developed by others will connect to Old Fitzhugh Road, Mercer Street, and Springlake Drive. **Figure 2** shows the proposed site plan.

Existing Traffic Volumes

Weekday AM and PM peak period turning movement counts were collected at the study intersections on two separate occasions. Turning movements counts were collected on Tuesday, January 30, 2018 at the intersections of US 290 at RR 12, US 290 at Sportsplex, and RR 12 at Old Fitzhugh. A 4% growth rate was applied to these counts to reach 2020 volumes. Turning movement counts were collected on Tuesday, March 10, 2020 at the intersections of RR 12 at Brookside, Sportsplex at Baird, and US 290 at Roger Hanks. **Figure 3** shows existing weekday AM and PM peak hour traffic volumes. The raw count sheets are provided in **Appendix B**.



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2026 DEVELOPMENT

A. SITE TRAFFIC

Site-generated traffic estimates are determined through a process known as trip generation. The acknowledged source for trip generation rates is the 10th edition of *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. The trips indicated are one-way trips or trip ends, where one vehicle entering and exiting the site is counted as two trips (one inbound trip and one outbound trip).

Table 3 summarizes the resulting Daily and Weekday AM and PM peak hour trip generation for 2026. Details of site trip generation are provided in **Appendix C**.

Table 3 – 2026 Site Trip Generation

Land Uses	Quantity	ITE Code	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Single-Family Detached Housing	595 du	210	5,366	107	320	427	355	208	563
Multifamily Housing (Mid-Rise)	105 du	221	572	10	28	38	28	18	46
Subtotal			5,938	117	348	465	383	226	609
Internal Capture Trip Adjustment			-	-	-	-	-	-	-
Pass-By Trip Adjustment			-	-	-	-	-	-	-
TOTAL TRIPS			5,938	117	348	465	383	226	609

B. TRIP DISTRIBUTION AND ASSIGNMENT

Site traffic is distributed into and out of the site connections and onto the street system based on the area street system characteristics, existing traffic patterns, “journey to work” assumptions, and the location of driveway access to/from the site. **Table 4** displays the general directional distribution percentages assumed for the proposed development. **Figure 4** and **Figure 5** display the trip distribution graphically.

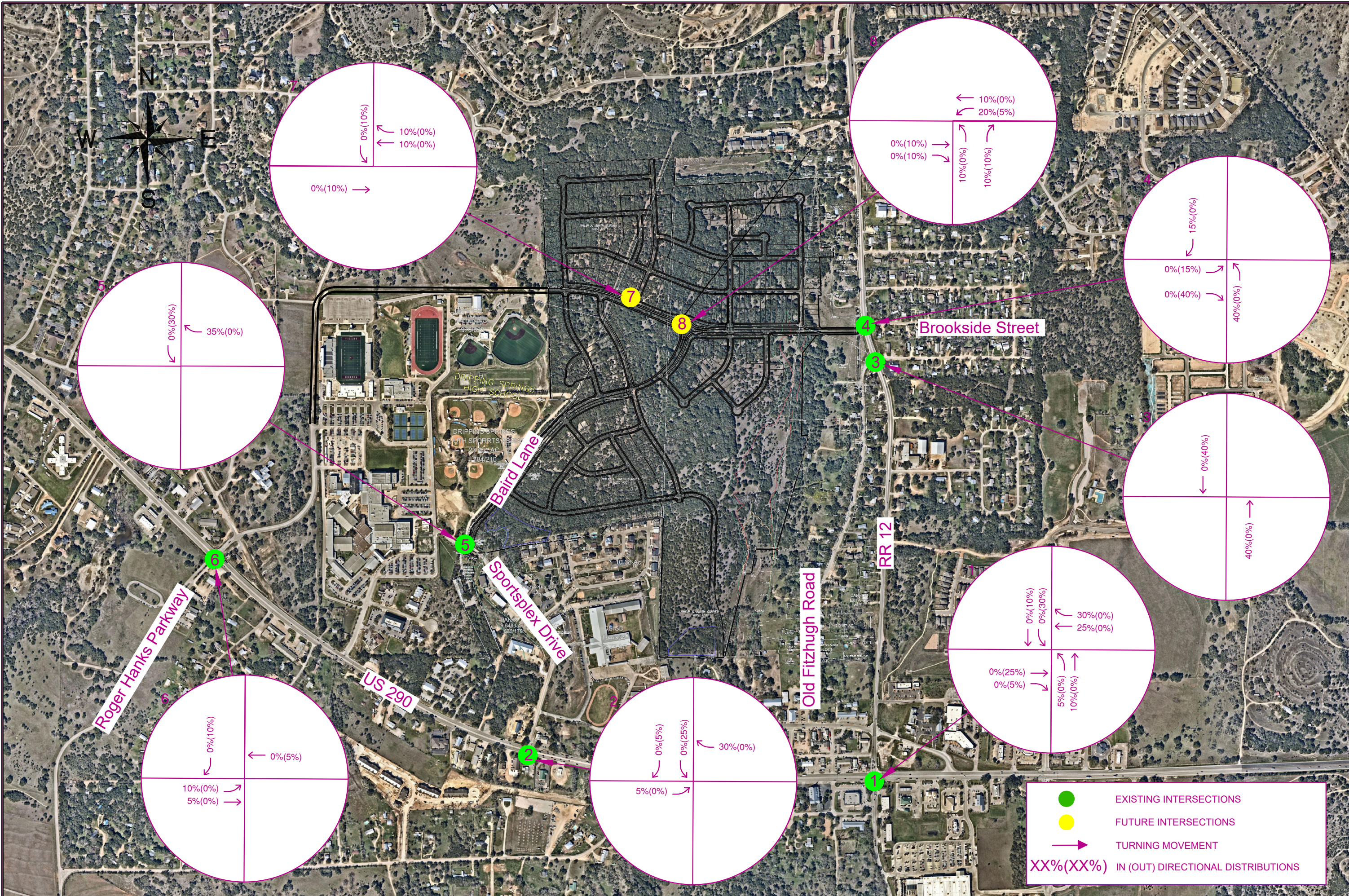
Table 4 – Site Trip Distribution

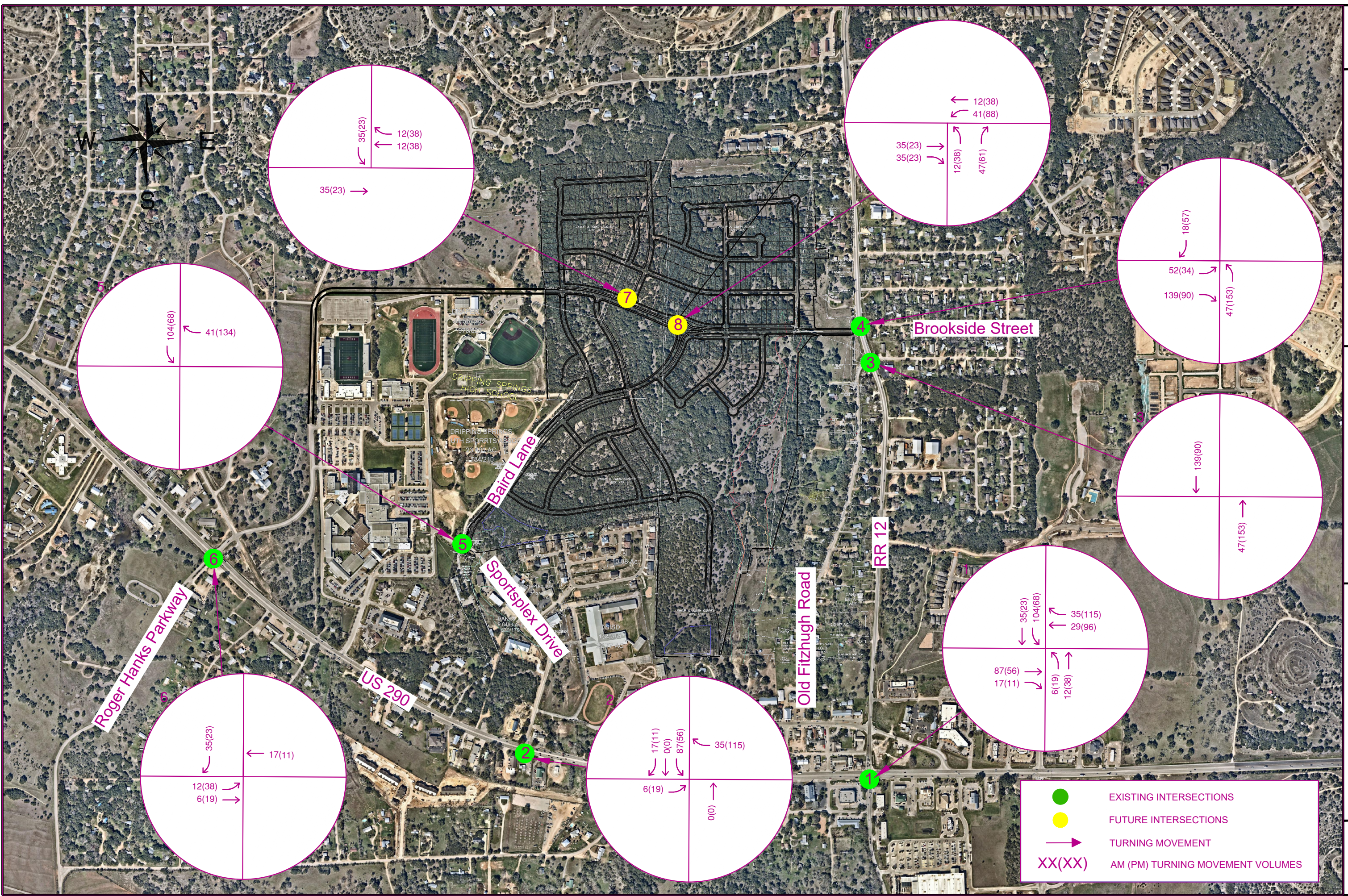
Direction	Percent To/From Commercial Component
To/From E US 290	55%
To/From W US 290	15%
To/From N RR 12	15%
To/From S RR 12	15%

Figure 4 show the resulting weekday AM and PM peak hour site trip distribution at all study intersections for the site developments. These distributions are the same as those determined in the 2015 Bury report. *Figure 5* shows the total site traffic after being calculated using the percentages for each trip assignment group in *Figure 4*.

ASSUMPTIONS

- Site trip distributions were assumed to match those determined in the 2015 Bury report for the same development.
- Signal timings were provided by TxDOT for all existing traffic signals.
- The traffic generated by the site was assigned to the future roadway network using the appropriate trip distribution percentages for the AM and PM peak hours.
- Site trips are added to the forecasted year 2026 background trips to determine the total 2026 traffic volumes.
- Existing volumes were balanced between intersection 3 (RR 12 at Old Fitzhugh Road) and intersection 4 (RR 12 at Brookside Street) due to their proximity. No other volume balancing was required for these study intersections. Volume balancing was done in order to remove existing sink/source since there are no existing possible sinks or sources. Balancing was done by bringing the volumes at the intersection with lower volumes up.
- Peak Hour Factors (PHF) from existing counts were used.
- AM and PM peak hours were determined from the existing count data. Peak hours were used by intersection.





C. DEVELOPMENT OF 2026 BACKGROUND TRAFFIC

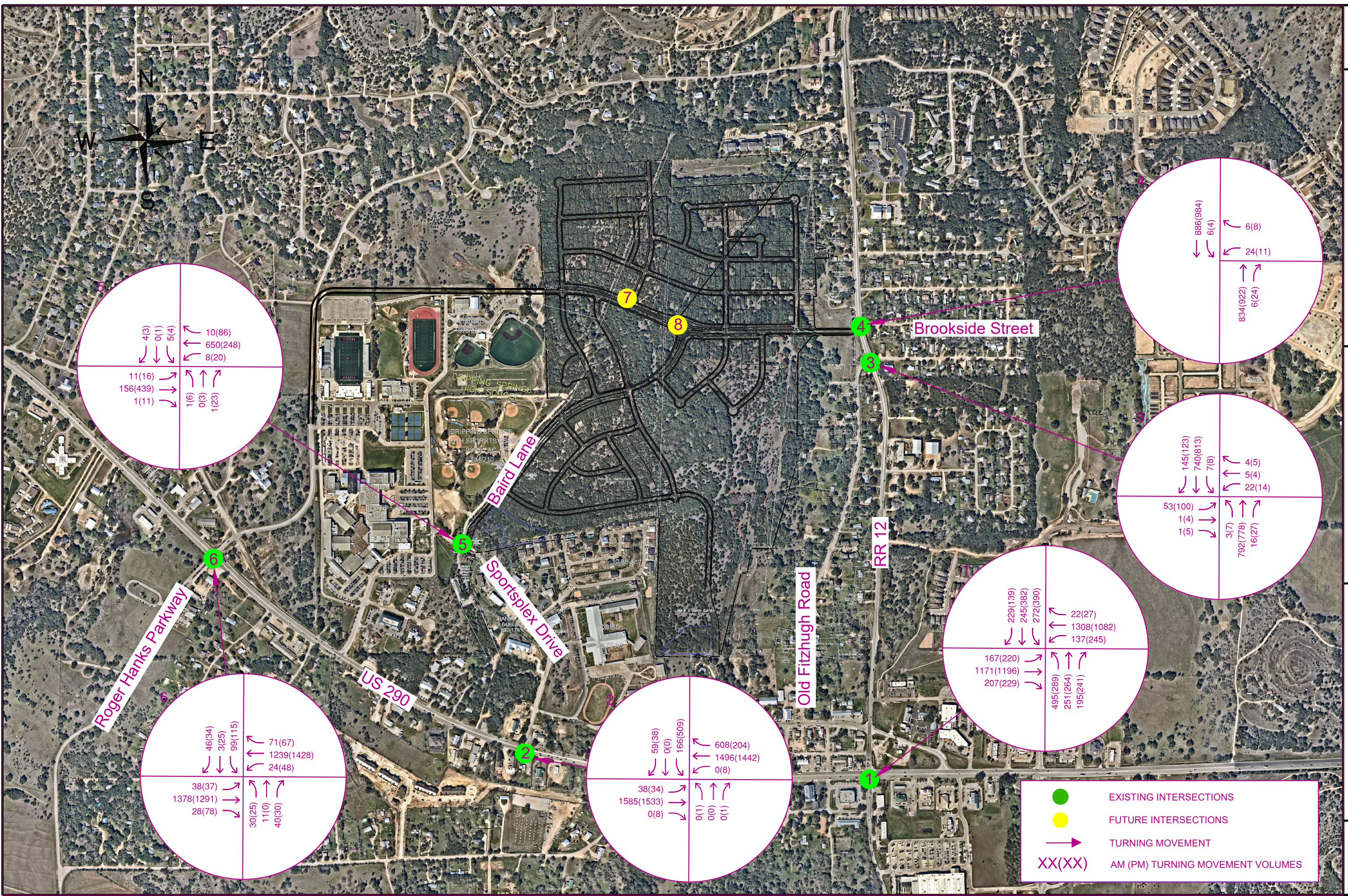
To obtain 2026 background traffic projections, existing traffic counts and historic counts near the site were compared to find expected growth trends within the study area. Based on data from TxDOT and guidance from City staff, traffic volumes were assumed to increase at a growth rate of 4.0% per year.

Background development projects identified in the scope were reviewed and relevant background traffic was added to the networks existing traffic counts.

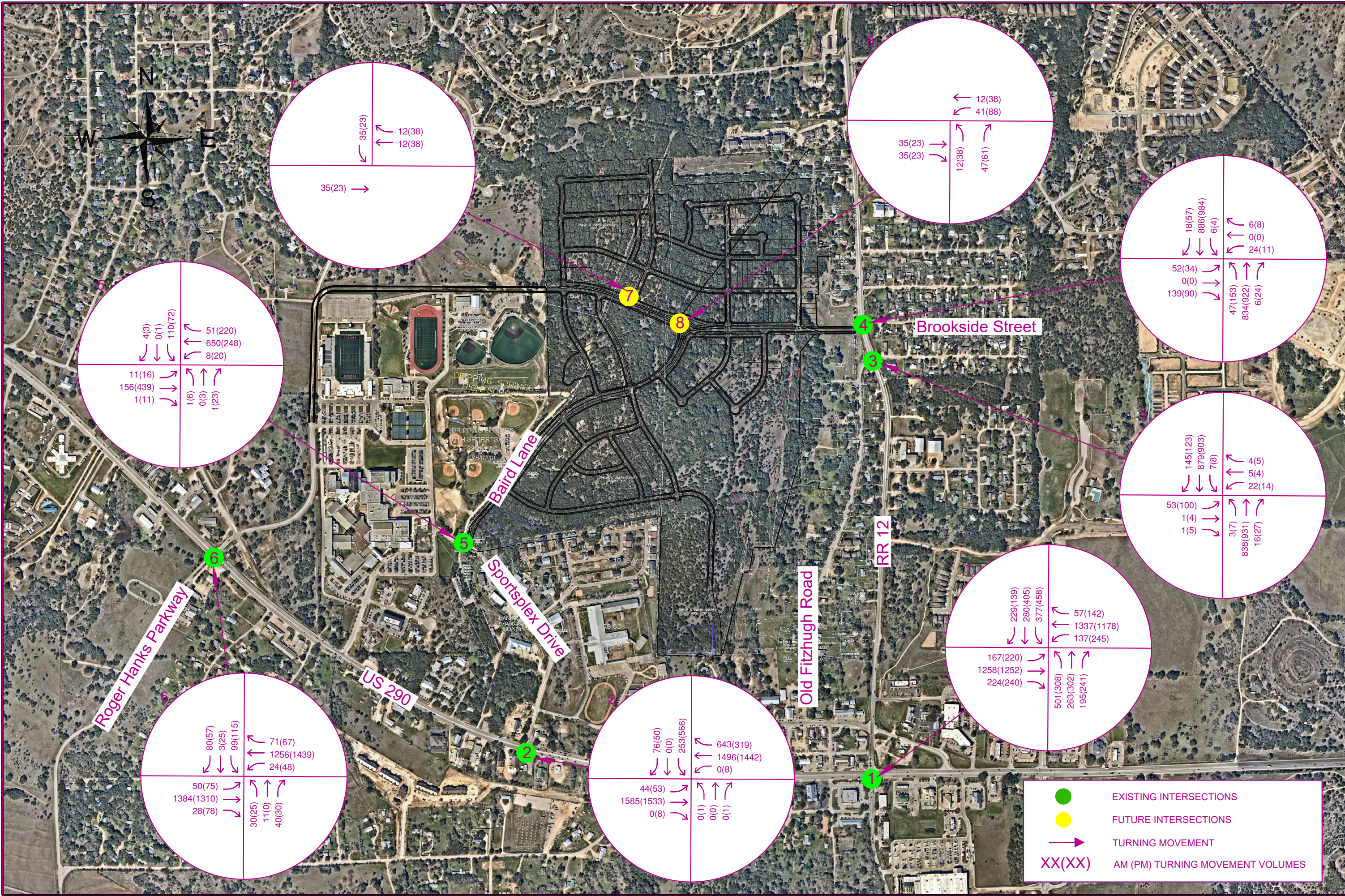
The resulting 2026 no build weekday AM and PM peak hour traffic volumes including background traffic projections are shown in **Figure 6**.

D. 2026 BUILD-OUT TRAFFIC

Site traffic was added to the background volumes to represent estimated total Build-Out (background plus site-generated) traffic conditions in 2026 after the completion of the proposed development. The resulting 2026 total weekday AM and PM peak hour traffic volumes are shown in **Figure 8**.



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TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn conducted a traffic operations analysis to determine potential capacity deficiencies in 2026 at the study intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual*.

A. ANALYSIS METHODOLOGY

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from “A” (very little delay) to “F” (long delays and congestion). **Table 5** shows the definition of level of service for signalized and unsignalized intersections. LOS C is the threshold for acceptable operations for signalized intersections for the City of Dripping Springs.

Table 5 – Level of Service

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Study area intersections were analyzed based on average total delay for signalized intersections. For the unsignalized analysis, the level of service (LOS) is defined for each controlled approach.

Where possible, HCM 6th Edition analysis is used. For intersections not possible to analyze using HCM 6th or HCM 2010, HCM 2000 is used. Calculations for the level of service at the study intersections are provided in **Appendix F-1**.

B. ANALYSIS RESULTS & MITIGATIONS

2020 EXISTING TRAFFIC OPERATIONS

Existing conditions measures of effectiveness (MOEs) are summarized in **Table 6** and the detailed *Synchro* reports are provided in **Appendix F**.

Table 6 – MOEs – Existing Peak Hours

Intersection	Existing AM		Existing PM	
	Delay	LOS	Delay	LOS
1: US 290 & RR 12	60.7	E	61.1	E
2: US 290 & Sportsplex Drive	8.2	A	35.8	D
3: RR 12 & Old Fitzhugh Road*	94.4 (EB)	F	206.8 (EB)	F
4: RR 12 & Brookside Street*	21.2 (WB)	C	17.8 (WB)	C
5: Baird Lane & Sportsplex Drive*	16.8 (SB)	C	20.2 (SB)	C
6: US 290 & Roger Hanks Parkway	22.2	C	18.4	B

*Stop controlled approach analyzed at two-way stop intersections

2026 BACKGROUND/NO-BUILD TRAFFIC OPERATIONS

The 2026 No-Build condition represents traffic operations if this project is never built. The 2026 No-Build conditions also assume a traffic growth rate of 4% as discussed above.

No Build conditions MOEs are summarized in **Table 7** and **Table 8** and the detailed *Synchro* reports are provided in **Appendix G**.

2026 BUILD-OUT TRAFFIC OPERATIONS

Site trips from the proposed project are added to the No-Build scenario for the Build-Out scenario.

Build-Out conditions MOEs are summarized in **Table 7** and **Table 8** and the detailed *Synchro* reports are provided in **Appendix H**.

2026 MITIGATIONS

The mitigation plan developed for this project is designed to show the recommended improvements to bring intersection operations back to Level of Service (LOS) C or to at least the operating conditions of the No Build scenario.

To accommodate traffic from the proposed development, the following mitigations are proposed:

1. US 290 at RR 12
 - a. Adjust signal timing
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install a 275' eastbound right-turn lane with a 100' taper
 - d. Install 150' eastbound dual left-turn lanes with a 25' taper
 - e. Install 150' westbound dual left-turn lanes with a 25' taper
 - f. Install 150' northbound dual left-turn lanes with a 100' taper
 - g. Install 130' southbound dual left-turn lanes with a 100' taper
2. US 290 at Sportsplex Drive
 - a. Adjust signal timings
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install 250' southbound dual left-turn lanes with a 50' taper
3. RR 12 at Brookside Street
 - a. Install traffic signal
 - b. Install a 400' southbound right-turn deceleration lane
4. Sportsplex Drive at Baird Lane
 - a. Install 100' eastbound left turn lane and 50' taper
 - b. Install 175' southbound left turn lane and 50' taper
 - c. Install 100 southbound right turn lane and 50' taper
 - d. Install 150 westbound right turn lane and 25' taper
5. US 290 at Roger Hanks
 - a. Signal head modifications
 - b. Adjust signal timing

The above mitigations bring all movements to an acceptable LOS if reasonably possible.

Mitigation results are summarized in **Table 9**, with the modified intersections indicated by bold red lettering; detailed *Synchro* reports are provided in **Appendix I**.

Table 7 – 2026 MOEs – AM Peak Hour

Intersection	No Build 2026		Build-Out 2026	
	Delay	LOS	Delay	LOS
1: US 290 & RR 12	157.0	F	197.6	F
2: US 290 & Sportsplex Drive	13.2	B	26.1	C
3: RR 12 & Old Fitzhugh Road*	712.3 (EB)	F	1300.2 (EB)	F
4: RR 12 & Brookside Street*	33.7 (WB)	D	1710.1 (WB)	F
5: Baird Lane & Sportsplex Drive*	21.9 (SB)	C	384.8 (SB)	F
6: US 290 & Roger Hanks Parkway	28.9	C	31.5	C
7: Brookside Extension at Internal Intersection	--	--	9.0 (SB)	A
8: Brookside Extension at Internal Roundabout	--	--	3.2	A

*Stop controlled approach analyzed at two-way stop intersections

Table 8 – 2026 MOEs – PM Peak Hour

Intersection	No Build 2026		Build-Out 2026	
	Delay	LOS	Delay	LOS
1: US 290 & RR 12	143.9	F	193.5	F
2: US 290 & Sportsplex Drive	83.6	F	124.3	F
3: RR 12 & Old Fitzhugh Road*	1252.5 (EB)	F	2252.6 (EB)	F
4: RR 12 & Brookside Street*	24.5 (WB)	C	1026.7 (EB)	F
5: Baird Lane & Sportsplex Drive*	28.9 (SB)	D	401.3 (SB)	F
6: US 290 & Roger Hanks Parkway	26.9	C	29.2	C
7: Brookside Extension at Internal Intersection	--	--	9.0 (SB)	A
8: Brookside Extension at Internal Roundabout	--	--	3.5	A

*Stop controlled approach analyzed at two-way stop intersections

Table 9 – 2026 MOEs – Mitigated Peak Hours

Intersection	Mitigated AM		Mitigated PM	
	Delay	LOS	Delay	LOS
1: US 290 & RR 12	114.7	F	124.7	F
2: US 290 & Sportsplex Drive	14.8	B	62.8	E
3: RR 12 & Old Fitzhugh Road*	1300.2 (EB)	F	2252.6 (EB)	F
4: RR 12 & Brookside Street	27.6	C	19.8	B
5: Baird Lane & Sportsplex Drive*	90.4 (SB)	F	59.8 (SB)	F
6: US 290 & Roger Hanks Parkway	26.5	C	34.4	C
7: Brookside Extension at Internal Intersection	9.0 (SB)	A	9.0 (SB)	A
8: Brookside Extension at Internal Roundabout	3.2	A	3.5	A

*Stop controlled approach analyzed at two-way stop intersections

US 290 & RR 12 – remains below the acceptable LOS C despite mitigations. However, the proposed mitigations bring operations at the intersection back to the projected No Build conditions. All mitigations proposed in the previously approved TIA have been included. No further mitigation is recommended at this point.

US 290 & Sportsplex Drive – remains below the acceptable LOS C in the PM peak despite mitigations. However, the proposed mitigations bring operations at the intersection back to the projected No Build conditions. All mitigations proposed in the previously approved TIA have been included. No further mitigation is recommended at this point.

RR 12 & Old Fitzhugh Road – remains below the acceptable LOS C despite mitigations. It is not uncommon for side streets of unsignalized intersections to fail at peak hour. It is more important to keep the flow of traffic through the major streets. For this intersection, the major street is RR 12. This intersection also does meet peak hour warrant; however, it is located approximately 300 feet south of RR12 & Brookside Street, which is too close in proximity for two signalized intersections. This study recommends the signalization of RR 12 & Brookside Street instead of RR 12 & Old Fitzhugh Road since only one of the two can be recommended to be signalized due to the spacing between the intersections. The proposed development will include a stub out for Old Fitzhugh Road to be realigned in the future. This would connect Old Fitzhugh Road to Brookside Street and the new signal to be constructed by the development.

Baird Lane & Sportsplex Drive – remains below the acceptable LOS C or better than the No Build scenario despite mitigations. This intersection has unusually low peak hour factors. Since site traffic is anticipated to be a large proportion of traffic through this intersection, the overall intersection peak hour factor was utilized in the mitigated scenario instead of the peak hour factor by movement. This intersection does not meet the peak hour signal warrants and it is not expected to meet the 4-hour or 8-hour warrant. Additional geometrical changes would not fix operations for the intersection. All mitigations proposed in the previously approved TIA have been included.

A peak hour signal warrant analysis was conducted for RR 12 & Brookside Street and can be found in *Appendix J*.

ROAD SIZING ANALYSIS FOR 2026 BUILD-OUT SCENARIO

Per the project scope, a roadway sizing analysis must be performed for the Build-Out year of development as a part of this study to determine the most appropriate size and type of roadway for five project roadways, which are all currently two-lane undivided. These roadways are listed below.

1. Brookside Street Extension (Proposed) between RR 12 and US 290 (two locations – at RR 12, at US 290)
2. Baird Lane (Proposed Extension) between Sportsplex Trail and Brookside Street
3. Proposed N/S Road between Brookside Street and Springlake Drive
4. Proposed N/S Road between Mercer St and Baird Lane (Proposed Extension)
5. Proposed E/W Road between Old Fitzhugh Road and Baird Lane (Proposed Extension)

A road sizing analysis was previously performed in the 2015 Bury TIA report. This prior analysis utilized the Highway Capacity Manual (HCM) 2010. The full Bury TIA is included in **Appendix D**.

The Bury report resulted in all future connections operating at an acceptable LOS; however, if bypass traffic proves to be higher than anticipated in that study, further evaluation of the roadway capacity would be needed. At the time that the 2015 Bury report was performed, the 9th Edition of ITE's *Trip Generation* was utilized, and the development was anticipated to consist of 701 single-family dwelling units. As a result, the anticipated number of trips generated was higher in the 2015 approved TIA than in the current development analysis. The Bury report is a more conservative analysis of road sizing and therefore is sufficient for anticipated 2026 Build-Out conditions. All study roads are proposed to remain as two lane undivided roadways.

QUEUING ANALYSIS

When evaluating the traffic operations in the study area, the queue lengths were calculated using *Synchro 10*TM. The queue lengths are summarized for the AM and PM peak hours in Table 10 and Table 11 respectively. Queue length is recorded according to the analysis methodology specified in the second column from the left.

Table 10 – Queue Lengths (AM)

Intersection	Methodology (unit)	Turning Movement	Existing (2020)		No Build (2026)		Build Out (2026)		Mitigation (2026)	
			Queue Length	Storage	Queue Length	Storage	Queue Length	Storage	Queue Length	Storage
RR 12 at US 290	Synchro (feet)	EBL1	#180	300	#277	300	#279	300	#170	150
		EBL2	-	-	-	-	-	-	-	150
		EBR	-	-	-	-	-	-	-	275
		WBL1	107	250	#208	250	#208	250	#137	150
		WBL2	-	-	-	-	-	-	-	150
		WBR	-	-	-	-	-	-	-	275
		NBL1	#487	130	#694	130	#718	130	#306	150
		NBL2	-	-	-	-	-	-	-	150
		NBR	76	130	111	130	111	130	161	150
		SBL1	#308	70	#467	70	#695	70	201	130
		SBL2	-	-	-	-	-	-	-	130
Sportsplex Dr at US 290	Synchro (feet)	EBL	9	TWLTL	27	TWLTL	36	TWLTL	71	TWLTL
		WBL	-	TWLTL	-	TWLTL	-	TWLTL	-	TWLTL
		WBR	-	-	-	-	-	-	122	275
		SBL1	177	1000	215	1000	291	1000	144	250
		SBL2	-	-	-	-	-	-	-	250
RR 12 at Fitzhugh Road	HCM 6th Ed (vehicles)	NBL	0	TWLTL	0	TWLTL	0	TWLTL	0	TWLTL
		SBL	0	TWLTL	0	TWLTL	0.1	TWLTL	0.1	TWLTL
RR 12 at Brookside St	HCM 6th Ed (vehicles) [Mitigation: Synchro (feet)]	NBL	-	TWLTL	-	TWLTL	0.2	TWLTL	19	TWLTL
		SBL	0	TWLTL	0.1	TWLTL	0.1	TWLTL	3	TWLTL
		SBR	-	-	-	-	-	-	0	400
Baird Ln at Sportsplex Dr	HCM 6th Ed (vehicles)	EBL	-	-	-	-	-	-	0.1	100
		WBR	-	-	-	-	-	-	0	100
		SBL	-	-	-	-	-	-	6.6	100
		SBR	-	-	-	-	-	-	0	100
Roger Hanks Parkway at US 290	Synchro (feet)	EBL	20	TWLTL	26	TWLTL	33	TWLTL	33	TWLTL
		WBL	16	TWLTL	18	TWLTL	17	TWLTL	19	TWLTL
		NBR	0	100	0	100	0	100	0	100
		SBL	132	150	158	150	156	150	156	150

- 95th Percentile volume exceeds capacity, queue may be longer

Table 11 – Queue Lengths (PM)

Intersection	Methodology (unit)	Turning Movement	Existing (2020)		No Build (2026)		Build Out (2026)		Mitigation (2026)	
			Queue Length	Storage	Queue Length	Storage	Queue Length	Storage	Queue Length	Storage
RR 12 at US 290	Synchro (feet)	EBL1	#164	300	#331	300	#313	300	#248	150
		EBL2	-	-	-	-	-	-	-	150
		EBR	-	-	-	-	-	-	-	275
		WBL1	#311	250	#458	250	#458	250	#281	150
		WBL2	-	-	-	-	-	-	-	150
		WBR	-	-	-	-	-	-	-	275
		NBL1	#307	130	#482	130	#525	130	199	150
		NBL2	-	-	-	-	-	-	-	150
		NBR	90	130	145	130	145	130	240	150
		SBL1	#453	70	#647	70	#784	70	#308	130
		SBL2	-	-	-	-	-	-	-	130
Sportsplex Dr at US 290	Synchro (feet)	EBL	27	TWLTL	25	TWLTL	37	TWLTL	91	TWLTL
		WBL	2	TWLTL	3	TWLTL	3	TWLTL	16	TWLTL
		WBR	-	-	-	-	-	-	38	275
		SBL1	#328	1000	#471	1000	#572	1000	350	250
		SBL2	-	-	-	-	-	-	-	250
RR 12 at Fitzhugh Road	HCM 6th Ed (vehicles)	NBL	0	TWLTL	0.1	TWLTL	0.1	TWLTL	3	TWLTL
		SBL	0	TWLTL	0.1	TWLTL	0.1	TWLTL	2	TWLTL
RR 12 at Brookside St	HCM 6th Ed (vehicles) [Mitigation: Synchro (feet)]	NBL	-	TWLTL	-	TWLTL	1.1	TWLTL	#104	TWLTL
		SBL	0	TWLTL	0	TWLTL	0	TWLTL	2	TWLTL
		SBR	-	-	-	-	-	-	8	400
Baird Ln at Sportsplex Dr	HCM 6th Ed (vehicles)	EBL	-	-	-	-	-	-	0.1	100
		WBR	-	-	-	-	-	-	0.1	100
		SBL	-	-	-	-	-	-	4	100
		SBR	-	-	-	-	-	-	0	100
Roger Hanks Parkway at US 290	Synchro (feet)	EBL	17	TWLTL	20	TWLTL	54	TWLTL	47	TWLTL
		WBL	8	TWLTL	13	TWLTL	8	TWLTL	34	TWLTL
		NBR	0	100	0	100	0	100	0	100
		SBL	138	150	#179	150	#179	150	149	150

- 95th Percentile volume exceeds capacity, queue may be longer

The following queues are projected to exceed the storage capacity in the Mitigated 2026 scenario:

- RR 12 at US 290:
 - NBL (AM) – despite providing two 150-foot left turn bays, the queue still exceeds capacity.
 - SBR (AM) – the storage is limited due to the proximity of the upstream signalized intersection of Mercer Street at RR 12.
- Roger Hanks Parkway at US 290:
 - SBL (AM) – storage is limited by the adjacent intersection to the north (Roger Hanks Pkwy at Old Hwy 290); however, left-turning vehicles can queue in the center two-way left turn lane behind Old Hwy 290.

CONCLUSION AND RECOMMENDATION

This study analyzes traffic impacts of the proposed Heritage development located northwest of the intersection of US 290 and RR 12 in the City of Dripping Springs, Hays County, Texas. The scenarios studied include – Existing conditions, 2026 No-Build, and 2026 Build-Out.

Analysis of the 2026 Build-Out scenario showed some study intersections operate below acceptable LOS C. To restore operating conditions to acceptable LOS, the following mitigations are recommended:

1. US 290 at RR 12
 - a. Adjust signal timing
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install a 275' eastbound right-turn lane with a 100' taper
 - d. Install 150' eastbound dual left-turn lanes with a 25' taper
 - e. Install 150' westbound dual left-turn lanes with a 25' taper
 - f. Install 150' northbound dual left-turn lanes with a 100' taper
 - g. Install 130' southbound dual left-turn lanes with a 100' taper
2. US 290 at Sportsplex Drive
 - a. Adjust signal timings
 - b. Install a 275' westbound right-turn lane with a 100' taper
 - c. Install 250' southbound dual left-turn lanes with a 50' taper
3. RR 12 at Brookside Street
 - a. Install traffic signal
 - b. Install a 400' southbound right-turn deceleration lane
4. Sportsplex Drive at Baird Lane
 - a. Install 100' eastbound left turn lane and 50' taper
 - b. Install 175' southbound left turn lane and 50' taper
 - c. Install 100 southbound right turn lane and 50' taper
 - d. Install 150 westbound right turn lane and 25' taper
5. US 290 at Roger Hanks
 - a. Signal head modifications
 - b. Adjust signal timing

For the above mitigation measures, the total contribution by the developer is broken down in **Table 12**.

A mitigation agreement with TxDOT was agreed upon. The developer is responsible for design and construction of a new traffic signal at the intersection of RR 12 and Brookside Street. No other improvements on TxDOT roadways are required. The intersection is to be built with channelized right turns for the eastbound and southbound approaches.

Per discussion with City staff, the developer is responsible for design and construction of a southbound left-turn lane and westbound right-turn lane at the intersection of Sportsplex Drive and Baird Lane. The constraints of this intersection have been evaluated and a concept figure for the construction of these improvements is provided in **Appendix K**.

Table 12 – Mitigation Cost Estimate

Intersection	Approach	Mitigation Measure	Unit Cost	Total Estimated Cost	% Site Traffic at Location	Pro-Rata Cost Share	TxDOT Improvements		City of Dripping Springs Improvements	
							% Contribution	\$ Contribution	% Contribution	\$ Contribution
RR 12 at US 290	All	Adjust Signal Timing	\$5,000 per signal	\$5,000	100.0%	\$ 5,000	0%	\$ -	TxDOT Improvements	
RR 12 at US 290	EB	Install 275' EB Right Turn Lane with 100' Taper	\$350 per linear foot/min \$150,000/min \$150,000	\$150,000	7.8%	\$ 11,657	0%	\$ -		
RR 12 at US 290	EB	Install 150' EB Dual Left Turn Lanes with 25' Taper	\$350 per linear foot/min \$150,000	\$150,000	0.0%	\$ -	0%	\$ -		
RR 12 at US 290	WB	Install 275' WB Right Turn Lane with 100' Taper	\$350 per linear foot/min \$150,000	\$150,000	80.8%	\$ 121,142	0%	\$ -		
RR 12 at US 290	WB	Install 150' WB Dual Left Turn Lanes with 25' Taper	\$350 per linear foot/min \$150,000	\$150,000	0.0%	\$ -	0%	\$ -		
RR 12 at US 290	NB	Install 150' NB Dual Left Turn Lanes with 100' Taper	\$350 per linear foot/min \$150,000	\$150,000	6.2%	\$ 9,329	0%	\$ -		
RR 12 at US 290	SB	Install 130' SB Dual Left Turn Lanes with 100' Taper	\$350 per linear foot/min \$150,000	\$150,000	27.7%	\$ 41,588	0%	\$ -		
US 290 at Sportsplex	All	Adjust Signal Timing	\$5,000 per signal	\$5,000	100.0%	\$ 5,000	0%	\$ -		
US 290 at Sportsplex	WB	Install 275' WB Right Turn Lane with 100' Taper	\$350 per linear foot/min \$150,000	\$150,000	36.0%	\$ 54,059	0%	\$ -		
US 290 at Sportsplex	SB	Install 250' SB Dual Left Turn Lanes with 50' Taper	\$350 per linear foot/min \$150,000	\$150,000	38.7%	\$ 58,026	0%	\$ -		0.0%
RR 12 at Brookside	All	Install Signal	\$300,000 per signal	\$300,000	14.7%	\$ 43,977	100%	\$ 300,000	TxDOT Improvements	
RR 12 at Brookside	EB	Install 100' EB Left Turn Lane with 25' Taper	DRIVEWAY TO BE BUILT AS TWO LANE APPROACH							
RR 12 at Brookside	SB	Install 400' SB Right Turn Deceleration Lane	\$350 per linear foot/min \$150,000	\$150,000	100.0%	\$ 150,000	0%	\$ -	TxDOT Improvements	
Baird at Sportsplex	EB	Install 100' EB Left Turn Lane with 50' Taper	\$350 per linear foot/min \$150,000	\$150,000	0.0%	\$ -	0%	\$ -	0.0%	\$ -
Baird at Sportsplex	WB	Install 150' WB Right Turn Lane with 25' Taper	\$350 per linear foot/min \$150,000	\$150,000	80.2%	\$ 120,270	0%	\$ -	100.0%	\$ 150,000
Baird at Sportsplex	SB	Install 175' SB Left Turn Lane with 50' Taper	\$350 per linear foot/min \$150,000	\$150,000	96.0%	\$ 144,020	0%	\$ -	100.0%	\$ 150,000
Baird at Sportsplex	SB	Install 100' SB Right Turn Lane with 50' Taper	\$350 per linear foot/min \$150,000	\$150,000	0.0%	\$ -	0%	\$ -	0.0%	\$ -
US 290 at Roger Hanks	All	Signal Head Modifications	\$5,000 per signal	\$5,000	100.0%	\$ 5,000	0%	\$ -	TxDOT Improvements	
US 290 at Roger Hanks	All	Adjust Signal Timing	\$5,000 per signal	\$5,000	2.8%	\$ 140	0%	\$ -	TxDOT Improvements	
TOTAL				\$2,105,000	-	\$ 919,207	-	\$ 300,000	-	\$ 300,000

CERTIFICATION STATEMENT

I hereby certify that this report complies with the City Code and with applicable technical requirements of the City of Dripping Springs and is complete to the best of my knowledge.

KIMLEY-HORN AND ASSOCIATES



Santiago A. Araque Rojas P.E.
Project Manager

Exhibit A: Peak Hour Factor Calculations

APPENDIX

Appendix A: Scoping Documents

TECHNICAL MEMORANDUM

DATE: MARCH 26, 2020

TO: CHAD GILPIN, P.E.
CITY OF DRIPPING SPRINGS

COLBY MACHACEK.
HAYS COUNTY DEVELOPMENT SERVICES

FROM: SANTIAGO A. ARAQUE ROJAS, P.E.
KIMLEY-HORN

RE: TRAFFIC IMPACT ANALYSIS SCOPING MATERIALS – HERITAGE DEVELOPMENT

A Traffic Impact Analysis (TIA) for the Heritage Development, dated March 25, 2016, was previously approved by the City of Dripping Springs. A TIA Update is recommended for the preliminary plat for the Heritage Development based on a revision to the redevelopment timeline.

Kimley-Horn has been retained to perform the TIA for the single-family residential development located at northwest of the intersection of West U.S. Highway 290 and RR 12 in the City of Dripping Springs, Hays County, Texas. The development will consist of 595 single family detached housing units and 105 residential attached units. Based on City of Dripping Springs guidelines the below intersections are proposed to be studied. The TIA will meet all requirements and standards set forth in the City of Dripping Springs UDC.

INTERSECTIONS FOR ANALYSIS

Level of service calculations for the AM and PM peak periods shall be performed for the following intersections for projected traffic conditions:

1. US 290 and RR 12
2. US 290 and Sportsplex Drive
3. Old Fitzhugh Road and RR 12
4. RR 12 and Brookside
5. Baird and Sportsplex
6. US 290 and Roger Hanks Parkway
7. Brookside and N/S Extension
8. Brookside Roundabout
9. All Site Driveways

AM and PM peak-hour turning movement counts will be collected at the study intersections to determine existing background traffic and will be collected when school is in session.

A map displaying study intersections and segment capacity analysis intersections is included at the end of this scope document.

ROAD SIZING ANALYSIS

A roadway sizing analysis will be performed for the following roadway segments.

1. Brookside Street Extension (Proposed) between RM 12 and US 290 (two locations – at RM 12, at US 290)
2. Baird Lane (Proposed Extension) between Sportsplex Trail and Brookside Street
3. Proposed N/S Road between Brookside Street and Springlake Drive
4. Proposed N/S Road between Mercer St and Baird Lane (Proposed Extension)
5. Proposed E/S Road between Old Fitzhugh Road and Baird Lane (Proposed Extension)

A map displaying study intersections and segment capacity analysis intersections is included at the end of this scope document.

ANALYSIS SCENARIOS

The planned development schedule would occur annually from 2021 to 2026. The following scenarios will be evaluated in the analysis, with one build out year (2026):

1. Existing Conditions: 2020
2. No Build Conditions: 2026
3. Build Out Conditions: 2026

PROPOSED LAND USES

Proposed land uses per the *ITE Trip Generation Handbook, 3rd Edition* are shown in Table 1. Trip generations have been calculated via equations, since number of studies exceeds 25 and R² values are greater than 0.75 for Daily, AM, and PM peaks.

Daily trips for single family developments are calculated by $\ln(\text{Trips}) = 0.92 \cdot \ln(X) + 2.71$. AM peak trips for single family developments are calculated by $\text{Trips} = 0.71 \cdot X + 4.80$. PM peak trips for single family developments are calculated by $\ln(\text{Trips}) = 0.96 \cdot \ln(X) + 0.20$.

Daily trips for multi-family developments are calculated by $\text{Trips} = 7.56 \cdot X - 40.86$. AM peak trips for multi-family developments are calculated by $\ln(\text{Trips}) = 0.95 \cdot \ln(X) - 0.51$. PM peak trips for multi-family developments are calculated by $\ln(\text{Trips}) = 0.89 \cdot \ln(X) - 0.02$.

Table 1: Trip Generation

Land Uses	Quantity	Units	ITE Code	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Single Family	595	DU	210	5,366	427	563	107	320	355	208
Multi-Family	105	DU	220	754	50	62	11	39	39	23
Internal Capture Trip Reduction				-	-	-	-	-	-	-
Pass-By Trip Reduction				-	-	-	-	-	-	-
TOTAL TRIPS				6,120	477	625	118	359	394	231

BACKGROUND TRAFFIC GROWTH RATE

One background TIA was identified for study and is listed below.

1. Big Sky Ranch

The growth rate was calculated as 3.87% per year. The proposed 4.0% growth rate is recommended based on historical counts.

Table 2: TxDOT Historical Counts

Location	2015	2016	2017	2018	Avg Annual Growth
RR 12 S	11,245	12,791	12,241	13,635	7.08%
US 290 E	29,826	30,305	25,305	31,572	1.95%
RR 12 N	11,448	12,681	13,503	14,199	8.01%
US 290 W	30,618	31,805	27,667	29,171	-1.58%
				Average	3.87%
				Assumed	4.00%





Prepared by: _____ Phone: (512)-418-4514

Santiago A. Araque Rojas, P.E.






Approved by: _____ Phone: (512)-858-4725

Chad Gilpin, P.E.

 INTERSECTION CAPACITY

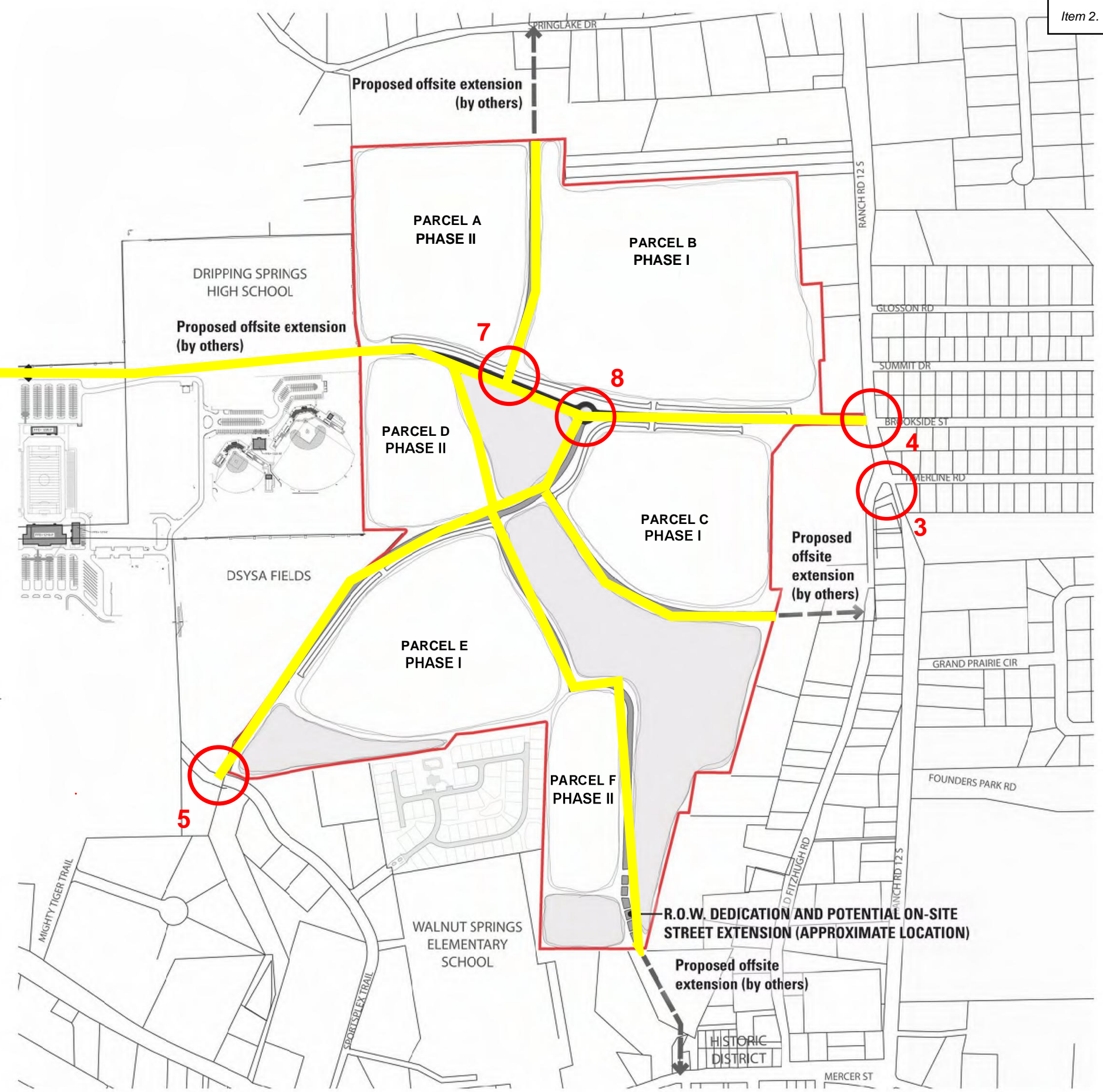
 SEGMENT CAPACITY ANALYSIS

PD STREET TYPES

-  MINOR COLLECTOR
-  LOCAL RESIDENTIAL STREET
-  SLIP STREET
-  R.O.W. DEDICATION AND POTENTIAL ON-SITE STREET EXTENSION (APPROXIMATE LOCATION)
-  PROPOSED OFF SITE EXTENSION (BY OTHERS)

NOTES:

1. Exact alignment of minor collector to be determined at Preliminary Plat stage.
2. Locations and alignments of Local Residential, Slip Streets, and Alleys are diagrammatic only and to be determined at Preliminary Plat stage




2


1



Appendix B: Existing Traffic Counts and Signal Timings

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 5 - US 290 & Sports Plex Dr-AM
Site Code : 5
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	Sports Plex Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	34	0	11	0	45	0	249	88	0	337	0	0	0	0	0	8	239	0	0	247	629
07:15	25	0	20	0	45	0	276	133	0	409	0	0	0	0	0	5	274	1	0	280	734
07:30	33	0	6	0	39	0	276	109	0	385	0	0	0	0	0	7	327	0	0	334	758
07:45	29	0	6	0	35	0	264	114	0	378	0	0	0	0	0	8	306	4	0	318	731
Total	121	0	43	0	164	0	1065	444	0	1509	0	0	0	0	0	28	1146	5	0	1179	2852
08:00	35	0	6	0	41	0	191	43	0	234	0	0	0	0	0	2	258	7	0	267	542
08:15	10	0	1	0	11	0	194	43	0	237	0	0	0	0	0	1	226	1	0	228	476
08:30	18	0	7	0	25	2	212	19	0	233	0	0	0	0	0	7	192	2	0	201	459
08:45	18	0	6	0	24	4	207	28	0	239	0	0	0	0	0	5	210	0	0	215	478
Total	81	0	20	0	101	6	804	133	0	943	0	0	0	0	0	15	886	10	0	911	1955
Grand Total	202	0	63	0	265	6	1869	577	0	2452	0	0	0	0	0	43	2032	15	0	2090	4807
Apprch %	76.2	0	23.8	0		0.2	76.2	23.5	0		0	0	0	0		2.1	97.2	0.7	0		
Total %	4.2	0	1.3	0	5.5	0.1	38.9	12	0	51	0	0	0	0	0	0.9	42.3	0.3	0	43.5	
Vehicles	202	0	60	0	262	3	1760									1957					
% Vehicles	100	0	95.2	0	98.9	50	94.2	100	0	95.4	0	0	0	0	0	100	96.3	0	0	95.7	95.7
Heavy Vehicles																					
% Heavy Vehicles	0	0	4.8	0	1.1	50	5.8	0	0	4.6	0	0	0	0	0	0	3.7	100	0	4.3	4.3

Start Time	Sports Plex Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	34	0	11	0	45	0	249	88	0	337	0	0	0	0	0	8	239	0	0	247	629
07:15	25	0	20	0	45	0	276	133	0	409	0	0	0	0	0	5	274	1	0	280	734
07:30	33	0	6	0	39	0	276	109	0	385	0	0	0	0	0	7	327	0	0	334	758
07:45	29	0	6	0	35	0	264	114	0	378	0	0	0	0	0	8	306	4	0	318	731
Total Volume	121	0	43	0	164	0	1065	444	0	1509	0	0	0	0	0	28	1146	5	0	1179	2852
% App. Total	73.8	0	26.2	0		0	70.6	29.4	0		0	0	0	0		2.4	97.2	0.4	0		
PHF	.890	.000	.538	.000	.911	.000	.965	.835	.000	.922	.000	.000	.000	.000	.000	.875	.876	.313	.000	.882	.941
Vehicles	121	0	41	0	162	0	992	444	0	1436	0	0	0	0	0	28	1115				
% Vehicles	100	0	95.3	0	98.8	0	93.1	100	0	95.2	0	0	0	0	0	100	97.3	0	0	96.9	96.1
Heavy Vehicles																					
% Heavy Vehicles	0	0	4.7	0	1.2	0	6.9	0	0	4.8	0	0	0	0	0	0	2.7	100	0	3.1	3.9

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 5 - US 290 & Sports Plex Dr-AM
Site Code : 5
Start Date : 1/30/2018
Page No : 2

Start Time	Sports Plex Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:00					07:00					07:15					
+0 mins.	34	0	11	0	45	0	249	88	0	337	0	0	0	0	0	5	274	1	0	280	
+15 mins.	25	0	20	0	45	0	276	133	0	409	0	0	0	0	0	7	327	0	0	334	
+30 mins.	33	0	6	0	39	0	276	109	0	385	0	0	0	0	0	8	306	4	0	318	
+45 mins.	29	0	6	0	35	0	264	114	0	378	0	0	0	0	0	2	258	7	0	267	
Total Volume	121	0	43	0	164	0	1065	444	0	1509	0	0	0	0	0	22	1165	12	0	1199	
% App. Total	73.8	0	26.2	0		0	70.6	29.4	0		0	0	0	0		1.8	97.2	1	0		
PHF	.890	.000	.538	.000	.911	.000	.965	.835	.000	.922	.000	.000	.000	.000	.000	.688	.891	.429	.000	.897	
Vehicles	121	0	41	0	162	0	992	444	0	1436	0	0	0	0	0	22	1126	0	0	1148	
% Vehicles																					
Heavy Vehicles	0	0	2	0	2	0	73	0	0	73	0	0	0	0	0	0	39	12	0	51	
% Heavy Vehicles	0	0	4.7	0	1.2	0	6.9	0	0	4.8	0	0	0	0	0	0	3.3	100	0	4.3	

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 5 - US 290 & Sports Plex Dr-PM
Site Code : 5
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	Sports Plex Dr Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
15:00	42	0	6	0	48	4	312	71	0	387	0	0	0	0	0	7	230	1	0	238	673
15:15	150	0	13	0	163	2	251	27	0	280	0	0	0	0	0	12	354	2	0	368	811
15:30	128	0	6	0	134	0	235	27	0	262	0	0	0	0	0	5	278	1	0	284	680
15:45	52	0	3	0	55	0	231	24	0	255	1	0	1	0	2	1	221	2	0	224	536
Total	372	0	28	0	400	6	1029	149	0	1184	1	0	1	0	2	25	1083	6	0	1114	2700
16:00	62	0	7	0	69	2	277	24	0	303	0	0	1	0	1	2	269	4	0	275	648
16:15	56	0	3	0	59	2	225	40	0	267	1	0	2	0	3	4	267	0	0	271	600
16:30	47	0	3	0	50	0	228	32	0	260	0	0	1	0	1	2	267	1	0	270	581
16:45	60	0	2	0	62	0	243	31	0	274	1	0	1	0	2	1	274	2	0	277	615
Total	225	0	15	0	240	4	973	127	0	1104	2	0	5	0	7	9	1077	7	0	1093	2444
17:00	31	0	4	0	35	0	226	13	0	239	0	0	0	0	0	1	243	0	0	244	518
17:15	29	0	2	0	31	0	211	14	0	225	0	0	0	0	0	2	170	0	0	172	428
17:30	23	0	4	0	27	0	186	8	0	194	0	0	0	0	0	2	168	0	0	170	391
17:45	37	0	3	0	40	0	166	13	0	179	0	0	0	0	0	0	117	2	0	119	338
Total	120	0	13	0	133	0	789	48	0	837	0	0	0	0	0	5	698	2	0	705	1675
Grand Total	717	0	56	0	773	10	2791	324	0	3125	3	0	6	0	9	39	2858	15	0	2912	6819
Apprch %	92.8	0	7.2	0		0.3	89.3	10.4	0		33.3	0	66.7	0		1.3	98.1	0.5	0		
Total %	10.5	0	0.8	0	11.3	0.1	40.9	4.8	0	45.8	0	0	0.1	0	0.1	0.6	41.9	0.2	0	42.7	
Vehicles	702	0	56	0	758	5	2729									2708					
% Vehicles	97.9	0	100	0	98.1	50	97.8	100	0	97.9	100	0	100	0	100	100	94.8	13.3	0	94.4	96.4
Heavy Vehicles																					
% Heavy Vehicles	2.1	0	0	0	1.9	50	2.2	0	0	2.1	0	0	0	0	0	0	5.2	86.7	0	5.6	3.6

Start Time	Sports Plex Dr Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Thru	Right	Peds	App. Total				
Peak Hour Analysis From 15:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:00																					
15:00	42	0	6	0	48	4	312	71	0	387	0	0	0	0	0	7	230	1	0	238	673
15:15	150	0	13	0	163	2	251	27	0	280	0	0	0	0	0	12	354	2	0	368	811
15:30	128	0	6	0	134	0	235	27	0	262	0	0	0	0	0	5	278	1	0	284	680
15:45	52	0	3	0	55	0	231	24	0	255	1	0	1	0	2	1	221	2	0	224	536
Total Volume	372	0	28	0	400	6	1029	149	0	1184	1	0	1	0	2	25	1083	6	0	1114	2700
% App. Total	93	0	7	0		0.5	86.9	12.6	0		50	0	50	0		2.2	97.2	0.5	0		
PHF	.620	.000	.538	.000	.613	.375	.825	.525	.000	.765	.250	.000	.250	.000	.250	.521	.765	.750	.000	.757	.832
Vehicles	357	0	28	0	385	3	1010									1029					
% Vehicles	96.0	0	100	0	96.3	50.0	98.2	100	0	98.1	100	0	100	0	100	100	95.0	16.7	0	94.7	96.4
Heavy Vehicles																					
% Heavy Vehicles	4.0	0	0	0	3.8	50.0	1.8	0	0	1.9	0	0	0	0	0	0	5.0	83.3	0	5.3	3.6

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
 Georgetown, TX 78626
 512-832-8650

File Name : Site 5 - US 290 & Sports Plex Dr-PM
 Site Code : 5
 Start Date : 1/30/2018
 Page No : 2

Start Time	Sports Plex Dr Southbound					Hwy 290 Westbound					Driveway Northbound					Hwy 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 15:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	15:15					15:00					15:45					15:15				
+0 mins.	150	0	13	0	163	4	312	71	0	387	1	0	1	0	2	12	354	2	0	368
+15 mins.	128	0	6	0	134	2	251	27	0	280	0	0	1	0	1	5	278	1	0	284
+30 mins.	52	0	3	0	55	0	235	27	0	262	1	0	2	0	3	1	221	2	0	224
+45 mins.	62	0	7	0	69	0	231	24	0	255	0	0	1	0	1	2	269	4	0	275
Total Volume	392	0	29	0	421	6	1029	149	0	1184	2	0	5	0	7	20	1122	9	0	1151
% App. Total	93.1	0	6.9	0		0.5	86.9	12.6	0		28.6	0	71.4	0		1.7	97.5	0.8	0	
PHF	.653	.000	.558	.000	.646	.375	.825	.525	.000	.765	.500	.000	.625	.000	.583	.417	.792	.563	.000	.782
Vehicles	377	0	29	0	406	3	1010	149	0	1162	2	0	5	0	7	20	1066	2	0	1088
% Vehicles																				
Heavy Vehicles	15	0	0	0	15	3	19	0	0	22	0	0	0	0	0	0	56	7	0	63
% Heavy Vehicles	3.8	0	0	0	3.6	50	1.8	0	0	1.9	0	0	0	0	0	0	5	77.8	0	5.5

GRAM Traffic Counting, Inc.

3751 FM 1105, Bldg. A
Georgetown, Texas 78626
512-832-8650

File Name : Site 8 - US 290 & RM 12 - AM
Site Code : 8
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	29	15	26	0	70	19	127	7	0	153	41	38	49	0	128	29	151	61	0	241	592
07:15	48	20	22	0	90	20	131	2	0	153	97	40	41	0	178	31	140	50	0	221	642
07:30	72	36	27	0	135	25	162	10	0	197	86	38	25	0	149	34	162	53	0	249	730
07:45	79	37	25	0	141	30	187	5	0	222	103	58	51	0	212	35	202	1	0	238	813
Total	228	108	100	0	436	94	607	24	0	725	327	174	166	0	667	129	655	165	0	949	2777
08:00	58	42	31	0	131	20	200	3	0	223	93	46	39	0	178	25	174	22	0	221	753
08:15	36	32	33	0	101	22	291	3	0	316	90	30	29	0	149	29	206	30	0	265	831
08:30	54	29	42	0	125	25	213	7	0	245	101	51	26	0	178	34	224	54	0	312	860
08:45	51	25	40	0	116	18	235	3	0	256	78	45	42	0	165	27	246	45	0	318	855
Total	199	128	146	0	473	85	939	16	0	1040	362	172	136	0	670	115	850	151	0	1116	3299
Grand Total	427	236	246	0	909	179	1546	40	0	1765	689	346	302	0	1337	244	1505	316	0	2065	6076
Apprch %	47	26	27.1	0		10.1	87.6	2.3	0		51.5	25.9	22.6	0		11.8	72.9	15.3	0		
Total %	7	3.9	4	0	15	2.9	25.4	0.7	0	29	11.3	5.7	5	0	22	4	24.8	5.2	0	34	
Vehicles	415	229	232	0	876	164	1493	35	0	1692	663	330	294	0	1287	224	1474	306	0	2004	5859
% Vehicles	97.2	97	94.3	0	96.4	91.6	96.6	87.5	0	95.9	96.2	95.4	97.4	0	96.3	91.8	97.9	96.8	0	97	96.4
Heavy Vehicles	12	7	14	0	33	15	53	5	0	73	26	16	8	0	50	20	31	10	0	61	217
% Heavy Vehicles	2.8	3	5.7	0	3.6	8.4	3.4	12.5	0	4.1	3.8	4.6	2.6	0	3.7	8.2	2.1	3.2	0	3	3.6

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	58	42	31	0	131	20	200	3	0	223	93	46	39	0	178	25	174	22	0	221	753
08:15	36	32	33	0	101	22	291	3	0	316	90	30	29	0	149	29	206	30	0	265	831
08:30	54	29	42	0	125	25	213	7	0	245	101	51	26	0	178	34	224	54	0	312	860
08:45	51	25	40	0	116	18	235	3	0	256	78	45	42	0	165	27	246	45	0	318	855
Total Volume	199	128	146	0	473	85	939	16	0	1040	362	172	136	0	670	115	850	151	0	1116	3299
% App. Total	42.1	27.1	30.9	0		8.2	90.3	1.5	0		54	25.7	20.3	0		10.3	76.2	13.5	0		
PHF	.858	.762	.869	.000	.903	.850	.807	.571	.000	.823	.896	.843	.810	.000	.941	.846	.864	.699	.000	.877	.959
Vehicles	194	127	133	0	454	78	901	16	0	995	343	163	131	0	637	106	835	146	0	1087	3173
% Vehicles	97.5	99.2	91.1	0	96.0	91.8	96.0	100	0	95.7	94.8	94.8	96.3	0	95.1	92.2	98.2	96.7	0	97.4	96.2
Heavy Vehicles	5	1	13	0	19	7	38	0	0	45	19	9	5	0	33	9	15	5	0	29	126
% Heavy Vehicles	2.5	0.8	8.9	0	4.0	8.2	4.0	0	0	4.3	5.2	5.2	3.7	0	4.9	7.8	1.8	3.3	0	2.6	3.8

GRAM Traffic Counting, Inc.

3751 FM 1105, Bldg. A
Georgetown, Texas 78626
512-832-8650

File Name : Site 8 - US 290 & RM 12 - AM
Site Code : 8
Start Date : 1/30/2018
Page No : 2

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:30					08:00					07:15					08:00					
+0 mins.	72	36	27	0	135	20	200	3	0	223	97	40	41	0	178	25	174	22	0	221	
+15 mins.	79	37	25	0	141	22	291	3	0	316	86	38	25	0	149	29	206	30	0	265	
+30 mins.	58	42	31	0	131	25	213	7	0	245	103	58	51	0	212	34	224	54	0	312	
+45 mins.	36	32	33	0	101	18	235	3	0	256	93	46	39	0	178	27	246	45	0	318	
Total Volume	245	147	116	0	508	85	939	16	0	1040	379	182	156	0	717	115	850	151	0	1116	
% App. Total	48.2	28.9	22.8	0		8.2	90.3	1.5	0		52.9	25.4	21.8	0		10.3	76.2	13.5	0		
PHF	.775	.875	.879	.000	.901	.850	.807	.571	.000	.823	.920	.784	.765	.000	.846	.846	.864	.699	.000	.877	
Vehicles	237	142	105	0	484	78	901	16	0	995	370	176	152	0	698	106	835	146	0	1087	
% Vehicles	96.	96.	90.	0	95.3	91.	96	100	0	95.7	97.	96.	97.	0	97.4	92.	98.	96.	0	97.4	
	7	6	5			8	96				6	7	4			2	2	7			
Heavy Vehicles	8	5	11	0	24	7	38	0	0	45	9	6	4	0	19	9	15	5	0	29	
% Heavy Vehicles	3.3	3.4	9.5	0	4.7	8.2	4	0	0	4.3	2.4	3.3	2.6	0	2.6	7.8	1.8	3.3	0	2.6	

GRAM Traffic Counting, Inc.

3751 FM 1105, Bldg. A
Georgetown, Texas 78626
512-832-8650

File Name : Site 8 - US 290 & RM 12 - PM
Site Code : 8
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
15:00	90	38	26	0	154	37	183	3	0	223	57	35	36	0	128	40	202	35	0	277	782
15:15	56	55	13	0	124	29	172	7	0	208	54	28	31	0	113	35	202	46	0	283	728
15:30	72	48	24	0	144	48	166	7	0	221	53	36	40	0	129	45	137	36	0	218	712
15:45	52	37	29	0	118	53	232	5	0	290	54	19	43	0	116	25	168	45	0	238	762
Total	270	178	92	0	540	167	753	22	0	942	218	118	150	0	486	145	709	162	0	1016	2984
16:00	55	46	28	0	129	35	228	4	0	267	83	35	38	0	156	35	180	42	0	257	809
16:15	52	59	21	0	132	48	209	7	0	264	57	36	38	0	131	38	213	42	0	293	820
16:30	65	45	19	0	129	41	177	4	0	222	59	49	37	0	145	20	250	19	0	289	785
16:45	83	67	25	0	175	43	171	3	0	217	52	37	35	0	124	34	219	38	0	291	807
Total	255	217	93	0	565	167	785	18	0	970	251	157	148	0	556	127	862	141	0	1130	3221
17:00	58	55	27	0	140	34	231	10	0	275	43	41	51	0	135	30	231	43	0	304	854
17:15	83	61	27	0	171	42	177	4	0	223	56	34	37	0	127	30	181	60	0	271	792
17:30	61	65	9	0	135	50	201	3	0	254	60	38	31	0	129	46	226	26	0	298	816
17:45	41	75	20	0	136	49	190	1	0	240	65	39	36	0	140	34	176	48	0	258	774
Total	243	256	83	0	582	175	799	18	0	992	224	152	155	0	531	140	814	177	0	1131	3236
Grand Total	768	651	268	0	1687	509	2337	58	0	2904	693	427	453	0	1573	412	2385	480	0	3277	9441
Apprch %	45.5	38.6	15.9	0		17.5	80.5	2	0		44.1	27.1	28.8	0		12.6	72.8	14.6	0		
Total %	8.1	6.9	2.8	0	17.9	5.4	24.8	0.6	0	30.8	7.3	4.5	4.8	0	16.7	4.4	25.3	5.1	0	34.7	
Vehicles	752	640	249	0	1641	499	2246	57	0	2802	678	419	444	0	1541	394	2283	455	0	3132	9116
% Vehicles	97.9	98.3	92.9	0	97.3	98	96.1	98.3	0	96.5	97.8	98.1	98	0	98	95.6	95.7	94.8	0	95.6	96.6
Heavy Vehicles	16	11	19	0	46	10	91	1	0	102	15	8	9	0	32	18	102	25	0	145	325
% Heavy Vehicles	2.1	1.7	7.1	0	2.7	2	3.9	1.7	0	3.5	2.2	1.9	2	0	2	4.4	4.3	5.2	0	4.4	3.4

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	55	46	28	0	129	35	228	4	0	267	83	35	38	0	156	35	180	42	0	257	809
16:15	52	59	21	0	132	48	209	7	0	264	57	36	38	0	131	38	213	42	0	293	820
16:30	65	45	19	0	129	41	177	4	0	222	59	49	37	0	145	20	250	19	0	289	785
16:45	83	67	25	0	175	43	171	3	0	217	52	37	35	0	124	34	219	38	0	291	807
Total Volume	255	217	93	0	565	167	785	18	0	970	251	157	148	0	556	127	862	141	0	1130	3221
% App. Total	45.1	38.4	16.5	0		17.2	80.9	1.9	0		45.1	28.2	26.6	0		11.2	76.3	12.5	0		
PHF	.768	.810	.830	.000	.807	.870	.861	.643	.000	.908	.756	.801	.974	.000	.891	.836	.862	.839	.000	.964	.982
Vehicles	250	213	89	0	552	162	761	17	0	940	248	154	145	0	547	116	813	135	0	1064	3103
% Vehicles	98.0	98.2	95.7	0	97.7	97.0	96.9	94.4	0	96.9	98.8	98.1	98.0	0	98.4	91.3	94.3	95.7	0	94.2	96.3
Heavy Vehicles	5	4	4	0	13	5	24	1	0	30	3	3	3	0	9	11	49	6	0	66	118
% Heavy Vehicles	2.0	1.8	4.3	0	2.3	3.0	3.1	5.6	0	3.1	1.2	1.9	2.0	0	1.6	8.7	5.7	4.3	0	5.8	3.7

GRAM Traffic Counting, Inc.

3751 FM 1105, Bldg. A
Georgetown, Texas 78626
512-832-8650

File Name : Site 8 - US 290 & RM 12 - PM
Site Code : 8
Start Date : 1/30/2018
Page No : 2

Start Time	RM 12 Southbound					US 290 Westbound					RM 12 Northbound					US 290 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 16:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:00					15:45					16:00					16:00					
+0 mins.	55	46	28	0	129	53	232	5	0	290	83	35	38	0	156	35	180	42	0	257	
+15 mins.	52	59	21	0	132	35	228	4	0	267	57	36	38	0	131	38	213	42	0	293	
+30 mins.	65	45	19	0	129	48	209	7	0	264	59	49	37	0	145	20	250	19	0	289	
+45 mins.	83	67	25	0	175	41	177	4	0	222	52	37	35	0	124	34	219	38	0	291	
Total Volume	255	217	93	0	565	177	846	20	0	1043	251	157	148	0	556	127	862	141	0	1130	
% App. Total	45.1	38.4	16.5	0		17	81.1	1.9	0		45.1	28.2	26.6	0		11.2	76.3	12.5	0		
PHF	.768	.810	.830	.000	.807	.835	.912	.714	.000	.899	.756	.801	.974	.000	.891	.836	.862	.839	.000	.964	
Vehicles	250	213	89	0	552	171	814	20	0	1005	248	154	145	0	547	116	813	135	0	1064	
% Vehicles	98	98.	95.	0	97.7	96.	96.	100	0	96.4	98.	98.	98	0	98.4	91.	94.	95.	0	94.2	
		2	7			6	2				8	1				3	3	7			
Heavy Vehicles	5	4	4	0	13	6	32	0	0	38	3	3	3	0	9	11	49	6	0	66	
% Heavy Vehicles	2	1.8	4.3	0	2.3	3.4	3.8	0	0	3.6	1.2	1.9	2	0	1.6	8.7	5.7	4.3	0	5.8	

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 14 - RM 12 and Old Fitzhugh Rd- AM
Site Code : 14
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
07:00	3	85	9	0	97	1	1	1	0	3	0	109	2	0	111	9	1	0	0	10	221
07:15	2	99	17	0	118	6	1	0	0	7	1	158	5	0	164	10	0	0	0	10	299
07:30	2	153	33	0	188	4	1	3	0	8	0	165	3	0	168	9	0	1	0	10	374
07:45	0	172	31	0	203	5	0	0	0	5	0	114	3	0	117	11	1	0	0	12	337
Total	7	509	90	0	606	16	3	4	0	23	1	546	13	0	560	39	2	1	0	42	1231
08:00	1	105	25	0	131	1	2	0	0	3	1	92	1	0	94	9	0	0	0	9	237
08:15	0	112	34	0	146	3	2	0	0	5	2	75	3	0	80	6	0	3	0	9	240
08:30	0	111	32	0	143	2	0	0	0	2	0	142	1	0	143	10	0	1	0	11	299
08:45	0	116	24	0	140	1	0	0	0	1	1	127	1	0	129	20	0	3	0	23	293
Total	1	444	115	0	560	7	4	0	0	11	4	436	6	0	446	45	0	7	0	52	1069
Grand Total	8	953	205	0	1166	23	7	4	0	34	5	982	19	0	1006	84	2	8	0	94	2300
Apprch %	0.7	81.7	17.6	0		67.6	20.6	11.8	0		0.5	97.6	1.9	0		89.4	2.1	8.5	0		
Total %	0.3	41.4	8.9	0	50.7	1	0.3	0.2	0	1.5	0.2	42.7	0.8	0	43.7	3.7	0.1	0.3	0	4.1	
Vehicles % Vehicles	8	919	202	0	1129	23	7	4	0	34	5	932	18	0	955	84	2	8	0	94	2212
Heavy Vehicles	0	34	3	0	37	0	0	0	0	0	0	50	1	0	51	0	0	0	0	0	88
% Heavy Vehicles	0	3.6	1.5	0	3.2	0	0	0	0	0	0	5.1	5.3	0	5.1	0	0	0	0	0	3.8

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	2	99	17	0	118	6	1	0	0	7	1	158	5	0	164	10	0	0	0	10	299
07:30	2	153	33	0	188	4	1	3	0	8	0	165	3	0	168	9	0	1	0	10	374
07:45	0	172	31	0	203	5	0	0	0	5	0	114	3	0	117	11	1	0	0	12	337
08:00	1	105	25	0	131	1	2	0	0	3	1	92	1	0	94	9	0	0	0	9	237
Total Volume	5	529	106	0	640	16	4	3	0	23	2	529	12	0	543	39	1	1	0	41	1247
% App. Total	0.8	82.7	16.6	0		69.6	17.4	13	0		0.4	97.4	2.2	0		95.1	2.4	2.4	0		
PHF	.625	.769	.803	.000	.788	.667	.500	.250	.000	.719	.500	.802	.600	.000	.808	.886	.250	.250	.000	.854	.834
Vehicles	5	508	104	0	617	16	4	3	0	23	2	502	11	0	515	39	1	1	0	41	1196
% Vehicles		96.0	98.1	0	96.4	100	100	100	0	100	100	94.9	91.7	0	94.8	100	100	100	0	100	95.9
Heavy Vehicles																					
% Heavy Vehicles	0	4.0	1.9	0	3.6	0	0	0	0	0	0	5.1	8.3	0	5.2	0	0	0	0	0	4.1

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 14 - RM 12 and Old Fitzhugh Rd- AM
Site Code : 14
Start Date : 1/30/2018
Page No : 2

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:30					07:00					07:00					08:00					
+0 mins.	2	153	33	0	188	1	1	1	0	3	0	109	2	0	111	9	0	0	0	9	
+15 mins.	0	172	31	0	203	6	1	0	0	7	1	158	5	0	164	6	0	3	0	9	
+30 mins.	1	105	25	0	131	4	1	3	0	8	0	165	3	0	168	10	0	1	0	11	
+45 mins.	0	112	34	0	146	5	0	0	0	5	0	114	3	0	117	20	0	3	0	23	
Total Volume	3	542	123	0	668	16	3	4	0	23	1	546	13	0	560	45	0	7	0	52	
% App. Total	0.4	81.1	18.4	0		69.6	13	17.4	0		0.2	97.5	2.3	0		86.5	0	13.5	0		
PHF	.375	.788	.904	.000	.823	.667	.750	.333	.000	.719	.250	.827	.650	.000	.833	.563	.000	.583	.000	.565	
Vehicles	3	517	122	0	642	16	3	4	0	23	1	519	12	0	532	45	0	7	0	52	
% Vehicles																					
Heavy Vehicles	0	25	1	0	26	0	0	0	0	0	0	27	1	0	28	0	0	0	0	0	
% Heavy Vehicles	0	4.6	0.8	0	3.9	0	0	0	0	0	0	4.9	7.7	0	5	0	0	0	0	0	

GRAM Traffic Counting Inc.

3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 14 - RM 12 and Old Fitzhugh Rd- PM
Site Code : 14
Start Date : 1/30/2018
Page No : 1

Groups Printed- Vehicles - Heavy Vehicles

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
15:00	0	103	11	0	114	1	0	1	0	2	0	110	3	0	113	14	0	0	0	14	243
15:15	2	132	25	0	159	5	0	1	0	6	3	112	2	0	117	13	0	0	0	13	295
15:30	0	113	19	0	132	2	0	1	0	3	0	104	3	0	107	8	1	0	0	9	251
15:45	1	121	19	0	141	3	0	0	0	3	1	90	3	0	94	12	3	0	0	15	253
Total	3	469	74	0	546	11	0	3	0	14	4	416	11	0	431	47	4	0	0	51	1042
16:00	2	111	19	0	132	1	2	0	0	3	2	123	2	0	127	13	0	2	0	15	277
16:15	0	105	36	0	141	2	0	0	0	2	1	113	5	0	119	26	0	3	0	29	291
16:30	0	117	21	0	138	2	0	0	0	2	3	121	3	0	127	33	1	3	0	37	304
16:45	0	127	22	0	149	5	0	0	0	5	2	137	6	0	145	17	0	0	0	17	316
Total	2	460	98	0	560	10	2	0	0	12	8	494	16	0	518	89	1	8	0	98	1188
17:00	0	129	16	0	145	4	1	3	0	8	1	143	10	0	154	24	2	1	0	27	334
17:15	3	109	29	0	141	2	1	1	0	4	1	124	4	0	129	17	1	0	0	18	292
17:30	1	159	22	0	182	1	0	0	0	1	0	128	3	0	131	7	0	0	0	7	321
17:45	2	162	23	0	187	3	1	0	0	4	3	142	3	0	148	25	0	3	0	28	367
Total	6	559	90	0	655	10	3	4	0	17	5	537	20	0	562	73	3	4	0	80	1314
Grand Total	11	1488	262	0	1761	31	5	7	0	43	17	1447	47	0	1511	209	8	12	0	229	3544
Apprch %	0.6	84.5	14.9	0		72.1	11.6	16.3	0		1.1	95.8	3.1	0		91.3	3.5	5.2	0		
Total %	0.3	42	7.4	0	49.7	0.9	0.1	0.2	0	1.2	0.5	40.8	1.3	0	42.6	5.9	0.2	0.3	0	6.5	
Vehicles	11	1444										1415									
% Vehicles	100	97	98.1	0	97.2	100	100	100	0	100	100	97.8	97.9	0	97.8	100	100	100	0	100	97.7
Heavy Vehicles																					
% Heavy Vehicles	0	3	1.9	0	2.8	0	0	0	0	0	0	2.2	2.1	0	2.2	0	0	0	0	0	2.3

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:00	0	129	16	0	145	4	1	3	0	8	1	143	10	0	154	24	2	1	0	27	334
17:15	3	109	29	0	141	2	1	1	0	4	1	124	4	0	129	17	1	0	0	18	292
17:30	1	159	22	0	182	1	0	0	0	1	0	128	3	0	131	7	0	0	0	7	321
17:45	2	162	23	0	187	3	1	0	0	4	3	142	3	0	148	25	0	3	0	28	367
Total Volume	6	559	90	0	655	10	3	4	0	17	5	537	20	0	562	73	3	4	0	80	1314
% App. Total	0.9	85.3	13.7	0		58.8	17.6	23.5	0		0.9	95.6	3.6	0		91.2	3.8	5	0		
PHF	.500	.863	.776	.000	.876	.625	.750	.333	.000	.531	.417	.939	.500	.000	.912	.730	.375	.333	.000	.714	.895
Vehicles	6	551	88	0	645	10	3	4	0	17	5	527	20	0	552	73	3	4	0	80	1294
% Vehicles		98.6	97.8	0	98.5	100	100	100	0	100	100	98.1	100	0	98.2	100	100	100	0	100	98.5
Heavy Vehicles																					
% Heavy Vehicles	0	1.4	2.2	0	1.5	0	0	0	0	0	0	1.9	0	0	1.8	0	0	0	0	0	1.5

GRAM Traffic Counting Inc.

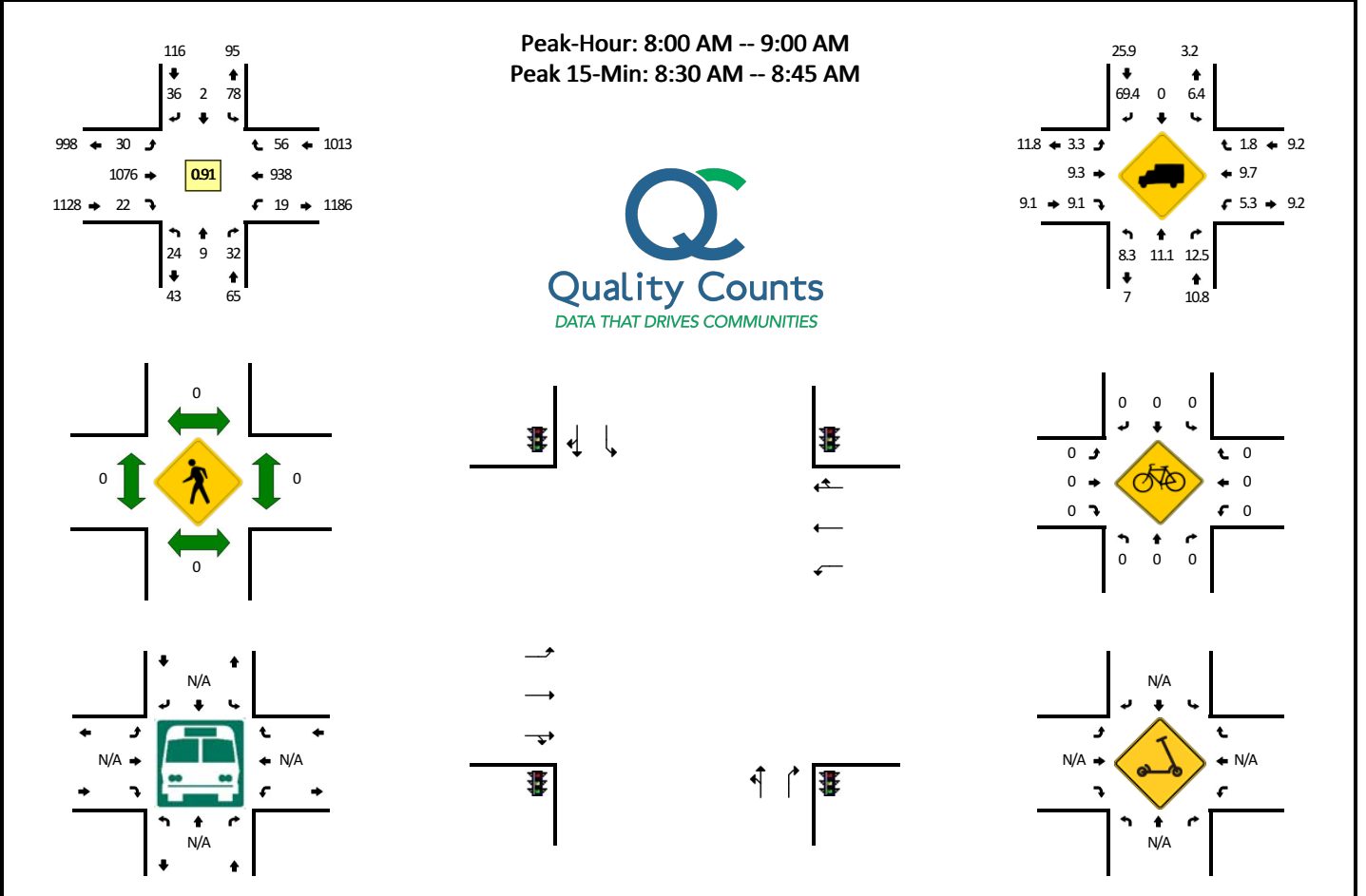
3751 FM 1105 Bldg A
Georgetown, TX 78626
512-832-8650

File Name : Site 14 - RM 12 and Old Fitzhugh Rd- PM
Site Code : 14
Start Date : 1/30/2018
Page No : 2

Start Time	RM 12 Southbound					Old Fitzhugh Rd Westbound					RM 12 Northbound					Old Fitzhugh Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	17:00					16:30					17:00					16:15					
+0 mins.	0	129	16	0	145	2	0	0	0	2	1	143	10	0	154	26	0	3	0	29	
+15 mins.	3	109	29	0	141	5	0	0	0	5	1	124	4	0	129	33	1	3	0	37	
+30 mins.	1	159	22	0	182	4	1	3	0	8	0	128	3	0	131	17	0	0	0	17	
+45 mins.	2	162	23	0	187	2	1	1	0	4	3	142	3	0	148	24	2	1	0	27	
Total Volume	6	559	90	0	655	13	2	4	0	19	5	537	20	0	562	100	3	7	0	110	
% App. Total	0.9	85.3	13.7	0		68.4	10.5	21.1	0		0.9	95.6	3.6	0		90.9	2.7	6.4	0		
PHF	.500	.863	.776	.000	.876	.650	.500	.333	.000	.594	.417	.939	.500	.000	.912	.758	.375	.583	.000	.743	
Vehicles	6	551	88	0	645	13	2	4	0	19	5	527	20	0	552	100	3	7	0	110	
% Vehicles																					
Heavy Vehicles	0	8	2	0	10	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	
% Heavy Vehicles	0	1.4	2.2	0	1.5	0	0	0	0	0	0	1.9	0	0	1.8	0	0	0	0	0	

LOCATION: Roger Hanks Pkwy -- US 290
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207101
DATE: Tue, Mar 10 2020

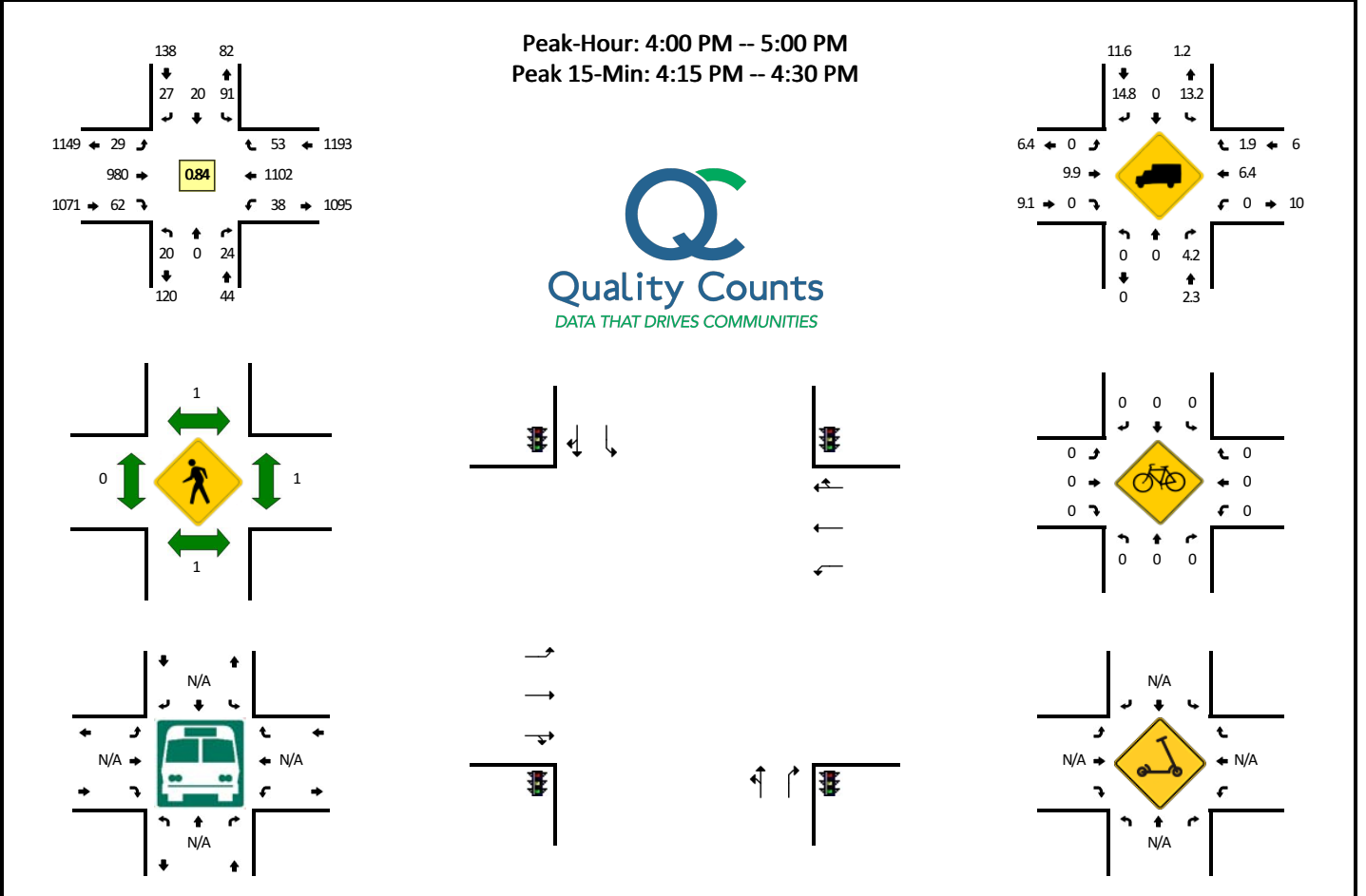


15-Min Count Period Beginning At	Roger Hanks Pkwy (Northbound)				Roger Hanks Pkwy (Southbound)				US 290 (Eastbound)				US 290 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	1	1	0	4	0	0	0	1	163	1	0	0	117	15	0	304	
7:15 AM	3	1	13	0	8	0	0	0	2	236	0	0	5	144	9	0	421	
7:30 AM	4	1	13	0	8	0	0	0	2	234	1	0	9	173	9	0	454	
7:45 AM	4	0	7	0	15	0	3	0	2	202	2	0	8	211	21	0	475	1654
8:00 AM	3	2	6	0	16	0	1	0	5	213	3	0	6	178	11	0	444	1794
8:15 AM	6	1	14	0	22	0	12	0	6	282	6	0	2	237	19	0	607	1980
8:30 AM	9	3	4	0	20	1	18	0	12	289	7	0	7	258	13	0	641	2167
8:45 AM	6	3	8	0	20	1	5	0	7	292	6	0	4	265	13	0	630	2322
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	36	12	16	0	80	4	72	0	48	1156	28	0	28	1032	52	0	2564	
Heavy Trucks	0	0	0		4	0	60		0	96	4		0	92	0		256	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																	0	

Comments:

LOCATION: Roger Hanks Pkwy -- US 290
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207102
DATE: Tue, Mar 10 2020



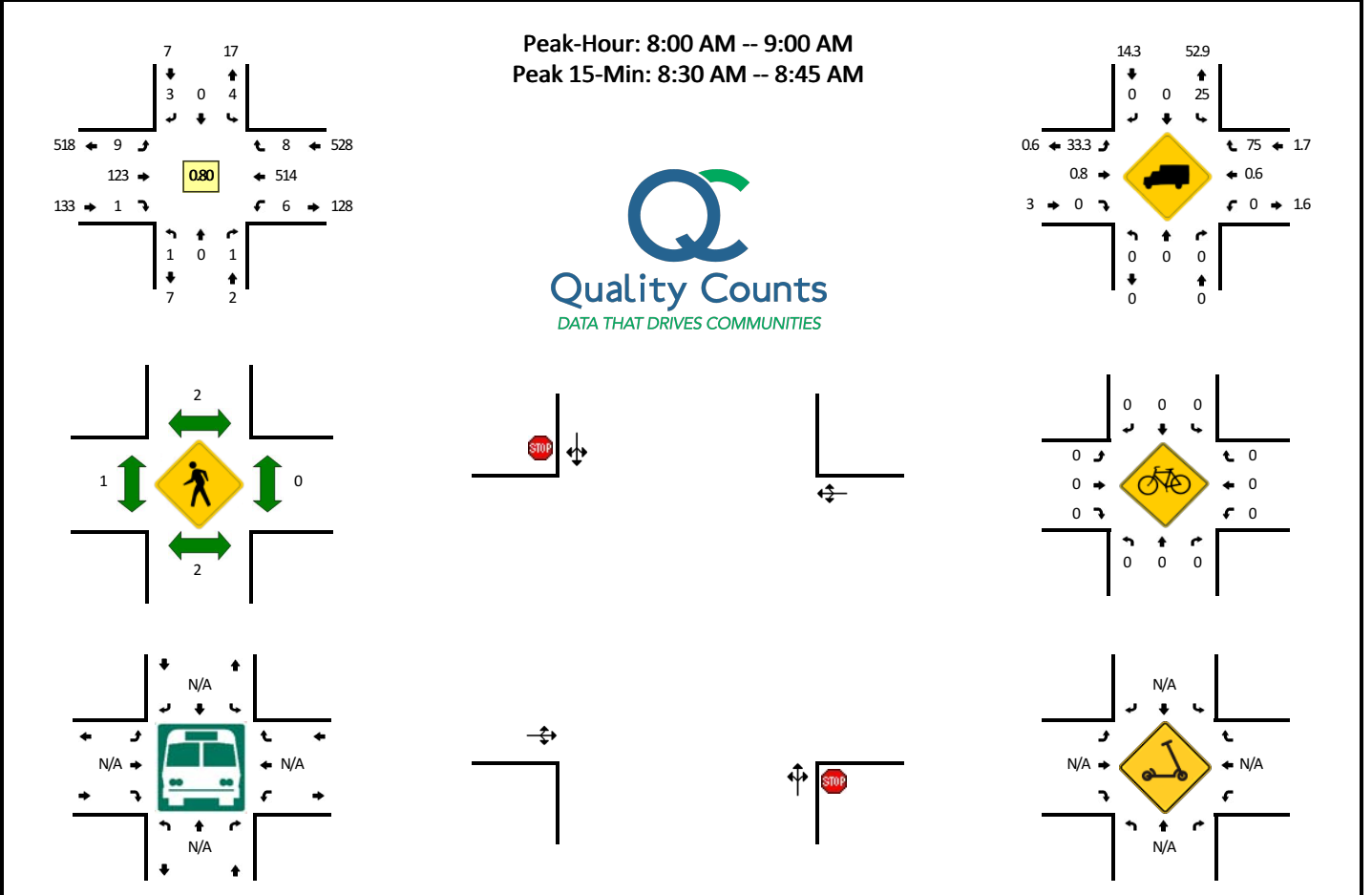
15-Min Count Period Beginning At	Roger Hanks Pkwy (Northbound)				Roger Hanks Pkwy (Southbound)				US 290 (Eastbound)				US 290 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	8	0	11	1	4	0	7	230	7	0	6	272	13	0	562	
4:15 PM	3	0	5	0	39	7	7	0	15	310	20	0	10	302	13	0	731	
4:30 PM	6	0	8	0	21	7	9	0	1	233	26	0	14	266	18	0	609	
4:45 PM	8	0	3	0	20	5	7	0	6	207	9	0	8	262	9	0	544	2446
5:00 PM	8	1	7	0	20	2	2	0	1	202	9	0	10	237	13	0	512	2396
5:15 PM	7	3	5	0	27	0	1	0	1	272	3	0	6	253	20	0	598	2263
5:30 PM	0	1	3	0	20	1	1	0	4	238	6	0	6	238	17	0	535	2189
5:45 PM	6	0	5	0	15	0	7	0	4	227	4	0	6	278	22	0	574	2219

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	0	20	0	156	28	28	0	60	1240	80	0	40	1208	52	0	2924
Heavy Trucks	0	0	4		32	0	0		0	108	0		0	80	0		224
Buses																	0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	0

Comments:

LOCATION: Baird Ln -- Sportsplex Dr
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207103
DATE: Tue, Mar 10 2020

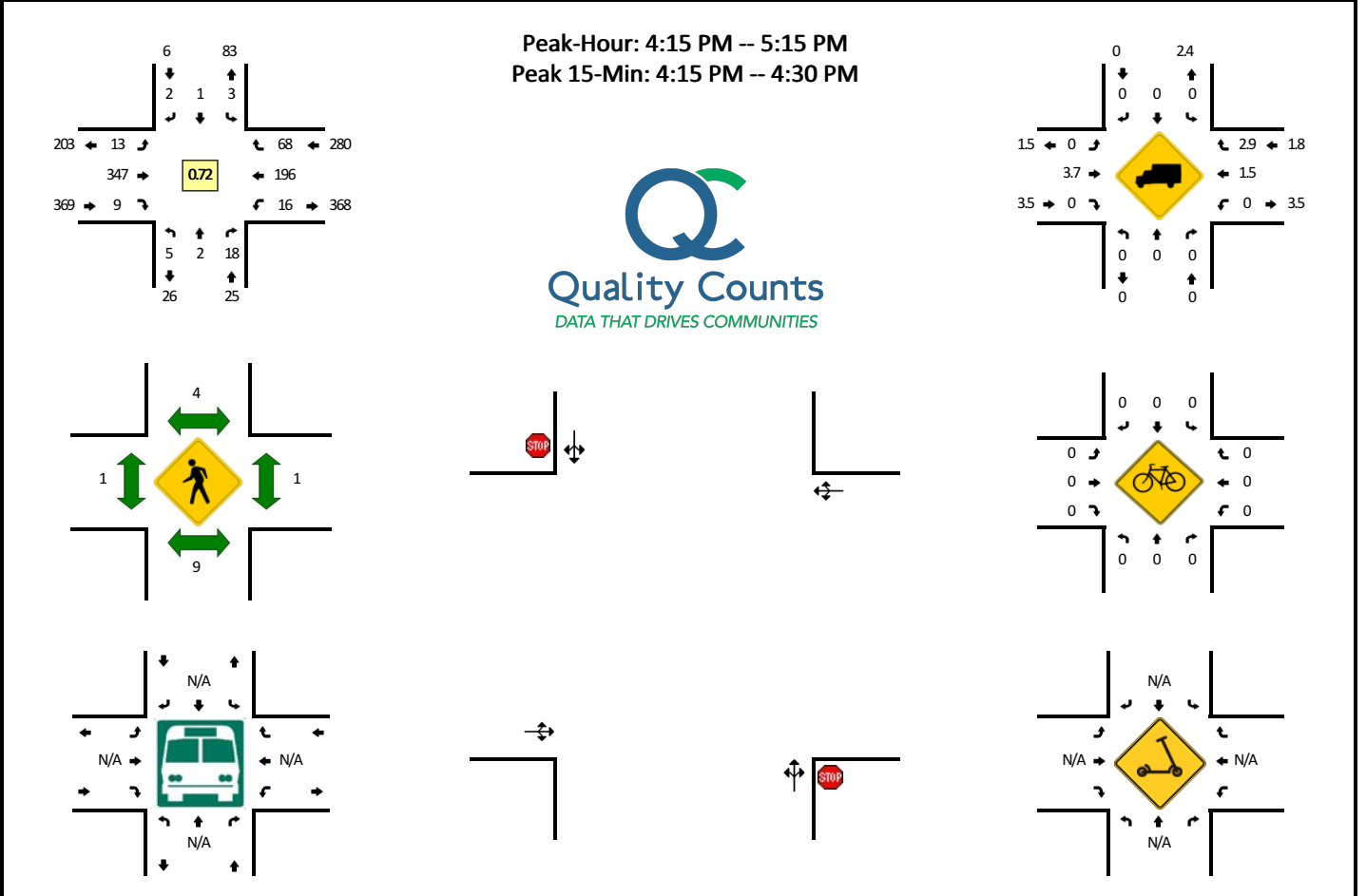


15-Min Count Period Beginning At	Baird Ln (Northbound)				Baird Ln (Southbound)				Sportsplex Dr (Eastbound)				Sportsplex Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	12	0	0	15	
7:15 AM	0	0	0	0	0	0	0	0	0	23	0	0	0	21	0	0	44	
7:30 AM	0	0	0	0	0	0	0	0	0	54	1	0	1	70	0	0	126	
7:45 AM	0	0	2	0	0	0	0	0	2	11	0	0	2	79	1	0	97	282
8:00 AM	0	0	0	0	0	0	0	0	0	18	0	0	3	113	1	0	135	402
8:15 AM	0	0	1	0	0	0	2	0	2	36	0	0	1	134	0	0	176	534
8:30 AM	1	0	0	0	2	0	0	0	5	43	1	0	0	154	4	0	210	618
8:45 AM	0	0	0	0	2	0	1	0	2	26	0	0	2	113	3	0	149	670
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	0	0	8	0	0	0	20	172	4	0	0	616	16	0	840	
Heavy Trucks	0	0	0	0	4	0	0	0	4	0	0	0	0	0	12	0	20	
Buses																		
Pedestrians		0				4				4				0			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Baird Ln -- Sportsplex Dr
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207104
DATE: Tue, Mar 10 2020



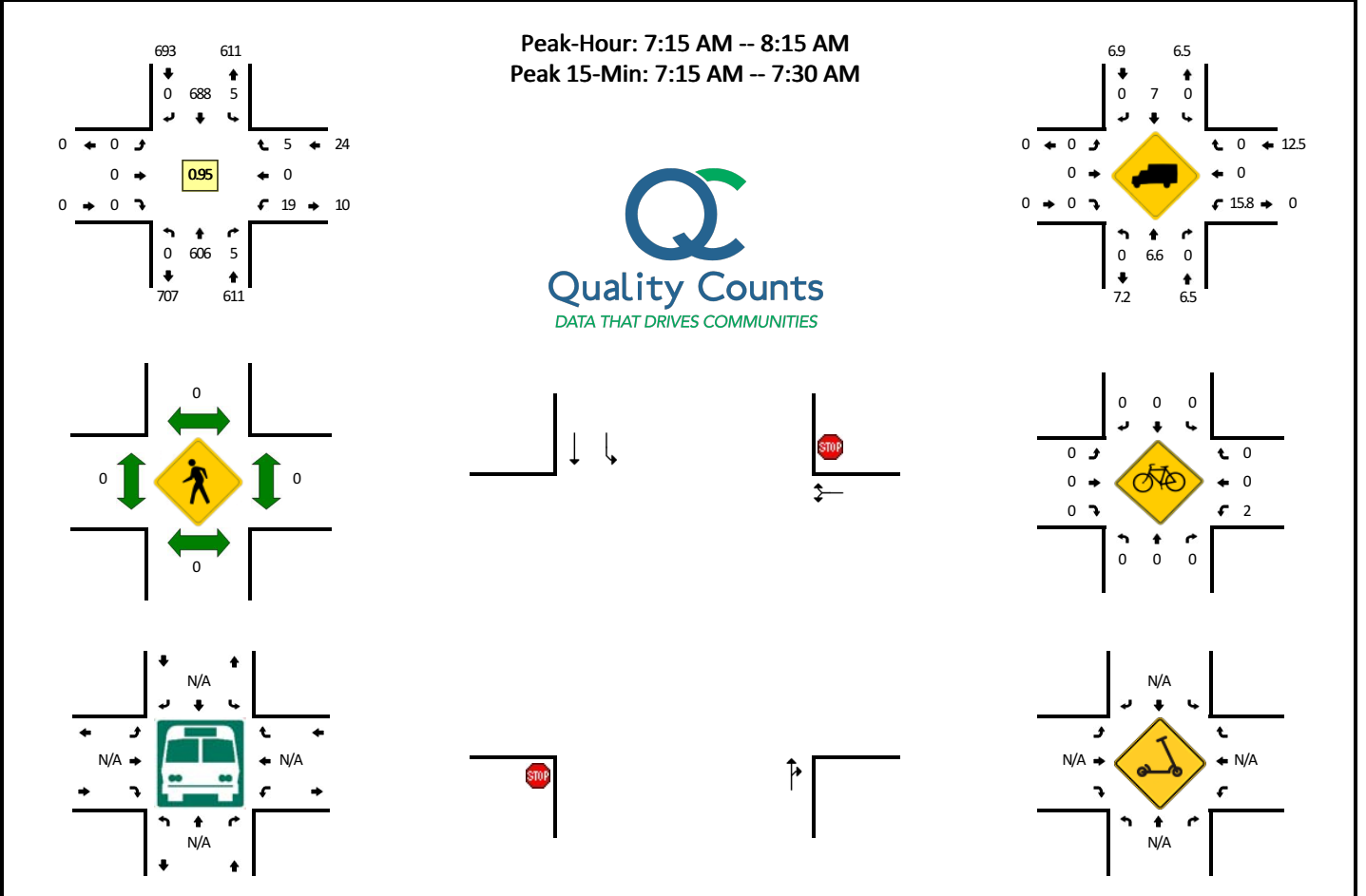
15-Min Count Period Beginning At	Baird Ln (Northbound)				Baird Ln (Southbound)				Sportsplex Dr (Eastbound)				Sportsplex Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	0	5	0	0	0	0	0	0	50	4	0	4	89	1	0	155	
4:15 PM	1	0	5	0	0	0	1	0	0	147	3	0	5	75	0	0	237	
4:30 PM	2	0	2	0	1	0	0	0	2	66	1	0	5	44	5	0	128	
4:45 PM	1	1	7	0	1	0	0	0	6	68	3	0	2	39	21	0	149	669
5:00 PM	1	1	4	0	1	1	1	0	5	66	2	0	4	38	42	0	166	680
5:15 PM	2	0	5	0	3	1	1	0	5	81	1	0	3	41	63	0	206	649
5:30 PM	3	0	8	0	5	0	2	0	2	45	1	0	3	38	41	0	148	669
5:45 PM	3	0	5	0	7	0	3	0	10	26	0	0	4	35	44	0	137	657

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	20	0	0	0	4	0	0	588	12	0	20	300	0	0	948
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	4	0	0	12
Buses																	
Pedestrians		24				12				0				4			40
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

LOCATION: RR 12 -- Brookside St
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207105
DATE: Tue, Mar 10 2020



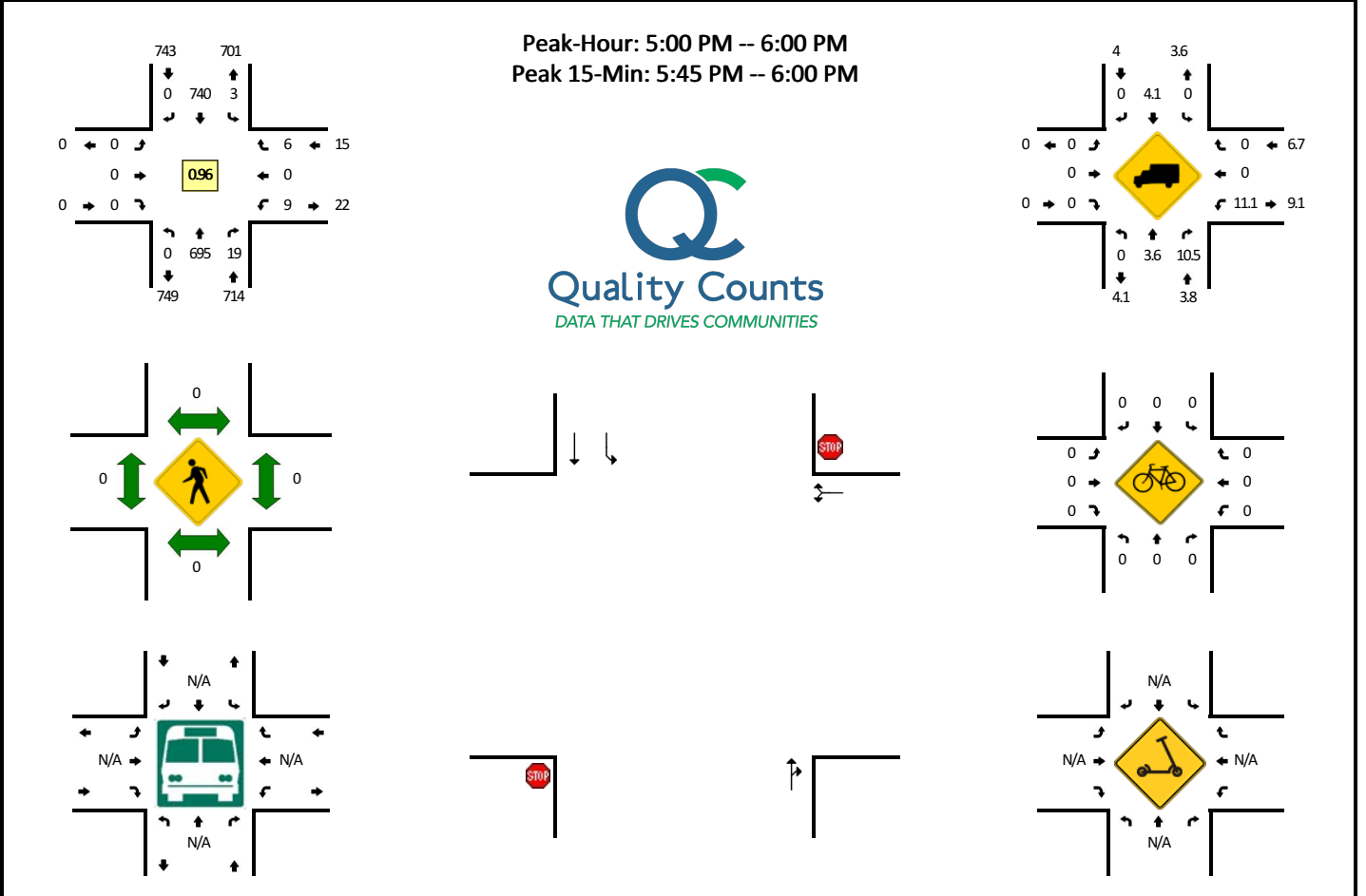
15-Min Count Period Beginning At	RR 12 (Northbound)				RR 12 (Southbound)				Brookside St (Eastbound)				Brookside St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	109	1	0	0	94	0	0	0	0	0	0	3	0	0	0	207	
7:15 AM	0	197	1	0	3	140	0	0	0	0	0	0	5	0	3	0	349	
7:30 AM	0	157	1	0	2	187	0	0	0	0	0	0	1	0	1	0	349	
7:45 AM	0	128	2	0	0	190	0	0	0	0	0	0	9	0	0	0	329	1234
8:00 AM	0	124	1	0	0	171	0	0	0	0	0	0	4	0	1	0	301	1328
8:15 AM	0	120	0	0	1	161	0	0	0	0	0	0	4	0	0	0	286	1265
8:30 AM	0	134	3	0	1	167	0	0	0	0	0	0	2	0	0	0	307	1223
8:45 AM	0	166	2	0	1	143	0	0	0	0	0	0	2	0	1	0	315	1209

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	788	4	0	12	560	0	0	0	0	0	0	20	0	12	0	1396
Heavy Trucks	0	56	0		0	28	0		0	0	0		4	0	0		88
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		4	0	0		4
Scooters																	

Comments:

LOCATION: RR 12 -- Brookside St
CITY/STATE: Dripping Springs, TX

QC JOB #: 15207106
DATE: Tue, Mar 10 2020



15-Min Count Period Beginning At	RR 12 (Northbound)				RR 12 (Southbound)				Brookside St (Eastbound)				Brookside St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	145	0	0	2	204	0	0	0	0	0	0	1	0	1	0	353	
4:15 PM	0	180	2	0	0	188	0	0	0	0	0	0	1	0	2	0	373	
4:30 PM	0	182	1	0	1	146	0	0	0	0	0	0	0	0	1	0	331	
4:45 PM	0	149	1	0	0	169	0	0	0	0	0	0	2	0	0	0	321	1378
5:00 PM	0	179	3	0	0	193	0	0	0	0	0	0	3	0	1	0	379	1404
5:15 PM	0	160	5	0	2	208	0	0	0	0	0	0	3	0	1	0	379	1410
5:30 PM	0	187	7	0	0	132	0	0	0	0	0	0	1	0	3	0	330	1409
5:45 PM	0	169	4	0	1	207	0	0	0	0	0	0	2	0	1	0	384	1472

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	676	16	0	4	828	0	0	0	0	0	0	8	0	4	0	1536
Heavy Trucks	0	28	4		0	32	0		0	0	0		4	0	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

Type of report: Tube Count - Volume Data

LOCATION: RR 12 South of Brookside St						QC JOB #: 15207107				
SPECIFIC LOCATION:						DIRECTION: NB				
CITY/STATE: Dripping Springs, TX						DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		18				18			18	
01:00 AM		9				9			9	
02:00 AM		3				3			3	
03:00 AM		7				7			7	
04:00 AM		9				9			9	
05:00 AM		38				38			38	
06:00 AM		247				247			247	
07:00 AM		606				606			606	
08:00 AM		562				562			562	
09:00 AM		459				459			459	
10:00 AM		451				451			451	
11:00 AM		460				460			460	
12:00 PM		422				422			422	
01:00 PM		467				467			467	
02:00 PM		524				524			524	
03:00 PM		553				553			553	
04:00 PM		666				666			666	
05:00 PM		721				721			721	
06:00 PM		602				602			602	
07:00 PM		480				480			480	
08:00 PM		395				395			395	
09:00 PM		160				160			160	
10:00 PM		83				83			83	
11:00 PM		44				44			44	
Day Total		7986				7986			7986	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 606				7:00 AM 606			7:00 AM 606	
PM Peak Volume		5:00 PM 721				5:00 PM 721			5:00 PM 721	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: RR 12 South of Brookside St SPECIFIC LOCATION: CITY/STATE: Dripping Springs, TX						QC JOB #: 15207107 DIRECTION: NB, SB DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		42				42			42	
01:00 AM		20				20			20	
02:00 AM		6				6			6	
03:00 AM		18				18			18	
04:00 AM		40				40			40	
05:00 AM		131				131			131	
06:00 AM		506				506			506	
07:00 AM		1263				1263			1263	
08:00 AM		1237				1237			1237	
09:00 AM		882				882			882	
10:00 AM		936				936			936	
11:00 AM		984				984			984	
12:00 PM		892				892			892	
01:00 PM		910				910			910	
02:00 PM		1011				1011			1011	
03:00 PM		1220				1220			1220	
04:00 PM		1402				1402			1402	
05:00 PM		1471				1471			1471	
06:00 PM		1194				1194			1194	
07:00 PM		808				808			808	
08:00 PM		617				617			617	
09:00 PM		284				284			284	
10:00 PM		140				140			140	
11:00 PM		62				62			62	
Day Total		16076				16076			16076	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1263				7:00 AM 1263			7:00 AM 1263	
PM Peak Volume		5:00 PM 1471				5:00 PM 1471			5:00 PM 1471	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: RR 12 North of Brookside St							QC JOB #: 15207108			
SPECIFIC LOCATION:							DIRECTION: NB			
CITY/STATE: Dripping Springs, TX							DATE: Mar 10 2020 - Mar 10 2020			
Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
	10 Mar 20					Hourly Traffic			Hourly Traffic	
12:00 AM		18				18			18	
01:00 AM		10				10			10	
02:00 AM		3				3			3	
03:00 AM		7				7			7	
04:00 AM		9				9			9	
05:00 AM		40				40			40	
06:00 AM		247				247			247	
07:00 AM		622				622			622	
08:00 AM		595				595			595	
09:00 AM		454				454			454	
10:00 AM		453				453			453	
11:00 AM		482				482			482	
12:00 PM		443				443			443	
01:00 PM		492				492			492	
02:00 PM		547				547			547	
03:00 PM		576				576			576	
04:00 PM		692				692			692	
05:00 PM		727				727			727	
06:00 PM		596				596			596	
07:00 PM		474				474			474	
08:00 PM		392				392			392	
09:00 PM		156				156			156	
10:00 PM		77				77			77	
11:00 PM		39				39			39	
Day Total		8151				8151			8151	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 622				7:00 AM 622			7:00 AM 622	
PM Peak Volume		5:00 PM 727				5:00 PM 727			5:00 PM 727	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: RR 12 North of Brookside St						QC JOB #: 15207108				
SPECIFIC LOCATION:						DIRECTION: NB				
CITY/STATE: Dripping Springs, TX						DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		18				18			18	
01:00 AM		10				10			10	
02:00 AM		3				3			3	
03:00 AM		7				7			7	
04:00 AM		9				9			9	
05:00 AM		40				40			40	
06:00 AM		247				247			247	
07:00 AM		622				622			622	
08:00 AM		595				595			595	
09:00 AM		454				454			454	
10:00 AM		453				453			453	
11:00 AM		482				482			482	
12:00 PM		443				443			443	
01:00 PM		492				492			492	
02:00 PM		547				547			547	
03:00 PM		576				576			576	
04:00 PM		692				692			692	
05:00 PM		727				727			727	
06:00 PM		596				596			596	
07:00 PM		474				474			474	
08:00 PM		392				392			392	
09:00 PM		156				156			156	
10:00 PM		77				77			77	
11:00 PM		39				39			39	
Day Total		8151				8151			8151	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 622				7:00 AM 622			7:00 AM 622	
PM Peak Volume		5:00 PM 727				5:00 PM 727			5:00 PM 727	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: RR 12 North of Brookside St SPECIFIC LOCATION: CITY/STATE: Dripping Springs, TX						QC JOB #: 15207108 DIRECTION: NB, SB DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		40				40			40	
01:00 AM		21				21			21	
02:00 AM		6				6			6	
03:00 AM		20				20			20	
04:00 AM		41				41			41	
05:00 AM		131				131			131	
06:00 AM		489				489			489	
07:00 AM		1260				1260			1260	
08:00 AM		1262				1262			1262	
09:00 AM		880				880			880	
10:00 AM		941				941			941	
11:00 AM		999				999			999	
12:00 PM		916				916			916	
01:00 PM		929				929			929	
02:00 PM		1033				1033			1033	
03:00 PM		1226				1226			1226	
04:00 PM		1441				1441			1441	
05:00 PM		1463				1463			1463	
06:00 PM		1198				1198			1198	
07:00 PM		790				790			790	
08:00 PM		599				599			599	
09:00 PM		269				269			269	
10:00 PM		124				124			124	
11:00 PM		55				55			55	
Day Total		16133				16133			16133	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		8:00 AM 1262				8:00 AM 1262			8:00 AM 1262	
PM Peak Volume		5:00 PM 1463				5:00 PM 1463			5:00 PM 1463	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: RR 12 North of Brookside St SPECIFIC LOCATION: CITY/STATE: Dripping Springs, TX						QC JOB #: 15207108 DIRECTION: SB DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		22				22			22	
01:00 AM		11				11			11	
02:00 AM		3				3			3	
03:00 AM		13				13			13	
04:00 AM		32				32			32	
05:00 AM		91				91			91	
06:00 AM		242				242			242	
07:00 AM		638				638			638	
08:00 AM		667				667			667	
09:00 AM		426				426			426	
10:00 AM		488				488			488	
11:00 AM		517				517			517	
12:00 PM		473				473			473	
01:00 PM		437				437			437	
02:00 PM		486				486			486	
03:00 PM		650				650			650	
04:00 PM		749				749			749	
05:00 PM		736				736			736	
06:00 PM		602				602			602	
07:00 PM		316				316			316	
08:00 PM		207				207			207	
09:00 PM		113				113			113	
10:00 PM		47				47			47	
11:00 PM		16				16			16	
Day Total		7982				7982			7982	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		8:00 AM 667				8:00 AM 667			8:00 AM 667	
PM Peak Volume		4:00 PM 749				4:00 PM 749			4:00 PM 749	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: Brookside St East of RR 12 SPECIFIC LOCATION: CITY/STATE: Dripping Springs, TX						QC JOB #: 15207109 DIRECTION: EB DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		1				1			1	
01:00 AM		0				0			0	
02:00 AM		0				0			0	
03:00 AM		0				0			0	
04:00 AM		0				0			0	
05:00 AM		0				0			0	
06:00 AM		3				3			3	
07:00 AM		10				10			10	
08:00 AM		10				10			10	
09:00 AM		7				7			7	
10:00 AM		10				10			10	
11:00 AM		5				5			5	
12:00 PM		7				7			7	
01:00 PM		9				9			9	
02:00 PM		4				4			4	
03:00 PM		15				15			15	
04:00 PM		7				7			7	
05:00 PM		24				24			24	
06:00 PM		20				20			20	
07:00 PM		12				12			12	
08:00 PM		13				13			13	
09:00 PM		6				6			6	
10:00 PM		5				5			5	
11:00 PM		6				6			6	
Day Total		174				174			174	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 10				7:00 AM 10			7:00 AM 10	
PM Peak Volume		5:00 PM 24				5:00 PM 24			5:00 PM 24	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: Brookside St East of RR 12 SPECIFIC LOCATION: CITY/STATE: Dripping Springs, TX						QC JOB #: 15207109 DIRECTION: EB, WB DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		3				3			3	
01:00 AM		0				0			0	
02:00 AM		0				0			0	
03:00 AM		0				0			0	
04:00 AM		0				0			0	
05:00 AM		3				3			3	
06:00 AM		18				18			18	
07:00 AM		35				35			35	
08:00 AM		24				24			24	
09:00 AM		19				19			19	
10:00 AM		18				18			18	
11:00 AM		9				9			9	
12:00 PM		13				13			13	
01:00 PM		15				15			15	
02:00 PM		11				11			11	
03:00 PM		24				24			24	
04:00 PM		15				15			15	
05:00 PM		40				40			40	
06:00 PM		34				34			34	
07:00 PM		24				24			24	
08:00 PM		22				22			22	
09:00 PM		12				12			12	
10:00 PM		13				13			13	
11:00 PM		6				6			6	
Day Total		358				358			358	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 35				7:00 AM 35			7:00 AM 35	
PM Peak Volume		5:00 PM 40				5:00 PM 40			5:00 PM 40	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Type of report: Tube Count - Volume Data

LOCATION: Brookside St East of RR 12						QC JOB #: 15207109				
SPECIFIC LOCATION:						DIRECTION: WB				
CITY/STATE: Dripping Springs, TX						DATE: Mar 10 2020 - Mar 10 2020				
Start Time	Mon 10 Mar 20	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		2				2			2	
01:00 AM		0				0			0	
02:00 AM		0				0			0	
03:00 AM		0				0			0	
04:00 AM		0				0			0	
05:00 AM		3				3			3	
06:00 AM		15				15			15	
07:00 AM		25				25			25	
08:00 AM		14				14			14	
09:00 AM		12				12			12	
10:00 AM		8				8			8	
11:00 AM		4				4			4	
12:00 PM		6				6			6	
01:00 PM		6				6			6	
02:00 PM		7				7			7	
03:00 PM		9				9			9	
04:00 PM		8				8			8	
05:00 PM		16				16			16	
06:00 PM		14				14			14	
07:00 PM		12				12			12	
08:00 PM		9				9			9	
09:00 PM		6				6			6	
10:00 PM		8				8			8	
11:00 PM		0				0			0	
Day Total		184				184			184	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 25				7:00 AM 25			7:00 AM 25	
PM Peak Volume		5:00 PM 16				5:00 PM 16			5:00 PM 16	

Comments:

Report generated on 3/12/2020 11:20 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

Appendix C: Site Trip Generation

Appendix D: 2015 Approved Bury Report

BURY

FINAL TRAFFIC STUDY

*Heritage Dripping Springs
Dripping Springs, Hays County, Texas*

March 25, 2016

TBPE F-1048



LET'S SOLVE IT.

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CERTIFICATION STATEMENT

I hereby certify that this report complies with Ordinance requirements and applicable technical requirements of the City of Dripping Springs and the Texas Department of Transportation and is complete and accurate to the best of my knowledge.

Nicola Gheno 117180
(Signature of Responsible Engineer) Texas P.E. No.

03/25/2016
Date

Nicola Gheno
Signature of Submitter

03/25/2016
Date

Nicola Gheno, P.E., PTOE
Printed Name of Submitter

03/25/2016
Date

INTRODUCTION

STUDY PURPOSE AND OBJECTIVE

The purpose of this report is to summarize the findings of the Traffic Study performed by Bury, Inc. (Bury) for the proposed Heritage Dripping Springs development. The proposed development is a residential development located west of Ranch Road (RM) 12 and north of US Highway (US) 290 within the City of Dripping Springs, Hays County, Texas. A site location map of the proposed development is included as *Exhibit 1*. For the purposes of this analysis, this report documents the estimated traffic volumes to be generated by the development in two (2) phases described below and understand the impact of the site on the roadway network. The site is currently undeveloped. The scope of this study includes the following:

- Data collection of the existing roadway system;
- Estimate the number of trips to be generated by the development in two (2) phases. Phase I will analyze Parcels B, C and E to be included with the 2018 build-out year and Phase II will analyze Parcels A, D and F to be included with the 2022 build-out year;
- Distributing new trips to the proposed build-out at year 2018 for Phase I and year 2022 for Phase II;
- Evaluating capacity of the study area intersections using the latest version of Synchro and SimTraffic software for the 2015 Existing , 2018 Forecasted (future, no-build), 2018 Phase I Site+Forecasted (future-build) conditions, 2022 Forecasted (future, build with Phase 1) and 2022 Phase II Site+Forecasted (future-build) conditions;
- Evaluating the segment capacity with and without future connections (to be made by others) tying into Mercer Street, Old Fitzhugh Road, and Springlake Drive. The following roadway segments for each condition will be analyzed utilizing HCS 2010;
- Brookside Street Extension between RM 12 and US 290 (two (2) locations at RM 12 and US 290)
- Baird Lane between Sportsplex Drive and Brookside Street
- Proposed N/S Road between Brookside Street and Springlake Drive
- Proposed N/S Road between Mercer Street and Baird Lane
- Proposed E/W Road between Old Fitzhugh Road and Baird Lane
- Suggest roadway or intersection improvements to mitigate significant impacts, if any, due to the proposed development.

As mentioned above the proposed development has been analyzed as a 2-phase single-family residential development including the following land uses:

- Phase I (2018 Build-Out) will include a total of 458 single-family dwelling units associated with Parcel B (213 dwelling units), Parcel C (111 dwelling units) and Parcel E (134 dwelling units)
- Phase II (2022 Build-Out) will include a total of 243 single-family dwelling units associated with Parcel A (115 dwelling units), Parcel D (72 dwelling units) and Parcel F (56 dwelling units)

The conceptual site plan for the proposed development has been included within the Appendix of this report as **Exhibit 2**. The Traffic Study scoping documents with the City of Dripping Springs, Hays County, and Texas Department of Transportation (TxDOT) defining the parameters of this report is contained within the Appendix as **Exhibit 3**.

STUDY METHODOLOGY

This study consists of five (5) major components listed below.

- Data Collection of the existing roadway system;
- Trip Generation – An estimation of new trips generated by the proposed development was determined using the Institute of Transportation Engineers Trip Generation Handbook, 9th Edition;
- Trip Distribution – The origins and destinations of site-related trips were determined by comparing existing traffic patterns on the study area roadways, and by observing the existing land use in the area;
- Trip Assignment – New trips were assigned to the completion of the development in 2018 as well as 2022; and
- Analysis – An operational and capacity analysis of the surrounding roadway network was completed for the 2015 Existing, 2018 Forecasted, 2018 Phase I Site + Forecasted, 2022 Forecasted and 2022 Phase II Site+Forecasted conditions.

DATA COLLECTION OF ROADWAY SYSTEM

Manual TMC's for the peak periods were performed between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on May 14, 2015. All independent schools districts were in session at the time counts were captured. All TMC data is included within the Appendix of this report as **Exhibit 4** and represent current traffic conditions within the study area roadway network.

A site investigation was performed to understand the existing conditions of the roadway network within the analysis. Intersection geometries, traffic behavior, and unique characteristics were noted during the investigation. The following provides a description of the roadway system within the study area based upon the data obtained in the field:

- US 290 is a 4-lane roadway with a 14 feet Two-Way-Left-Turn-Lane (TWLTL) in the center located south of the proposed development. The posted speed limit along the US 290 is 55 miles per hour (mph). Based on HDR's Average Daily Traffic (ADT) counts taken on May 4, 2015, US 290 experienced 32,085 vehicles per day.
- RM 12 is a 2-lane roadway located east of the proposed development. The posted speed limit along RM 12 is 45 mph. Based on HDR's Average Daily Traffic (ADT) counts taken on May 4, 2015, RM 12 experienced 11,272 vehicles per day. RM 12 will be widened to a 3-lane section in the vicinity of Old Fitzhugh Road by TxDOT was considered for all future conditions.
- Brookside Street is an existing 2-lane local residential roadway located east of the proposed development with a posted speed limit of 25 mph. Brookside Street forms a three-leg stop controlled intersection with RM 12 with stop control along Brookside Street. Brookside Street is proposed to be extended through the proposed development from RM 12 to the western property limits and serve as the primary internal collector roadway for the proposed development. Further extension on Brookside Street will be completed by others and is expected to align and tie-into US 290 at existing intersection of US 290 with Roger Hanks Parkway. The proposed cross section for Brookside Street internal to the development will be a 2-lane roadway with bike lanes on either side. Additional, slip streets adjacent to Brookside Street within the development are being utilized to promote ease of access to and from the collector.
- Springlake Drive is an existing 2-lane local roadway located north of the proposed development with a posted speed limit of 30 mph. Springlake Drive forms a Two-Way Stop Control intersection (TWSC) with RM 12 with stop control along Springlake Drive. An internal roadway connection is expected to be built by others and tie-into Springlake Drive from the proposed development.
- Sportsplex Drive is an existing 3-lane roadway with a 12 foot center Fire Lane that can only be utilized by emergency vehicles. Sportsplex Drive is located southwest of the proposed development with a posted speed limit of 30 mph. Sportsplex Drive primarily serves the Dripping Springs High School.
- Baird Lane is an existing 2-lane local roadway located west of the proposed development with a posted speed limit of 25 mph. Baird Lane is expected to tie into the proposed Brookside Street extension and will serve as an internal residential roadway for the proposed development. Baird Lane forms a Two-Way Stop Control intersection (TWSC) with stop control along Baird Lane and Library Driveway. The proposed cross section for Baird Lane internal to the development will be a two-way shared drive.

ASSUMPTIONS

As part of the proposed Dripping Springs development, various improvements have been assumed to occur based on the Development Agreements between Developers and the City of Dripping Springs. These improvements have been assumed in the 2018 Phase I Site+Forecasted conditions and 2022 Phase II Site + Forecasted conditions. The following improvements have been assumed as part of the proposed Dripping Springs development:

By Heritage Development:

- Extension of Brookside Street from RM 12 to western property limits
- Extension of Baird Lane to Brookside Street

By Others:

- Extension of Brookside Street/Roger Hanks from US 290 to western property limits

The extension of Brookside Street will be completed in multiple phases, however for the purposes of this analysis, it is assumed that Brookside Street will be extended from RM 12 Road to tie-into and align with US 290 at existing intersection of US 290/Roger Hanks Parkway. Brookside Street is proposed to be extended through the proposed development from RM 12 to the western property limits and serve as the primary internal collector roadway for the proposed development. Further extension of Brookside Street will be completed by others and is expected to align and tie into US 290 at existing intersection of US 290 with Roger Hanks Parkway. It was assumed that when the Brookside extension to US 290 occurs, a signal will be installed by others and has been included within the Phase I and Phase II Site + Forecasted conditions.

The extension of Baird Lane will be completed in multiple phases, however for the purposes of this analysis, it is assumed that Baird Lane will be extended to tie-into the proposed extension of Brookside Street.

TRIP GENERATION

SITE TRAFFIC

The Dripping Springs development consists of 2-phase single family residential development. The proposed development will be 2-phase single-family residential development including the following land uses:

- Phase I (2018 Build-Out) will include a total of 458 single-family dwelling units associated with Parcel B (213 dwelling units), Parcel C (111 dwelling units) and Parcel E (134 dwelling units)
- Phase II (2022 Build-Out) will include a total of 243 single-family dwelling units associated with Parcel A (115 dwelling units), Parcel D (72 dwelling units) and Parcel F (56 dwelling units)

A summary of the proposed land use and intensity can be seen within **Table 1** below. The conceptual site plan for the proposed development has been included within the Appendix of this report as **Exhibit 2**.

Based on the proposed site plan, site generated trips were estimated using rates or equations per the recommendations and data contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition. The proposed development will generate approximately 4,637 unadjusted daily trips by Phase I full-build out in 2018 and 2,586 unadjusted daily trips by Phase II full-build out in 2022. **Table 1** provides a detailed summary of unadjusted traffic production for each land use, which is directly related to the site plan. The trip generation outputs with associated rates or equations have been included as **Exhibit 3** within the Appendix of this report.

TABLE 1 - SUMMARY OF UNADJUSTED DAILY AND PEAK HOUR TRIP GENERATION

ITE Code	Land Use	Size	Units	24-Hour Two-Way Volume	AM Peak Hour			PM Peak Hour		
					Enter	Exit	Total	Enter	Exit	Total
Phase I - 2018										
210	Parcel B: Single Family	213	DU	2,106	40	119	160	131	77	208
210	Parcel C: Single Family	111	DU	1,156	22	65	87	72	43	115
210	Parcel E: Single Family	134	DU	1,375	26	78	104	86	51	137
Phase I Subtotal		458	DU	4,637	88	262	351	289	171	460
Phase II - 2022										
210	Parcel A: Single Family	115	DU	1,194	23	67	90	75	44	119
210	Parcel D: Single Family	72	DU	776	15	45	60	49	29	78
210	Parcel F: Single Family	56	DU	616	12	37	49	39	23	62
Phase II Subtotal		243	DU	2,586	50	149	199	163	96	259
Total Proposed Development		701	DU	7,223	138	411	550	452	267	719

Pass-by and internal trips can account for a significant portion of site generated traffic. Internal trips use only internal roadways within the site traveling from one land use to another. Given the land uses for this development, no pass-by or internal trip reductions have been applied for the purposes of this study.

TRIP DISTRIBUTION

The trip distribution for the site was evaluated utilizing the existing turning movement counts as well evaluating the area, locations of potential patrons of the development, and the location of similar developments within the vicinity. Phase I and II of this development will be residential land uses; therefore, trips will be primarily traveling to and from work during the peak hours. **Table 2** provides a summary of the directional trip distribution to and from the development as a whole. The traffic distribution map can also be seen in the Appendix of this report as **Exhibit 5**.

TABLE 2 - DIRECTIONAL DISTRIBUTION OF SITE TRAFFIC

Direction	% of Site Traffic
East US 290	55%
West US 290	15%
North RM 12	15%
South RM 12	15%

TRIP ASSIGNMENT

New site generated trips were assigned to the roadway network in accordance with the trip distribution patterns determined in the **Table 2** above. Trips to and from the site were assigned to each study area roadway and intersection. Additionally, the proposed extension of Brookside Street was also taken into consideration when determining the appropriate trip assignments.

The existing 2015 traffic volumes were increased using a conservative growth factor determined and agreed upon during the scoping agreement dated January 22, 2016. A 10% growth rate for the first five (5) years and a 5% growth rate for following two (2) years has been assumed for the roadway network. All traffic generated by the proposed Heritage Dripping Springs development was distributed throughout the study area and added to the forecasted condition AM and PM Peak Hour volumes, which are shown in **Exhibit 6**. No background developments were provided by the City of Dripping Springs to be evaluated as background traffic.

INTERSECTION ANALYSIS

INTERSECTION OPERATIONAL ANALYSIS

Following the assignment of projected traffic volumes onto the study area roadways, a Detailed Operational Analysis was undertaken using techniques outlined in the Highway Capacity Manual 2010 (HCM 2010). For the purposes of Traffic Operational Analyses, geometric conditions within the study area were input into the microcomputer based traffic model, Synchro, Version 9.0 (by David Husch in Trafficware, Synchro 9.0). Synchro follows procedures developed in the HCM 2010 and analyzes the study area in its entirety, rather than as a series of isolated intersections and driveways. All of the various scenarios, including Existing, Forecasted, and Site+Forecasted conditions for this study area were analyzed using Synchro. Traffic signal timing plans were obtained from TxDOT and these timing plans have been included with the Synchro Outputs for each scenario within the Appendix as *Exhibit 7*.

For the evaluation of existing and proposed conditions, measures of effectiveness were utilized such as intersection LOS and delay associated with these LOS. The intersection delay is the average control delay for the signalized intersection and is calculated by taking a volumes-weighted average of all the delays occurring at the intersection. The intersection delay for an unsignalized intersection was calculated by reporting the maximum delay for the stop controlled approaches. Control delay is defined as 'the component of delay that results when a traffic control device such as signal, stop etc. causes a lane group to reduce speed or brings traffic to a complete stop'. Control delay includes deceleration delay, queue move-up time, stopped delay, and acceleration delay. LOS refers to the operational conditions within a traffic stream and their perception by motorists in terms of delay, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. There are six (6) LOS capacity conditions for each roadway facility. These are designated from "A" to "F," with "A" representing a free-flow optimal best condition and "F" representing a congested forced flow worst condition. The LOS criteria for signalized and un-signalized intersections are different and is mainly because how the drivers function at a signalized versus un-signalized intersections. The general criteria associated with each LOS reported for signalized and un-signalized intersections are presented in **Table 3** below.

TABLE 3 - LEVEL OF SERVICE MEASUREMENT AND QUALITATIVE DESCRIPTIONS

Level of Service	Control Delay for Signalized Intersection (sec/veh)	Control Delay for Unsignalized Intersection (sec/veh)	Description
A	≤ 10	≤ 10	Good progression and short cycle lengths
B	> 10 and ≤ 20	> 10 and ≤ 15	Good progression or short cycle lengths, more vehicle stops
C	> 20 and ≤ 35	> 15 and ≤ 25	Fair progression and/or longer cycle lengths, some cycle failures
D	> 35 and ≤ 55	> 25 and ≤ 35	Congestion becomes noticeable, high volume-to-capacity ratio
E	> 55 and ≤ 80	> 35 and ≤ 50	Limit of acceptable delay, poor progression, long cycles, and/or high volume
F	> 80	> 50	Unacceptable to drivers, volume greater than capacity

Table 4, shown below summarizes the operations at each intersection under the Existing, Forecasted (no-build), and Site+Forecasted (build) conditions.

TABLE 4 - SUMMARY OF INTERSECTION LEVEL OF SERVICE

Intersection	2015		2018		2018		2022		2022	
	Existing LOS		Forecasted LOS		Site + Forecasted LOS		Forecasted LOS		Site + Forecasted LOS	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US 290 & RR 12	D	E	F	D	F	F	F	F	F	F
US 290 & Sportsplex Drive	B	C	D	E	F	F	F	F	F	F
RR 12 and Old Fitzhugh Road/Timberline Road	F	F	F	F	F	F	F	F	F	F
Brookside Street & RR 12	D	C	F	E	F	F	F	F	F	F
Brookside Street & N/S Extension	-	-	-	-	A	A	A	A	A	A
Brookside Street Roundabout	-	-	-	-	A	A	A	A	A	A
Baird Lane & Sportsplex Trail	-	-	-	-	D	C	F	E	F	F
US 290 & Roger Hanks Pkwy	C	D	B	B	A	A	B	E	A	E

The corresponding intersection delays associated with the levels of service have also been included in **Table 5**, below.

TABLE 5 – SUMMARY OF INTERSECTION DELAY IN SECONDS

Intersection	2015		2018		2018		2022		2022	
	Existing Delay (s)		Forecasted Delay (s)		Site + Forecasted LOS		Forecasted LOS		Site + Forecasted Delay (s)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US 290 & RR 12	43.1	71.6	119.8	180.9	148.1	219.6	294.2	391.5	313.2	415.0
US 290 & Sportsplex Drive	12.2	20.4	51.5	64.9	72.2	126.2	193.6	288.3	221.5	315.3
RR 12 and Old Fitzhugh Road/Timberline Road	51.4	162.3	305.2	859.1	609.4	1515.0	1542.0	6458.0	9854.5	8099.1
Brookside Street & RR 12	26.0	23.2	50.7	44.5	636.3	450.8	1007.1	3758.3	4802.2	28643.7
Brookside Street & N/S Extension	-	-	-	-	8.9	8.9	8.9	8.9	9.5	9.7
Brookside Street Roundabout	-	-	-	-	3.7	3.6	4.3	4.1	4.3	4.1
Baird Lane & Sportsplex Trail	-	-	-	-	31.1	24.9	64.7	42.5	228.0	84.2
US 290 & Roger Hanks Pkwy	19.7	34.7	17.5	19.0	7.9	8.5	11.4	55.6	11.5	58.1

A detailed table providing the level of service and delay for each approach has been included in the Appendix of this report as **Exhibit 8**. In order to mitigate the impacts to the intersections which are failing, improvements have been evaluated for the failing intersections. Additionally, a discussion of these improvements can be found in the Findings and Recommendations. The Synchro files associated with proposed improvements has been included within the Appendix of this report as **Exhibit 9**.

Table 6, shown below summarizes the operations at each intersection under the Forecasted, Site+Forecasted, and Site+Forecasted with Improvement conditions.

TABLE 6 - SUMMARY OF INTERSECTION LEVEL OF SERVICE WITH IMPROVEMENTS

Intersection	2018		2018		2018		2022		2022	
	Forecasted		Site +		S+F w/ Imps		Site +		S+F w/ Imps	
	LOS		LOS		LOS		LOS		LOS	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US 290 & RR 12	F	F	F	F	E	F	F	F	F	F
US 290 & Sportsplex Trail	D	E	F	F	D	F	F	F	F	F
RM 12 and Old Fitzhugh Road/Timberline Road	F	F	F	F	F	F	F	F	F	F
Brookside Street & RR 12	F	E	F	F	B	B	F	F	D	B
Brookside Street & N/S Extension	-	-	A	A	A	A	A	A	A	A
Brookside Street Roundabout	-	-	A	A	A	A	A	A	A	A
Baird Lane & Sportsplex Trail	-	-	D	C	D	C	F	F	F	F
US 290 & Roger Hanks Pkwy	B	B	A	A	A	A	A	E	B	D

The corresponding intersection delays associated with the levels of service have also been included in **Table 7**, below.

TABLE 7 - SUMMARY OF INTERSECTION LEVEL OF SERVICE WITH IMPROVEMENTS

Intersection	2018		2018		2018		2022		2022	
	Forecasted		Site +		S+F w/ Imps		Site +		S+F w/ Imps	
	Delay (s)		LOS		LOS		LOS		Delay (s)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US 290 & RR 12	119.8	180.9	148.1	219.6	78.6	82.6	313.2	415.0	732.6	212.2
US 290 & Sportsplex Trail	51.5	64.9	72.2	126.2	53.3	89.7	221.5	315.3	173.9	226.2
RM 12 and Old Fitzhugh Road/Timberline Road	305.2	859.1	609.4	1515	609.4	1231.1	9854.5	8099.1	9854.5	8099.1
Brookside Street & RR 12	50.7	44.5	636.3	450.8	14.5	10.6	4802.2	28643.7	41.9	19.3
Brookside Street & N/S Extension	-	-	8.9	8.9	8.9	8.9	9.5	9.7	9.3	9.3
Brookside Street Roundabout	-	-	3.74	3.58	3.7	3.6	4.3	4.1	4.3	4.1
Baird Lane & Sportsplex Trail	-	-	31.1	24.9	29.6	22.9	228.0	84.2	203.6	61.3
US 290 & Roger Hanks Pkwy	17.5	19	7.9	8.5	5.3	8.5	11.5	58.1	12.3	54.5

SEGMENT CAPACITY ANALYSIS

Per scoping agreement, Segment Capacity Analysis was completed with and without future connections (to be made by others) tying into Mercer Street, Old Fitzhugh Road, and Springlake Drive for the following proposed extensions:

- Brookside Street Extension between RM 12 and US 290 (two (2) locations – at RM 12 and US 290)
- Baird Lane between Sportsplex Drive and Brookside Street
- Proposed N/S Road between Brookside Street and Springlake Drive
- Proposed N/S Road between Mercer Street and Baird Lane
- Proposed E/W Road between Old Fitzhugh Road and Baird Lane

With regards to the traffic associate with the Dripping Springs Development, the traffic generated from the development has been split between the US 290, RM 12 and the future extension of Brookside Street. The distributions are based upon an understanding of the percentage of patrons who will travel in each directions, primarily in the direction of Austin.

Following the assignment of projected traffic volumes onto the study area roadway, a detailed operational analysis was undertaken using techniques outlined in the Highway Capacity Manual 2010 (HCM 2010). Due to the limitations or the Highway Capacity Manual and modeling the capacity of signalized and unsignalized intersections, Chapter 15 (Two-Lane Highways) of the HCM 2010 was utilized to model the street segments discussed in this report that are most closely operating as a suburban section by limiting the speed limit to 45 mph which is the lowest range of acceptable speed and providing the maximum range of acceptable access points of 40 per mile. The multiple roadway extensions providing internal circulation as well as connection points to the existing roadway facilities and adjoin the proposed development is intended to be an urban street that provides for vehicular, bicycle, and pedestrian facilities. The HCS 2010 outputs on the Segment Analyses has been included for each scenario within the Appendix as *Exhibit 11*.

There are six (6) LOS capacity conditions for each roadway facility. These are designated from "A" to "F," with "A" representing a free-flow optimal best condition and "F" representing a congested forced flow worst condition. The LOS criteria for a Roadway Facility as defined by Chapter 15 of the HCM 2010 evaluates the LOS by the flow rate, average travel speed, and percent time spend flowing (Exhibit 15-2, Page 15.6 of HCM 2010).

The capacity analysis was performed by using the 2022 Site+Forecasted traffic for the PM peak hour trip generated volumes (see *Exhibit 6*). The roadway segment for all internal roadways is proposed to be a 2-lane cross-section. The volume, free flow speed, demand flow rate, density, and LOS were provided for each roadway segment with and without future connections. All the calculated values are summarized in **Table 8** and **9**, below. Please refer to *Exhibit 11* for full calculations.

TABLE 8– SUMMARY OF ROADWAY CAPACITY FOR WITHOUT CONNECTIONS (PM PEAK)

Roadway Segment	Analysis Direction Volume (vph)	Opposing Direction Volumes (vph)	Volume to Capacity Ratio (v/c)	LOS
Brookside Street from RM 12 to Roundabout	266	165	0.17	B
Brookside Street from Roundabout to US 290	90	101	0.06	A
Baird Lane between Sportsplex Drive and Brookside Street	169	92	0.11	A
Proposed N/S Road between Brookside Street and Springlake Drive	51	81	0.03	A
Proposed N/S Road between Mercer Street and Baird Lane	25	58	0.02	A
Proposed E/W Road between Old Fitzhugh Road and Baird Lane	14	11	0.01	A

TABLE 9– SUMMARY OF ROADWAY CAPACITY FOR WITH CONNECTIONS (PM PEAK)

Roadway Segment	Analysis Direction Volume (vph)	Opposing Direction Volume (vph)	Volume to Capacity Ratio (v/c)	LOS
Brookside Street from RM 12 to Roundabout	198	151	0.13	B
Brookside Street from Roundabout to US 290	93	94	0.06	A
Baird Lane between Sportsplex Drive and Brookside Street	169	40	0.11	A
Proposed N/S Road between Brookside Street and Springlake Drive	73	55	0.05	A
Proposed N/S Road between Mercer Street and Baird Lane	8	53	0.01	A
Proposed E/W Road between Old Fitzhugh Road Baird Lane	12	11	0.01	A

For each condition with and without future connections, the capacity analysis resulted in all internal roadway segments performing above an acceptable LOS. The remaining additional capacity after considering the site traffic along this new roadway is approximately 1,150 vehicles per hour prior to this roadway performing at an unacceptable level of service. It is anticipated that bypass traffic may occur to travel northbound to westbound or vice versa. Currently there are 165 and 135 vehicles during the existing AM and PM peak hour, respectively performing an eastbound left turn to travel north on RM 12. Similarly there are 225 and 111 vehicles during the existing AM and PM peak hour, respectively performing a southbound right turn to travel west on US 290. Should this bypass traffic occur with higher projected volumes, further evaluation at the internal roadway intersections along Brookside Street shall be evaluated.

FINDINGS AND RECOMMENDATIONS

Upon completing the analysis for the roadway network, it became evident that with the anticipated future growth of the area and the proposed development, improvements will be needed in order to mitigate the degradation of intersections. All existing intersections analyzed will require some sort of traffic improvement to improve the level of service. While Bury has evaluated mitigation to improve the LOS for the overall intersections, some of the proposed improvements do not benefit the proposed development but were still considered to accommodate the excessive delay experienced at these intersections. A summary of pro-rata share and estimated construction cost for each improvement are summarized within the Appendix as *Exhibit 10*.

US 290 and Brookside Street/Roger Hanks Parkway

The intersection of US 290 and Roger Hanks Parkway performs at an acceptable level of service at the 2015 Existing and 2018 Forecasted condition and continues to perform at an acceptable level of service through the Phase I and II Site + Forecasted condition. It was assumed that when the Brookside extension to US 290 occurs, a signal will be installed by others and has been included within the 2018 Forecasted condition and subsequent phasing.

US 290 and RM 12

The intersection of US 290 and RM 12 performs at an unacceptable level of service E at the 2015 Existing condition and continues to degrade to a level of service F at the 2018 Forecasted AM and PM peak hour condition and continues to degrade further with the Phase I and Phase II Site + Forecasted conditions. In order to mitigate the failing condition of this intersection, dual left turn bays shall be constructed for all approaches. While the north and south bound left turn bays are utilized by the development, the eastbound and westbound left turn bays will not be utilized by the development. In addition, the split phase signal timing may be removed to provide a protected left turn for the major and minor and longer shared green time for thru movements. The pro-rata for the northbound and southbound dual left turns and signal modification is calculated to be 15%. The pro-rata for the eastbound and westbound dual left turn is calculated to be 0%.

RM 12 and Brookside Street

RM 12 and Brookside Street is currently a T-intersection with stop controlled on Brookside Street. The intersection of RM 12 and Brookside Street performs at an acceptable level of service at the 2015 Existing condition but degrades to a level of service F and E at the 2018 Forecasted AM and PM peak hour condition, respectively and continues to degrade with the 2018 Site + Forecasted conditions and subsequent phasing. In order to mitigate the failing condition of this intersection, signalization is recommended at the 2018 Site + Forecasted condition. It is also recommended to provide left turn bays at the northbound, southbound, and eastbound approaches and a south bound right turn deceleration lane. The pro-rata for the eastbound, northbound, and southbound left turn bay is calculated to be 100%. The pro-rata share for the signalization is calculated to be 100%.

RM 12 and Old Fitzhugh Road/Timberline Road

RM 12 and Brookside Street is currently a two-way-stop-controlled (TWSC) intersection with stop controlled along Old Fitzhugh Road and Timberline Road. The intersection of RM 12 and Brookside Street performs at an unacceptable level of service at the 2015 Existing condition and continues to degrade with subsequent phasing. Further discussions with the City of Dripping Springs are currently in progress to determine the future roadway alignment along Old Fitzhugh Road which will impact the performance of this intersection.

Sportsplex Drive and Baird Lane

Sportsplex Drive and Baird Lane is currently a two-way stop controlled (TWSC) intersection with stop controlled on Baird Lane. Sportsplex Drive currently serves as one of the primary access points for Dripping Springs High School. The intersection of Sportsplex Drive and Baird Lane performs at an acceptable level of service at the 2018 Site+Forecasted but degrades to a LOS F and E at the 2022 Forecasted AM and PM peak hour condition, respectively. It is recommended to provide an eastbound left turn bay, westbound right turn bay, and southbound right turn bay. These improvements will remove turning vehicles from the travel path and promote progression along the free flowing movements. The pro-rata for the eastbound and westbound left turn bay is calculated to be 100%. It is assumed that the southbound right turn bay will be built out with the reconstruction of Baird Lane.

US 290 and Sportsplex Drive

The intersection of US 290 and Sportsplex Drive performs at an acceptable level of service at the 2015 Existing condition but degrades to a level of service E at the 2018 Forecasted PM peak hour condition and continues for degrade with the 2018 and 2022 Site + Forecasted conditions. In order to mitigate the failing condition of this intersection, dual left turn bays is recommended to be constructed for the southbound approach with the final roadway geometry on the southbound approach to be a left, left, and shared thru-right. The pro-rata for the southbound dual left turn and signal modification is calculated to be 40%.

Internal Intersections/Driveways

The following recommendations are recommended to be taken into consideration during the design of the internal roadways and intersections:

Brookside Street and N/S Residential Street

- Southbound left turn bay
- Westbound right turn bay

Parcel B/C Brookside Driveway*

- Westbound left turn bay
- Westbound right turn bay

Parcel C Brookside Eastern Driveway*

- Westbound left turn bay

*Parcels locations have been noted in the conceptual site plan in *Exhibit 2*.

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2. David Husch, John Albeck, Synchro 9.0, Trafficware, Albany, California, 2011.
3. Highway Capacity Manual, (SR 209), Transportation Research Board, Washington, D.C., 2010.
4. Trip Generation Manual, Ninth Edition, Institute of Transportation Engineers, Washington, D.C., 2012.
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Appendix E: Background Projects



Big Sky Ranch

TRAFFIC IMPACT ANALYSIS

August 2018



Bethany James
8-15-2018

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INTRODUCTION

The Big Sky Ranch development is proposed to be located in the northeast quadrant of the intersection of US 290 with Ranch Road 12 (east of the existing Founders Memorial Park) within the extraterritorial jurisdiction near Dripping Springs, Texas. The development is proposed to be comprised of single family homes.

PURPOSE

The purpose of this study is to evaluate the traffic impacts of the site on the adjacent roadway network. This Traffic Impact Analysis (TIA) includes an evaluation of existing conditions (2018), future build-out conditions (2025), and a planning level analysis of the future build-out conditions of the surrounding area (2028). Based on analysis results, recommendations will be identified to ensure that the intersections within the study area operate at an adequate level of service (LOS) and that future planned roadways are constructed to provide adequate capacity for the anticipated traffic demand in the area.

METHODOLOGY

The following information provides a summary of the technical analysis used for this TIA. The methodology is based upon a thorough analysis of existing and projected site generated traffic on area roadways. The study methodology is as follows:

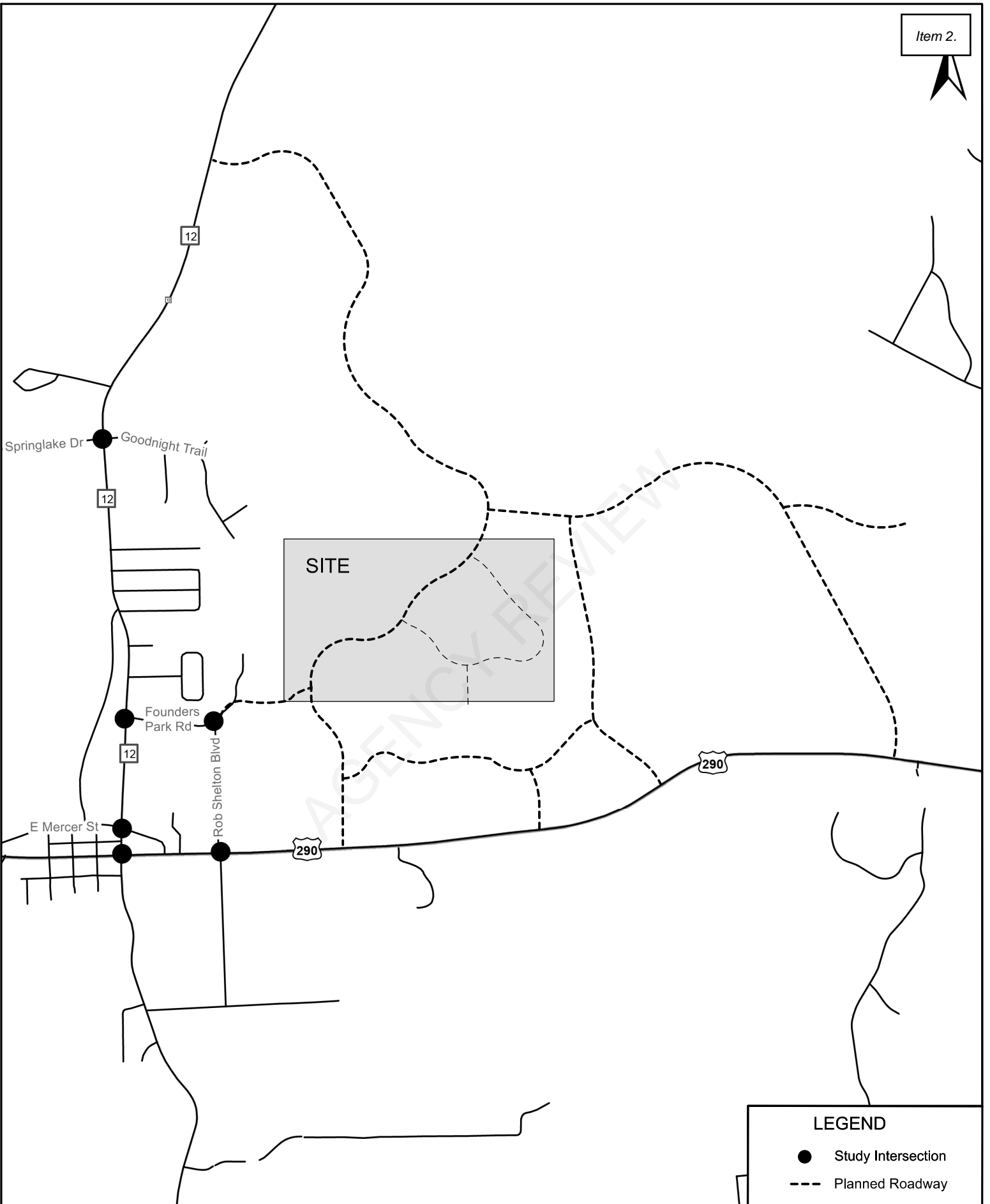
1. Conduct turning movement counts during the weekday AM (7-9) and PM (3:30-6) peak periods at the following intersections:
 - a. US 290 and Ranch Road 12
 - b. US 290 and Rob Shelton Boulevard
 - c. Ranch Road 12 and Mercer Street
 - d. Founders Park Road and Ranch Road 12
 - e. Ranch Road 12 and Springlake Drive/Goodnight Trail
2. Inventory the study intersections and note their respective intersection geometry, number of travel lanes, pavement markings, and intersection traffic control.
3. Evaluate AM and PM peak LOS (based on 2010 Highway Capacity Manual) at all intersections identified in Task 1.
4. Determine background traffic within the study area using existing volume counts and traffic growth rates determined from historical traffic counts obtained from the City and/or TxDOT.
5. Calculate the site-generated traffic for the proposed development using ITE Trip Generation Rates from the 9th Edition.
6. Determine trip distribution percentages for site generated traffic based on existing count data, site access locations and roadway geometries.
7. Assign total (background + site) traffic onto the roadway network located within the study area based on trip distribution percentages determined in Task 6.
8. Perform intersection analyses for the study peak period to determine intersection level-of-service (LOS) for the intersections identified in Task 1 and future intersections.
9. Analyze the results of Task 8 to determine the impacts of the development and accompanying traffic on surrounding study area roadways. Identify appropriate mitigation measures (geometric and/or operational improvements), which would be required in order to accommodate site generated traffic.
10. Determine probable cost of anticipated improvements from Task 9.
11. Analyze the future roadway demand related to planned background projects in the study area.

AREA CONDITIONS

The Big Sky Ranch development is proposed to be built in the northeast quadrant of the intersection of US 290 with Ranch Road 12 (east of the existing Founders Memorial Park) within the extraterritorial jurisdiction near Dripping Springs, Texas. The development is anticipated to be completed by 2025. The location of the proposed development with respect to the area roadway network is shown in **Figure 1**, and the current proposed site plan for the development is shown in **Figure 2**. The proposed land uses are shown in **Table 1**.

Table 1. Proposed Land Use and Density

ITE Code	Description	Quantity
210	Single Family Detached Housing	772 DU



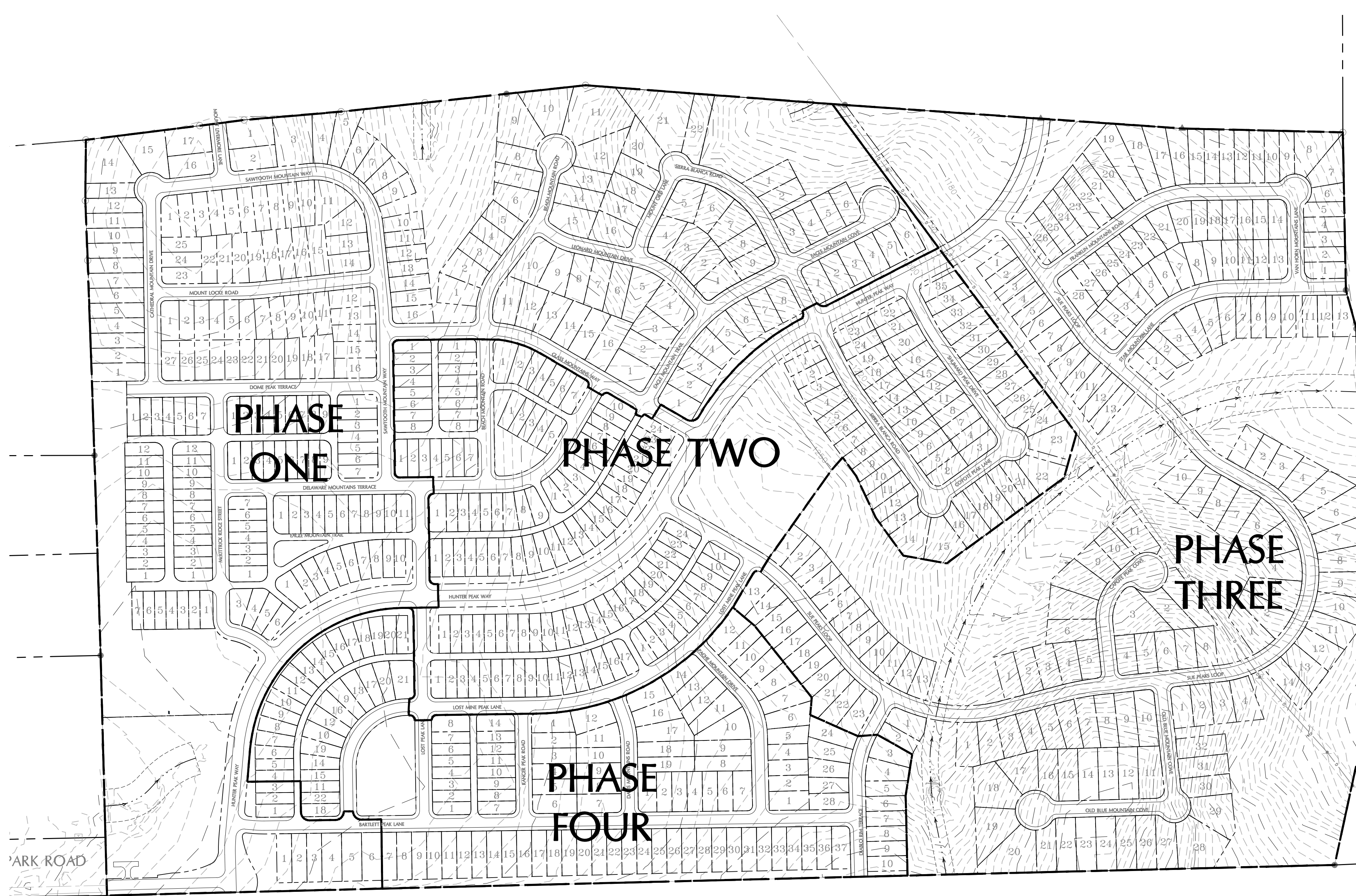
LEGEND

- Study Intersection
- - - Planned Roadway

Figure 1: Study Area

LEGEND

- SUBDIVISION BOUNDARY
- LOT LINES
- EASEMENTS
- PROPOSED RIGHT OF WAY
- PROPOSED FACE OF CURB
- PROPOSED SIDEWALK



RESIDENTIAL LOTS BY PHASE	
PHASE ONE	
RESIDENTIAL LOTS A (34' X 115')	98
RESIDENTIAL LOTS B (45' X 120')	88
RESIDENTIAL LOTS C (60' X 120')	70
TOTAL PHASE ONE	256
PHASE TWO	
RESIDENTIAL LOTS A (34' X 115')	130
RESIDENTIAL LOTS B (45' X 120')	58
RESIDENTIAL LOTS C (60' X 120')	0
TOTAL PHASE TWO	188
PHASE THREE	
RESIDENTIAL LOTS A (34' X 115')	0
RESIDENTIAL LOTS B (45' X 120')	106
RESIDENTIAL LOTS C (60' X 120')	79
TOTAL PHASE THREE	185
PHASE FOUR	
RESIDENTIAL LOTS A (34' X 115')	48
RESIDENTIAL LOTS B (45' X 120')	87
RESIDENTIAL LOTS C (60' X 120')	0
TOTAL PHASE FOUR	135
TOTAL	
RESIDENTIAL LOTS A (34' X 115')	276
RESIDENTIAL LOTS B (45' X 120')	339
RESIDENTIAL LOTS C (60' X 120')	149
TOTAL RESIDENTIAL LOTS	764

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 www.doucetengineers.com
 Firm Registration Number: 3937

PHASING PLAN

BIG SKY RANCH
 PRELIMINARY PLAT
 DRIPPINGS SPRINGS, TX

EXHIBIT

Scale: AS SHOWN
 Designed: JP
 Drawn: AD
 Reviewed: JP
 Date: 8/6/2018

SHEET
1
 OF 1

Project No:
 1691-002

Figure 2: Site Plan

Drawing: P:\1691-002\CADD\Map\working_drawing\sheet1\1691002-PP-SP-STIE DATA PER PHASING.dwg
 User: @ANISTER Aug. 06, 18 - 15:21
 Last Modified: Aug. 06, 18 - 15:29:34
 Plot Date/Time: Aug. 06, 18 - 15:29:34

STUDY AREA ROADWAY NETWORK

EXISTING THOROUGHFARE SYSTEM

The following provides a description of the major transportation facilities within the study area:

US 290

US 290 is an east/west roadway that runs through the state of Texas. Within the study area, US 290 is defined as a principal arterial with two lanes in each direction, a two-way left-turn lane, and a posted speed limit of 45 mph. For the purposes of this study, the cross section is expected to remain unchanged for the foreseeable future.

Rob Shelton Boulevard

Rob Shelton Boulevard is a north/south roadway that begins at Sports Park road and terminates at Founders Park Road. Rob Shelton Boulevard is an undivided roadway in the northern section and a two-way divided roadway in the southern section with a posted speed of 25 mph. For the purposes of this study, the cross section is expected to remain unchanged for the foreseeable future.

Ranch Road 12

Ranch Road 12 is a north/south roadway that begins at I-35 and terminates at Hamilton Pool Road and runs through Dripping Springs, Texas. South of US 290, Ranch Road 12 is a principal arterial, and north of US 290 it is a minor arterial. Within the study area, Ranch Road 12 is a two-lane roadway with a posted speed limit of 45 mph through the majority of the study area and transitions to 55 mph 755 feet south of Goodnight Trail. For the purposes of this study, the cross section is expected to remain unchanged for the foreseeable future.

Mercer Road

Mercer Road is a local road within Dripping Springs that serves commercial land uses, beginning and terminating at US 290. Mercer Road is a two-lane roadway with a posted speed limit of 30 mph. For the purposes of this study, the cross section is expected to remain unchanged for the foreseeable future.

Founders Park Road

Founders Park Road is a local road within Dripping Springs that serves a small residential community and a recreational land use, beginning at Ranch Road 12 and terminating at Founders Park. Founders Park Road is a two-lane roadway with a posted speed limit of 20 mph. The roadway is anticipated to be extended to serve as an access point to the Big Sky Ranch development.

Springlake Drive/Goodnight Trail

Springlake Drive and Goodnight Trail are local roads within Dripping Springs that serve residential communities. They are both two-lane roadways with a posted speed limit of 35 mph. West of US 290 the roadway is called Springlake Drive and east of US 290 the roadway is called Goodnight Trail. For the purposes of this study, the cross sections are expected to remain unchanged for the foreseeable future.

EXISTING INTERSECTIONS

The existing roadway network within the study area includes three un-signalized intersections and three signalized intersections. AM and PM peak period (7-9 AM and 3:30-6 PM) turning movement counts were obtained in February 2018, at the following intersections and are included in **Appendix A**.

Ranch Road 12 and Springlake Drive/Goodnight Trail

This four-legged intersection is unsignalized. Springlake Drive and Goodnight Trail are stop-controlled, while the Ranch Road 12 is uncontrolled. The northbound approach has a two-way left-turn lane and a shared through-right lane. The southbound approach has a left-turn bay and a shared through-right lane. The eastbound and westbound approaches each have one shared lane for all movements.

Ranch Road 12 and Founders Park Road

This three-legged intersection is unsignalized. Founders Park road is stop controlled, while Ranch Road 12 is uncontrolled. All approaches have one shared lane for all movements.

Ranch Road 12 and Mercer Road

This four-legged intersection is signalized. The eastbound approach has a shared left-through lane and a right-turn bay. All other approaches have one shared lane for all movements.

Ranch Road 12 and US 290

This four-legged intersection is signalized. The northbound approach has a left-turn bay, a shared left-through lane, and a right-turn bay. The southbound approach has a left-turn bay, a shared left-through, and a right-turn bay. The eastbound and westbound approaches each have a left-turn bay (within a two-way left-turn lane), a through lane, and a shared through-right lane.

Founders Park Road and Rob Shelton Boulevard

This three-legged intersection is unsignalized. The northbound approach on Rob Shelton Boulevard is stop-controlled, while Founders Park Road is uncontrolled. All approaches have one shared lane for all movements.

Rob Shelton Boulevard and US 290

This four-legged intersection is signalized. The northbound approach has a left-turn bay and a shared through-right lane. The southbound approach has a left-turn bay and a shared through-right lane. The eastbound and westbound approaches each have a left-turn bay (within a two-way left-turn lane), a through lane, and a shared through-right lane.

LEVEL OF SERVICE

The 2010 HCM⁽²⁾ uses LOS as the method by which the quality of traffic flow is described. LOS describes operational conditions in six levels based upon speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. These six levels are given the letters ‘A’ through ‘F’ and are given different descriptions and defining criteria depending on the roadway element analyzed.

LOS criteria for traffic signals are based on the average control delay per vehicle. Control delay includes deceleration and acceleration delay, queue move-up time, and stopped delay. These criteria are shown in **Table 2**. Thus, if the average control delay for vehicles at an intersection is fifty-five seconds or less, the intersection is defined as operating at a LOS ‘D’ or better. Control delay of fifty-five through eighty seconds represents LOS ‘E’, and values greater than eighty seconds define LOS ‘F’. For signalized intersection operation, LOS ‘A’ represents very low delay; most vehicles do not stop at all. With LOS ‘B’, more vehicles stop than LOS ‘A’, increasing the average delay. Under LOS ‘C’, the number of vehicles stopping is significant; however, many still pass through the intersection without stopping. LOS ‘D’ describes conditions where congestion is readily apparent with many vehicles stopping and individual cycle failures are noticeable. LOS ‘E’ generally describes operations with poor progression, long cycle lengths and frequent cycle failures. LOS ‘F’ describes unacceptable operations which include many cycle failures caused by arrival flow rates exceeding intersection capacity.

Stop controlled intersections are analyzed in a similar manner; however, LOS is based on total delay per vehicle. The values that define LOS for stop controlled intersections are more restrictive than those for signalized intersections. Total delay includes both stopped delay and time spent in the queue waiting to enter the intersection. Two-way stop controlled intersections with the minor street average total delay greater than thirty-five seconds identifies LOS ‘E’ or worse.

Table 2: LOS Criteria for Signalized and Stop-Controlled Intersections

LOS	Average Control Delay – Signalized Intersections (sec/veh)	Average Total Delay – Stop Controlled Intersections (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

For this study, the criterion for minimum acceptable LOS for future conditions is a LOS ‘D’ or better.

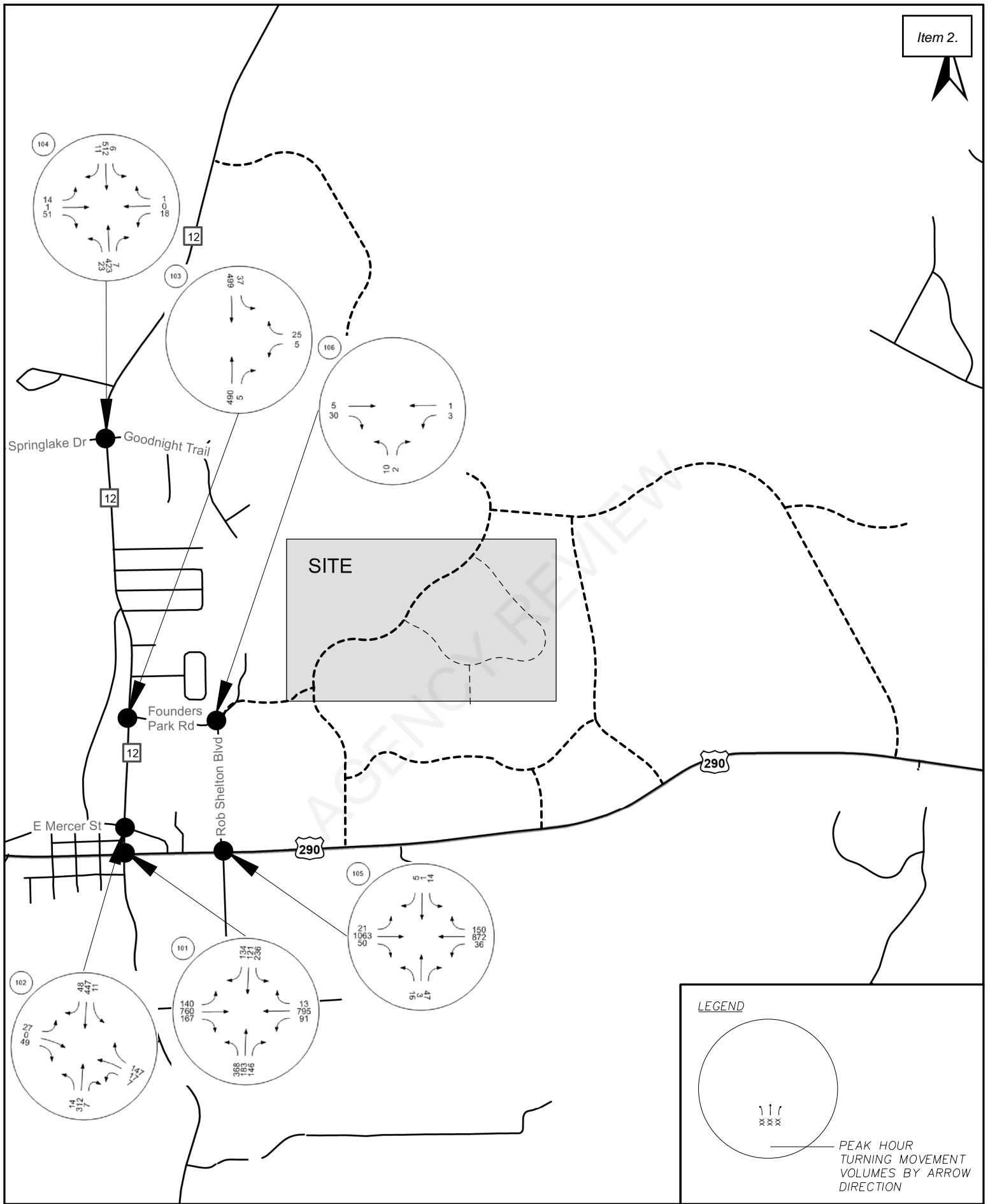


Figure 3: AM Existing Traffic (2018)

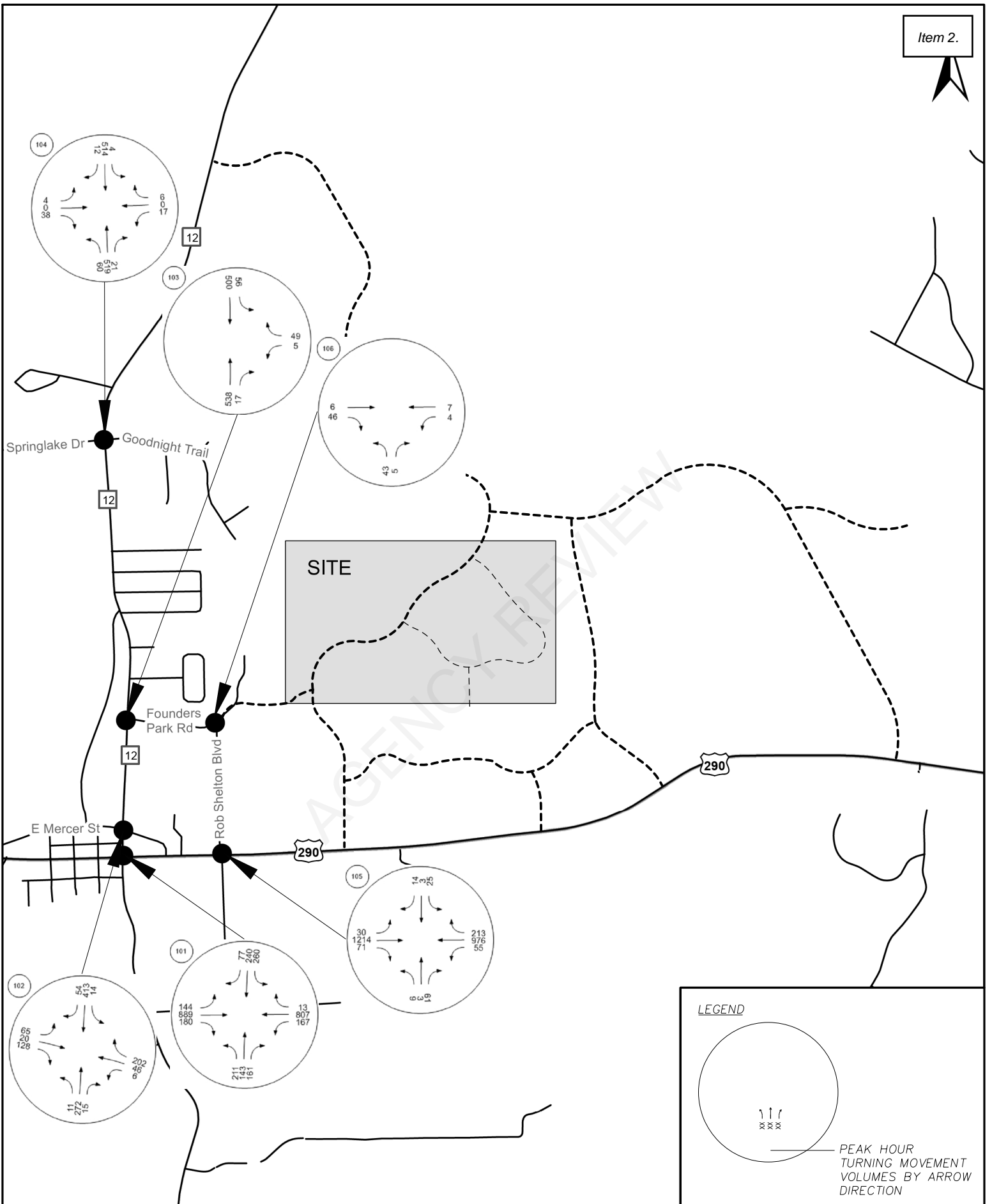


Figure 4: PM Existing Traffic (2018)

ANALYSIS OF FUTURE CONDITIONS

A technical approach for estimating future travel demand was utilized in evaluating the roadway system in and around the proposed development. Information used to develop the projection of future traffic for this area is documented in the following sections of the report.

BACKGROUND TRAFFIC

Existing and projected traffic volumes using the roadway system without the proposed project are commonly called background traffic. For the proposed Big Sky Ranch development, background traffic was based upon traffic counts collected in February of 2018. A 3% growth rate was then applied to existing traffic. The growth rate was determined using Texas Department of Transportation count maps from 2011 to 2016. The anticipated build out year is 2025. Thus, existing traffic was grown over a seven-year period.

When computing background traffic, consideration must be taken to include projected traffic from sites that have not yet been completed but are estimated to be completed by the build-out date. The City of Dripping Springs has identified seven background projects located north of US 290 between Ranch Road 12 and East Creek Drive to be included in the background analysis. A map detailing the background project locations can be found in **Appendix I**. It was determined by the City of Dripping Springs that the following projects be included:

- Cynosure Ranch: a residential development consisting of single family housing. This development is expected to be complete by 2028, with development anticipated to occur starting in 2022; therefore, the traffic anticipated to be generated from the site will be included in background and future condition (2025 and 2028) scenarios.
- Cannon Tract: a mixed-use development consisting of commercial property, single family housing, and multi-family housing. This development is expected to be complete by 2026, with development anticipated to occur starting in 2022; therefore, the traffic anticipated to be generated from the site will be included in background and future condition (2025 and 2028) scenarios.
- Blue Blazes: a mixed-use development consisting of commercial property and single family housing. This development is expected to be complete by 2026, with development anticipated to occur in 2026; therefore, the traffic anticipated to be generated from the site will be included in the future year planning analysis (2028) conditions only.
- Bordie Tract: a mixed-use development consisting of commercial property, single family housing, and multi-family housing. This development is expected to be complete by 2028 with development anticipated to occur starting in 2026; therefore, the traffic anticipated to be generated from the site will be included in the future year planning analysis (2028) conditions only.
- Legacy Trails: a residential development consisting of single family housing. This development is already partially built out and is expected to be complete by 2019; therefore, the traffic anticipated to be generated from the unbuilt portion of the site will be included in background and future condition (2025 and 2028) scenarios.
- Founders Ridge: a residential development consisting of single family housing. This development is already partially built out and is expected to be complete by 2023; therefore, the traffic anticipated to be generated from the unbuilt portion of the site will be included in background and future condition (2025 and 2028) scenarios.
- Headwaters: a residential development consisting of single family housing. This development is expected to be complete by 2025; therefore, the traffic anticipated to be generated from the site will be included in background and future condition (2025 and 2028) scenarios.

A summary of the build-out timelines and trips generated by the background projects can be found in **Appendix J**. Peak hour turning volumes for the background project traffic can be found in **Appendix K**.

SITE TRAFFIC

Entering and exiting volumes were calculated using information from ITE’s Trip Generation Manual, 10th Edition⁽¹⁾ and are shown in **Table 4**. The trips shown in **Table 4** are the unadjusted generated trips for the attributed site developments for the AM and PM peak hour(s).

Table 4: Unadjusted ITE Trip Generation

ITE Code	Description	Quantity	ADT	AM Peak		PM Peak	
				Enter	Exit	Enter	Exit
210	Single Family Detached Housing	772 DU	7,914	144	436	491	288
		Total	7,914	144	436	491	288

Trips generated by the site are different from total site trips that add to the adjacent roadway. Pass-by and internal capture trips can account for a significant portion of a site’s generated traffic and are removed from site traffic per ITE methodology. Internal capture trips are trips that use only internal roadways traveling from one land use to another within the site. Pass-by trips are attracted to the site from traffic passing on the adjacent street. Primary trips, made for the specific purpose of visiting the development, are considered new traffic added to the street system. The net primary trips are determined by subtracting internal and pass-by trips from unadjusted trips for each land use. Because this development is completely residential, there are no anticipated internal capture or pass-by trips associated directly with the Big Sky Ranch development. However, internal capture trips between Big Sky Ranch and adjacent future commercial land uses planned within the analyzed background projects are expected. **Table 5** shows these internal capture trips anticipated to travel between the proposed Big Sky Ranch development and the adjacent background project commercial land uses. Per ITE methodology 8% of trips were assumed to be internal trips to and from the nearby background project. These internal trips were removed from the unadjusted trips shown in **Table 4** to analyze the proposed study intersections.

Table 5: Internal Capture Trips

ITE Code	Description	Quantity	ADT	AM Peak		PM Peak	
				Enter	Exit	Enter	Exit
210	Single Family Detached Housing	772	535	0	0	34	22
		Total		0	0	34	22

Table 6 shows the adjusted trips, or primary trips, for the full build-out of the development. The reported volumes are for the peak generation during the peak hour of the adjacent street.

Table 6: Adjusted ITE Trip Generation

ITE Code	Description	Quantity	ADT	AM Peak		PM Peak	
				Enter	Exit	Enter	Exit
210	Single Family Detached Housing	772	7,379	144	436	457	266
		Total	7,379	144	436	457	266

TRIP DISTRIBUTION

Trip distribution takes into account where vehicles generated by the site are going to or coming from based on the roadway network. As primary site trips are those trips which leave an origin, travel to the site, and then return to the origin, site trips were distributed based on probable origins of the site trips. For this development, the distribution percentages were estimated based on existing count data, land use, and roadway geometries. Next, future site traffic was distributed using these percentages. The trip distribution percentages shown in **Figure 5** were applied to the site generated traffic for the phases studied.

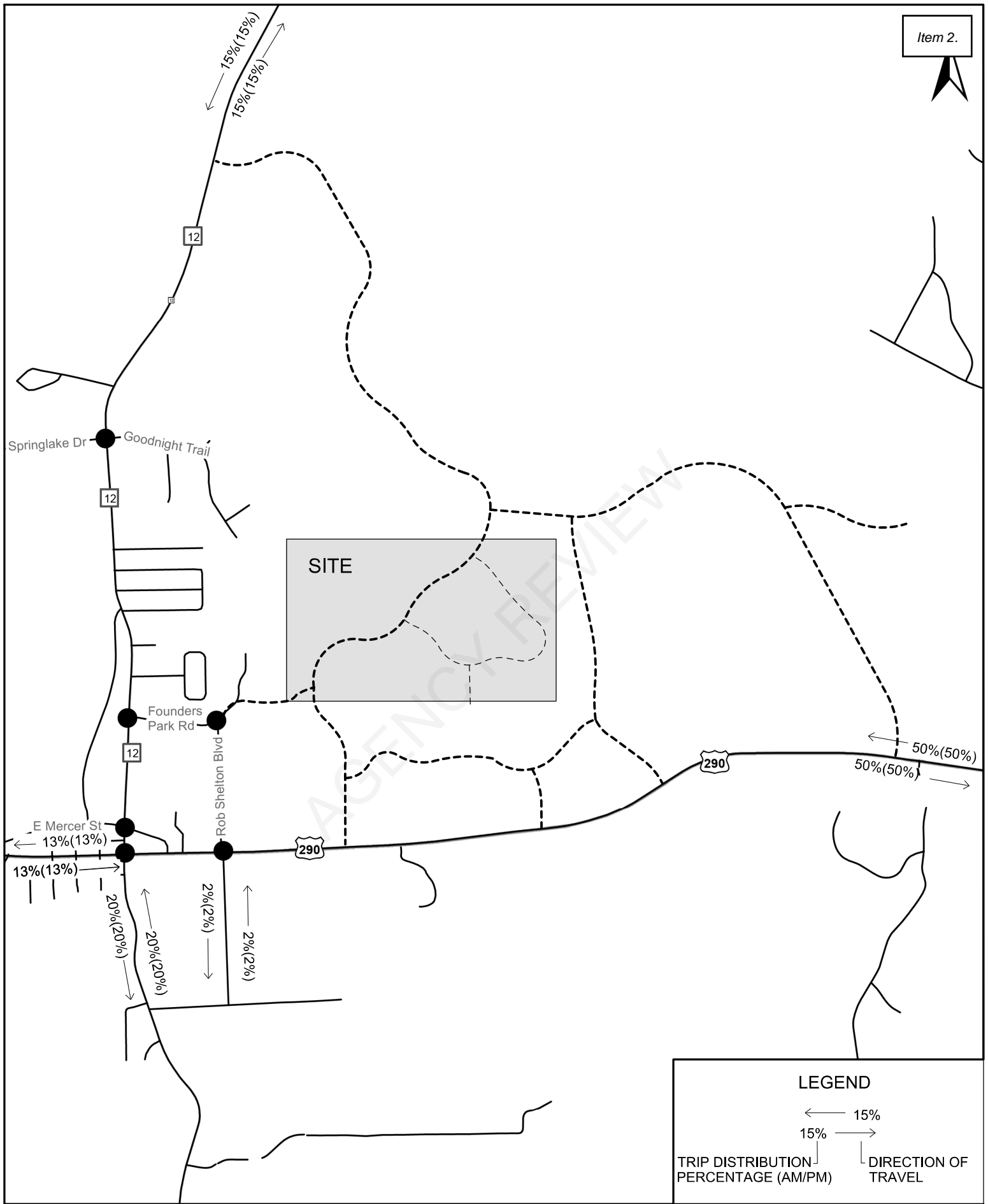


Figure 5: Trip Distribution

SITE ACCESS

Primary access for the development will be from a proposed roadway that will extend as the east leg of the Founders Park Road with Rob Shelton Boulevard intersection, providing access to Ranch Road 12 via Founders Park Road and to US 290 via Rob Shelton Boulevard. Big Sky Ranch is also anticipated to take access from a proposed north/south roadway that is planned to run through the Cannon Tract to US 290. Because it is unknown when this proposed north/south roadway through the Cannon tract will be build out, two access point scenarios were analyzed:

- **Access Scenario 1.** Access for the development is provided via Founders Park Road to Ranch Road 12 and via Rob Shelton Boulevard to US 290
- **Access Scenario 2.** Access for the development is provided via Founders Park Road to Ranch Road 12, via Rob Shelton Boulevard to US 290, as well as via the proposed north/south street which runs through the Cannon Tract to US 290.

Additionally, eight internal access points were analyzed to project the need for turn bays.

Once all background projects are built-out, access for the Big Sky Ranch development will also be provided via the planned roadways through the analyzed background projects as shown in **Figure 1**. However, these access points are not expected to come online until after the build-out of Big Sky Ranch, serving to alleviate the access points analyzed in this study. As such, the analysis of access points presented in this study represent the worst-case scenario for traffic operations, and recommended mitigation measures should be sufficient for future year scenarios once these other roadways are constructed and provide access to Big Sky Ranch.

PROJECTED CONDITIONS

The projected background traffic was combined with the proposed site generated traffic to perform the intersection analyses for the build-out year conditions (2025). Intersection analyses have been performed based on HCM⁽²⁾ Chapter 18 and Chapter 19 procedures using Synchro version 10.

Access Scenario 1 (2025) – Founders Park Road and Rob Shelton Boulevard

In this scenario, access for the development is assumed to be provided via Founders Park Road to Ranch Road 12 and via Rob Shelton Boulevard to US 290. Projected peak hour turning volumes for Background, Site, and Background + Site are illustrated in **Figure 6** through **Figure 11**. The results from this analysis are presented in **Table 7**. Analysis worksheets are provided in **Appendix C** and **Appendix E**.

Table 7: Scenario 1 Build-Out (2025) Projected Levels of Service

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
101	US 290 and Ranch Road 12	Signalized	Intersection	-	LOS	F	F	F	F	D	D
					Delay (s)	87.7	152.1	97.9	164.5	40.3	54.8
102	Ranch Road 12 and Mercer Street	Signalized	Intersection	-	LOS	B	C	C	C	-	-
					Delay (s)	18.7	21.8	22.5	23.8	-	-

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
103	Founders Park Road and Ranch Road 12	Un-signalized/ Signalized	Intersection	-	LOS	E	F	F	D	C	B
					Delay (s)	1.1	1.3	122	35.7	30.2	19.8
			Westbound	Left/Right	LOS	D	C	F	F	-	-
					Delay (s)	29.2	22.4	1006	391.3	-	-
			Northbound	Through/ Right	LOS	A	A	A	A	-	-
					Delay(s)	0.0	0.0	0.0	0.0	-	-
			Southbound	Left/Through	LOS	A	A	B	B	-	-
					Delay(s)	10.1	10.0	10.4	11.0	-	-
104	Ranch Road 12 and Springlake Drive/Goodnight Trail	Un-signalized/ Signalized	Intersection	-	LOS	F	C	F	B	B	B
					Delay(s)	87.3	10.1	109.7	13	18.8	11.4
			Eastbound	Left/Through/ Right	LOS	F	C	F	C	-	-
					Delay (s)	84.4	20.6	117.7	22.4	-	-
			Westbound	Left/Through/ Right	LOS	F	F	F	F	-	-
					Delay (s)	1255.5	209.5	1658.7	291.3	-	-
			Northbound	Left	LOS	B	A	B	A	-	-
					Delay(s)	10.2	9.5	10.3	9.7	-	-
				Through/ Right	LOS	A	A	A	A	-	-
					Delay(s)	0.0	0.0	.0.0	0.0	-	-
			Southbound	Left	LOS	A	A	A	A	-	-
					Delay(s)	9.6	9.5	10.0	9.6	-	-
Through/ Right	LOS	A		A	A	A	-	-			
	Delay(s)	0.0		0.0	0.0	0.0	-	-			
105	US 290 and Rob Shelton Boulevard	Signalized	Intersection	-	LOS	C	D	D	E	C	D
					Delay (s)	21.9	46.1	51.7	66.9	27.7	35.6
106	Rob Shelton Boulevard and Founders Park Road	Un-signalized	Intersection (stop)	-	LOS	A	A	A	B	-	-
					Delay(s)	3.4	5.3	5.6	19.1	-	-
			Intersection (roundabout)	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	7.3	7.8	-	-
			Eastbound	Left/Through/ Right	LOS	A	A	A	A	-	-
					Delay (s)	7.2	7.2	7.6	7.5	-	-
			Westbound	Left/Through/ Right	LOS	A	A	A	A	-	-
					Delay(s)	0.0	0.0	8.1	8.4	-	-
Northbound	Left/Through/ Right	LOS	A	A	B	E	-	-			
		Delay(s)	8.9	9.5	11.8	40.7	-	-			
Southbound	Left/Through/ Right	LOS	A	A	C	B	-	-			
		Delay (s)	9.2	8.9	20.7	13.7	-	-			
201	Founders Park Road and Internal Site Roadway/Driveway 1	Un-signalized	Intersection	-	LOS	-	-	-	-	-	-
					Delay(s)	-	-	-	-	-	-
			Eastbound	Left/Through	LOS	-	-	-	-	-	-
					Delay(s)	-	-	-	-	-	-
			Westbound	Through/Right	LOS	-	-	-	-	-	-
					Delay(s)	-	-	-	-	-	-
			Southwest bound	Left/Through	LOS	-	-	-	-	-	-
					Delay(s)	-	-	-	-	-	-

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
202	Driveway 2 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	1.2	1.1	-	-
			Southeast bound	Left/Right	LOS	-	-	B	A	-	-
					Delay (s)	-	-	10.9	9.7	-	-
			Northeast bound	Left/Right	LOS	-	-	A	A	-	-
					Delay(s)	-	-	8.1	7.8	-	-
Southwest bound	Through/right	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	0.0	0.0	-	-			
203	Driveway 3 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay (s)	-	-	3.0	2.4	-	-
			Southeast bound	Left/Through/Right	LOS	-	-	B	A	-	-
					Delay (s)	-	-	10.2	9.3	-	-
			Northwest bound	Left/Through/Right	LOS	-	-	B	C	-	-
					Delay (s)	-	-	13.5	15.8	-	-
Northeast bound	Left/Through/Right	LOS	-	-	A	A	-	-			
		Delay (s)	-	-	7.8	7.7	-	-			
Southwest bound	Left/Through/Right	LOS	-	-	A	A	-	-			
		Delay (s)	-	-	0.0	0.0	-	-			
204	Driveway 4 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	2.9	1.5	-	-
			Northwest bound	Left/Right	LOS	-	-	B	B	-	-
					Delay(s)	-	-	10.5	10.8	-	-
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-
					Delay(s)	-	-	0.0	0.0	-	-
Southwest bound	Left/Through	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	0.0	0.0	-	-			
205	Driveway 5 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay (s)	-	-	1.3	1.2	-	-
			Southeast bound	Left/Through	LOS	-	-	A	A	-	-
					Delay (s)	-	-	9.1	8.8	-	-
			Northeast bound	Left/Through	Los	-	-	A	A	-	-
					Delay(s)	-	-	7.5	7.7	-	-
Southwest bound	Through/Right	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	0.0	0.0	-	-			
206	Driveway 6 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay (s)	-	-	3.2	2.8	-	-
			Southeast bound	Left/Through/Right	LOS	-	-	A	A	-	-
					Delay (s)	-	-	8.9	8.7	-	-
			Northwest bound	Left/Through/Right	LOS	-	-	A	B	-	-
					Delay(s)	-	-	9.9	10.4	-	-
Northeast bound	Left/Through/Right	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	7.4	7.4	-	-			
Southwest bound	North/Through/Right	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	0.0	0.0	-	-			

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements		
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	
207	Driveway 7 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-	
						-	-	1.4	0.7	-	-	
			Northwest Bound	Left/Right	LOS	-	-	A	A	-	-	
					Delay (s)	-	-	9.1	9.2	-	-	
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-	
					Delay(s)	-	-	0.0	0.0	-	-	
			Southwest bound	Left/Through	LOS	-	-	A	A	-	-	
					Delay(s)	-	-	0.0	0.0	-	-	
208	Driveway 8 & Proposed Roadway	Un-signalized	Intersection	-		LOS	-	-	A	A	-	-
						Delay(s)	-	-	6.6	3.3	-	-
			Northwest bound	Left/Right	LOS	-	-	A	A	-	-	
					Delay (s)	-	-	8.9	8.9	-	-	
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-	
					Delay(s)	-	-	0.0	0.0	-	-	
			Southwest bound	Left/Through	LOS	-	-	A	A	-	-	
					Delay(s)	-	-	0.0	0.0	-	-	

As indicated in **Table 7**, four intersections are anticipated to operate with an unacceptable LOS in at least one of the peak hours under 2025 build-out conditions, while two of those intersections are anticipated to operate with an unacceptable LOS under background conditions without the site.

The proposed access points were evaluated against the criteria in the TxDOT Access Management Manual to determine the need for right-turn deceleration and/or acceleration lane(s) to accommodate the full build-out of the development. Per the Access Management Manual, the minimum threshold volumes are 200 vehicles per hour (vph) for egress (acceleration lane) and 50 vph for ingress (deceleration lane). The volumes are shown in **Table 8**.

Table 8: Auxiliary Lane Threshold Evaluation

TxDOT Volume Threshold Criteria* (vph)		Right Turn Projected Volumes to or from Property	
		Acceleration	Deceleration
		Right-turn egress >200 vph	For speed limit >45 mph where right-turn ingress volumes is >50 vph
		Exiting	Entering
Ranch Road 12 and Founders Park Road	AM	95	34
	PM	101	110

**TxDOT Criteria obtained from TxDOT Access Management Manual. Table 2-3 (Auxiliary Lane Threshold)⁽⁴⁾*

As indicated in **Table 8**, the access roadway exceeds the threshold for the PM egress volumes. Therefore, a deceleration lane should be considered for this development.

The projected opposing volumes, advancing volumes, and percentage of left-turns from the advancing volumes at the study driveway were evaluated using the criteria contained in Table 3-11 of the TxDOT Roadway Design Manual(5). The criteria contained in Table 3-11 that pertains to the proposed driveway is shown in **Table 9**. The criteria for a 60 mph design speed was used to provide a conservative analysis.

Table 9: Guide for Left-Turn Lane on Two-Lane Highways

60 mph Design Speed				
Opposing Volume (vph)	Advancing Volume (vph)			
	5% Left Turns	10% Left Turns	15% Left Turns	20% Left Turns
800	230	170	125	115
600	290	210	160	140
400	365	270	200	175
200	450	330	250	215
100	505	370	275	240

The projected opposing volumes, advancing volumes, and percentage of left-turns from the advancing volumes for the study driveway are shown in **Table 10**.

Table 10: Left-Turn Lane Threshold Evaluation

Intersection	AM Peak			PM Peak		
	Opposing Volume	% Left-Turn	Advancing Volume	Opposing Volume	% Left-Turn	Advancing Volume
Ranch Road 12 and Founders Park Road	699	8%	763	889	14%	831

As indicated in **Table 10**, the study driveway exceeds the minimum advancing volume required for the consideration of a left-turn lane during both the AM and PM peak periods.

The following improvements are recommended in order to achieve acceptable LOS and improve operations under 2025 build-out conditions:

- US 290 and Ranch Road 12
 - Add Left-Turn Bay to create dual lefts (175 feet) – Northbound
 - Add Left-Turn Bay (55 feet) – Northbound
 - Add Left-Turn Bay (185 feet) – Southbound
 - Add Left-Turn Bay (135 feet) – Southbound
 - Add Right-Turn Bay to create dual lefts (100 feet) – Eastbound
 - Modify Signal Timing - Intersection

- Ranch Road 12 and Founders Park Road
 - Install 3 Approach Traffic Signal
 - Add Right-Turn Bay (345 feet) – Northbound
 - Add Left-Turn Bay (270 feet) – Westbound
 - Add Left-Turn Bay (475 feet) – Southbound
- Ranch Road 12 and Springlake Drive/Goodnight Trail
 - Install 4 Approach Traffic Signal
- US 290 and Rob Shelton Boulevard
 - Modify Signal Timing
- Proposed Roadway and Driveway 3
 - Add Left-Turn Bay (50 feet) - Northbound
- Proposed Roadway and Driveway 4
 - Add Left-Turn Bay (50 feet) – Westbound*

* These improvements are included based on developer plans to facilitate entry into the Amenity center for the development. This intersection is anticipated to operate at an acceptable LOS without these improvements.

An engineer’s opinion of probable cost for the recommended improvements for the build-out year analysis as well as the developer’s pro-rata share cost are shown in **Table 11**.

Table 11: Scenario 1 - Probable Cost for Recommended Improvements (2025)

ID	Location	Improvement	Construction Subtotal	Developer’s Pro Rata Share %	Developer’s Construction Cost
101	US 290 and Ranch Road 12	Add Left-Turn Bay (175 feet) – Northbound	\$240,800.00	4.1%	\$9,900.00
		Add Left-Turn Bay (55 feet) – Northbound*			
		Add Left-Turn Bay (185 feet) – Southbound	\$207,800.00		\$8,500.00
		Add Left-Turn Bay (135 feet) – Southbound*			
		Add Right-Turn Bay (100 feet) – Eastbound			
Modify Signal Timing – Intersection	\$5,000.00	\$200.00			
103	Ranch Road 12 and Founders Park Road	Install 3 Approach Traffic Signal	\$250,000.00	12.6%	
		Add Right-Turn Bay (345 feet) – Northbound	\$131,000.00		\$16,500.00
		Add Left-Turn Bay (270 feet) - Westbound	\$73,400.00		\$9,200.00
		Add Left-Turn Bay (475 feet) - Southbound	\$146,400.00		\$18,400.00
104	Ranch Road 12 and Springlake Drive/Goodnight Trail	Install 4 Approach Traffic Signal	\$250,000.00	5.1%	\$12,800.00
105	US 290 and Rob Shelton Blvd	Modify Signal Timing - Intersection	\$5,000.00	9.4%	\$500.00
Subtotal			\$1,514,300.00		\$115,900.00
Developer Funded Site Improvements					
203	Proposed Roadway and Driveway 3	Add Left-Turn Bay (50 feet) – Northbound	\$38,000.00	100%	\$38,000.00
204	Proposed Roadway and Driveway 4	Add Left-Turn Bay (50 feet) – Westbound**	\$38,000.00	100%	\$38,000.00
Subtotal			\$76,000.00		\$76,000.00
Total			\$1,590,300.00		\$191,900.00

*The length of this turn-bay represents the difference in the existing turn-bay length and the total turn-bay length required to meet 95th queue lengths.

**These improvements are included based on developer plans to facilitate entry into the Amenity center for the development. This intersection is anticipated to operate at an acceptable LOS without these improvements.

At the request of the City of Dripping Springs, a roundabout was also analyzed at the intersections of Founders Park Road with Rob Shelton Boulevard. Results are presented in **Table 7**. The intersection is anticipated to operate at an acceptable level of service as a two-way stop-controlled intersection under Access Scenario 1- Build-out (2025) conditions. Therefore, the implementation of a roundabout should be reevaluated at a future date and should be contingent on receiving the appropriate funding.

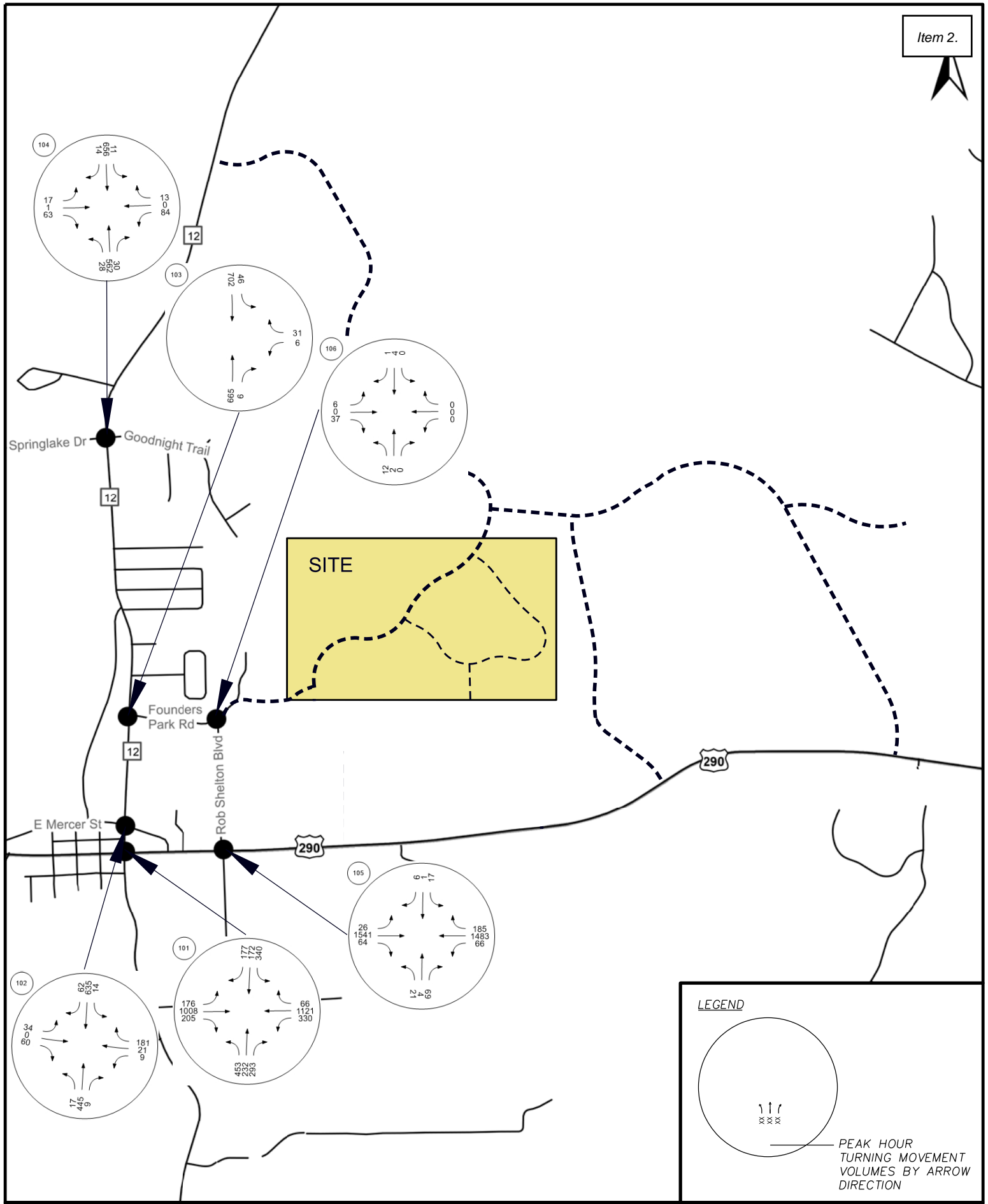


Figure 6: Access Scenario 1 - AM Background Traffic (2025)

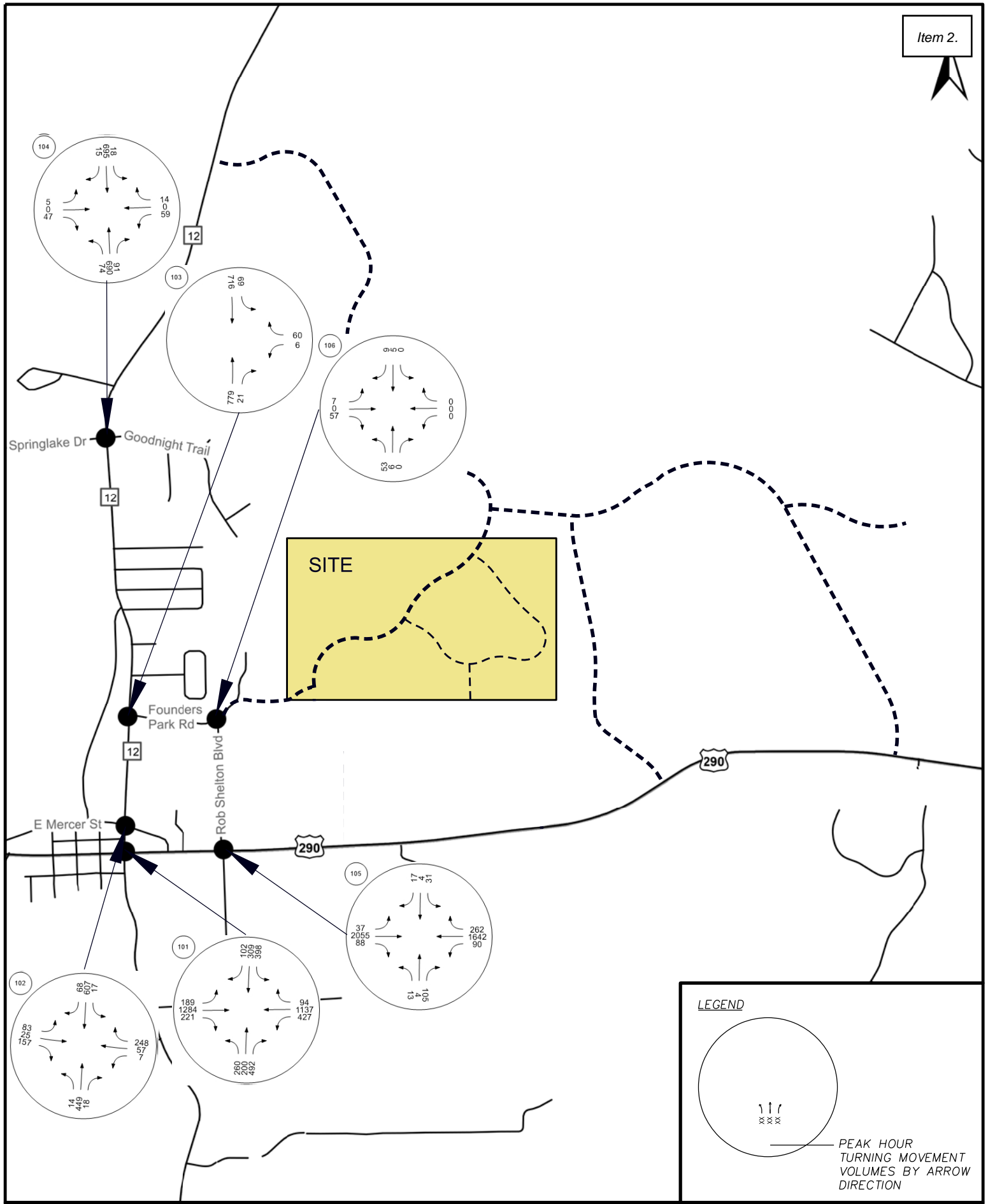


Figure 7: Access Scenario 1 - PM Background Traffic (2025)

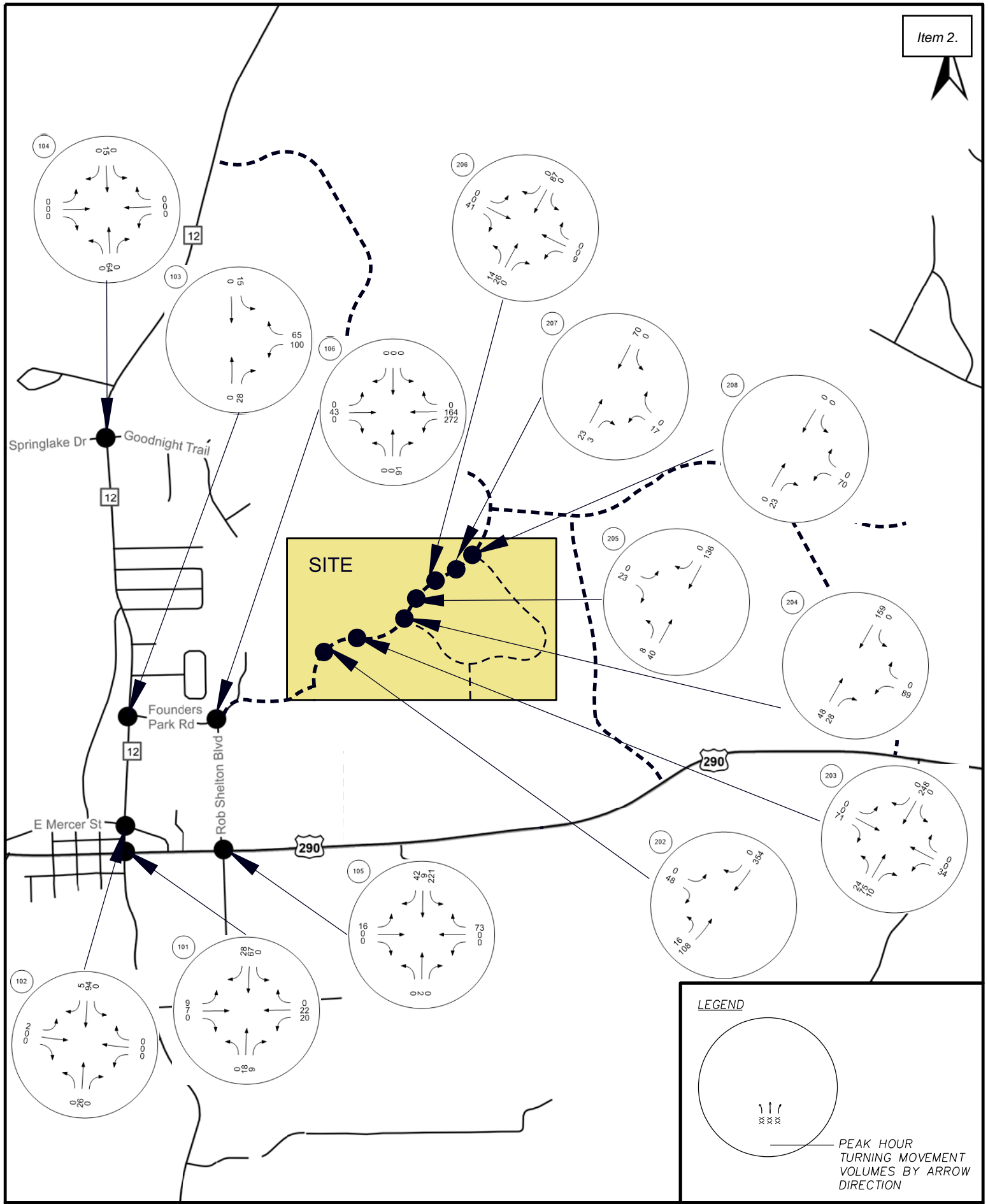


Figure 8: Access Scenario 1 - AM Peak Site Traffic (2025)

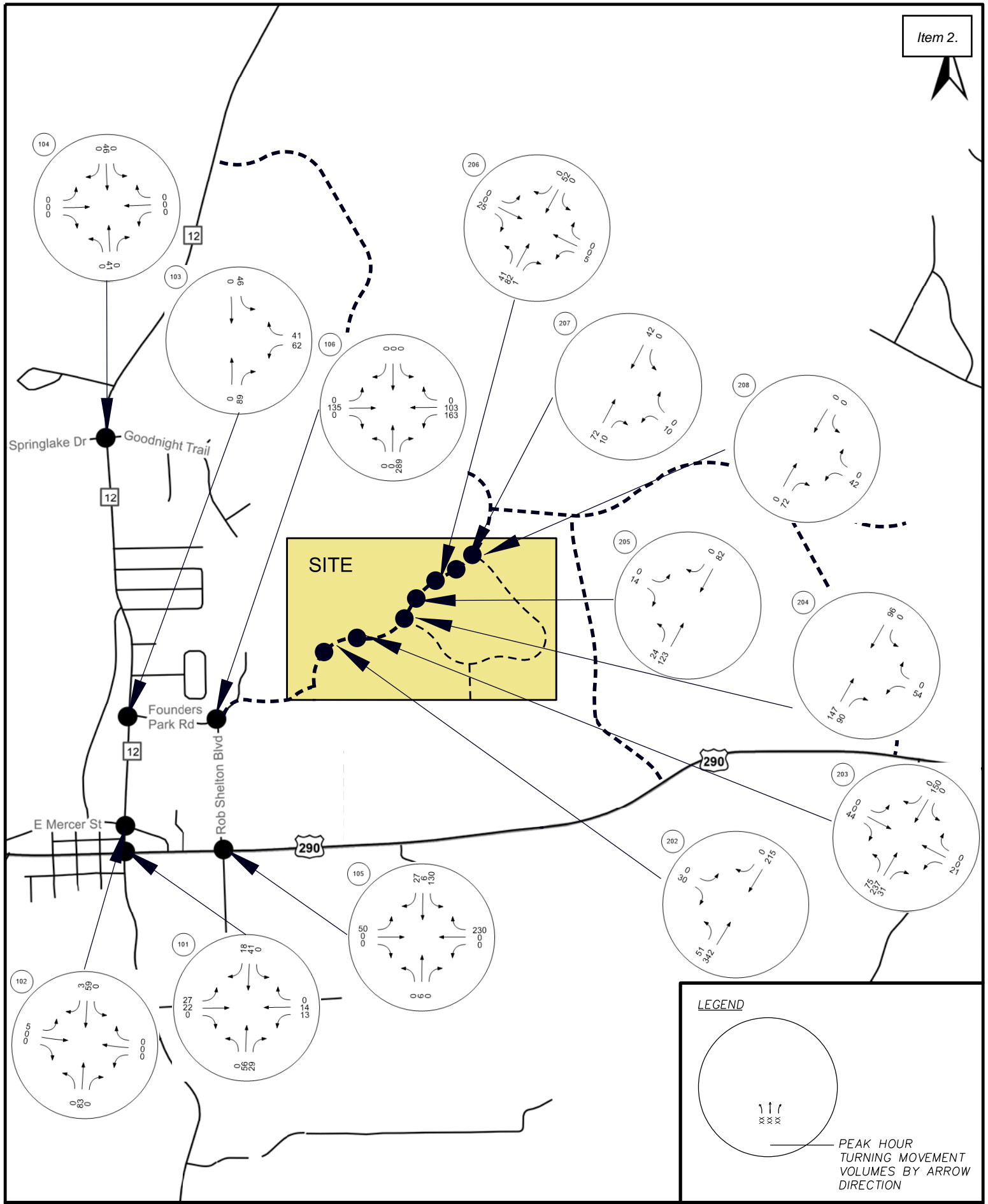


Figure 9: Access Scenario 1 - PM Peak Site Traffic (2025)

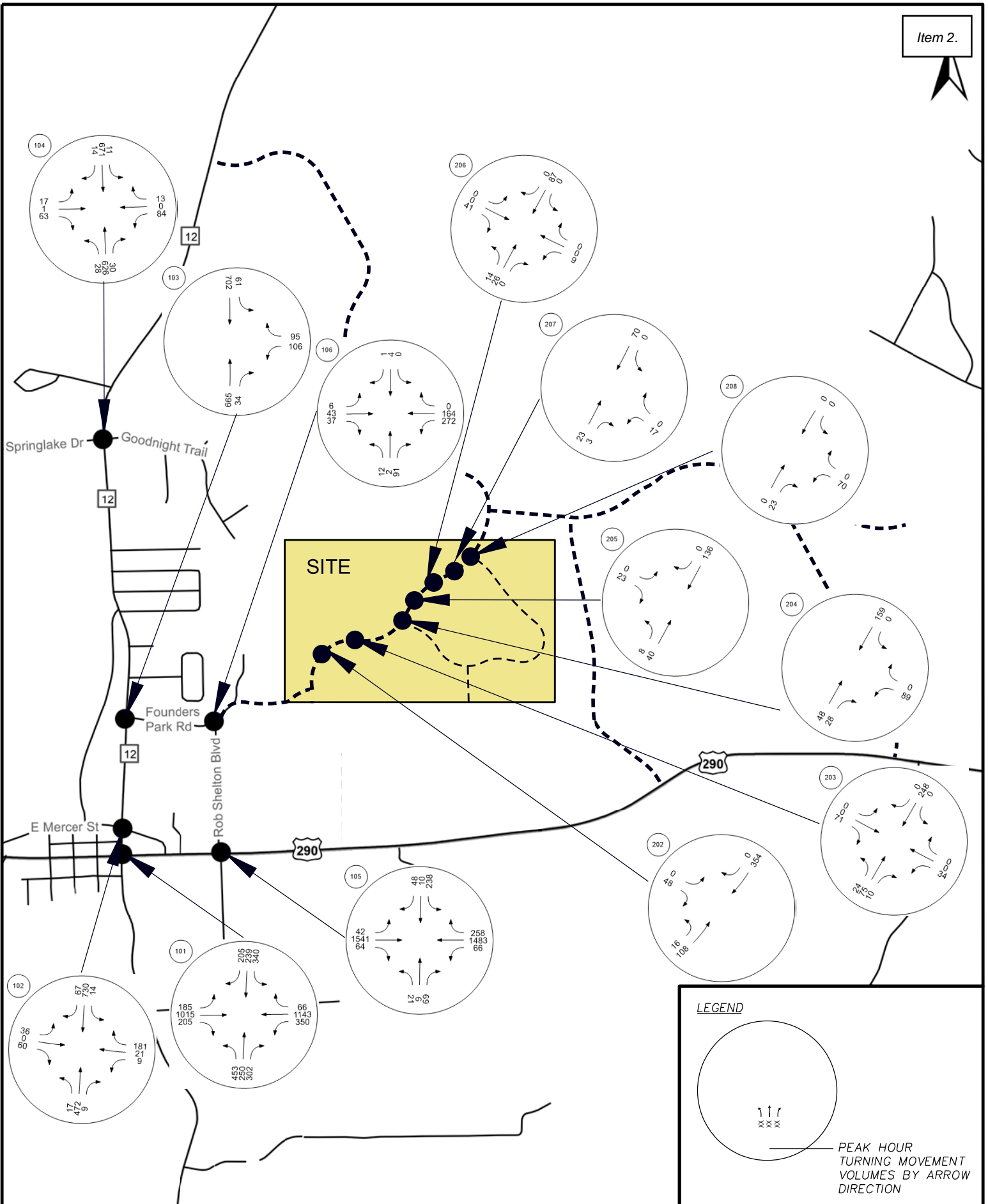


Figure 10: Access Scenario 1 - AM Peak B+S Traffic (2025)

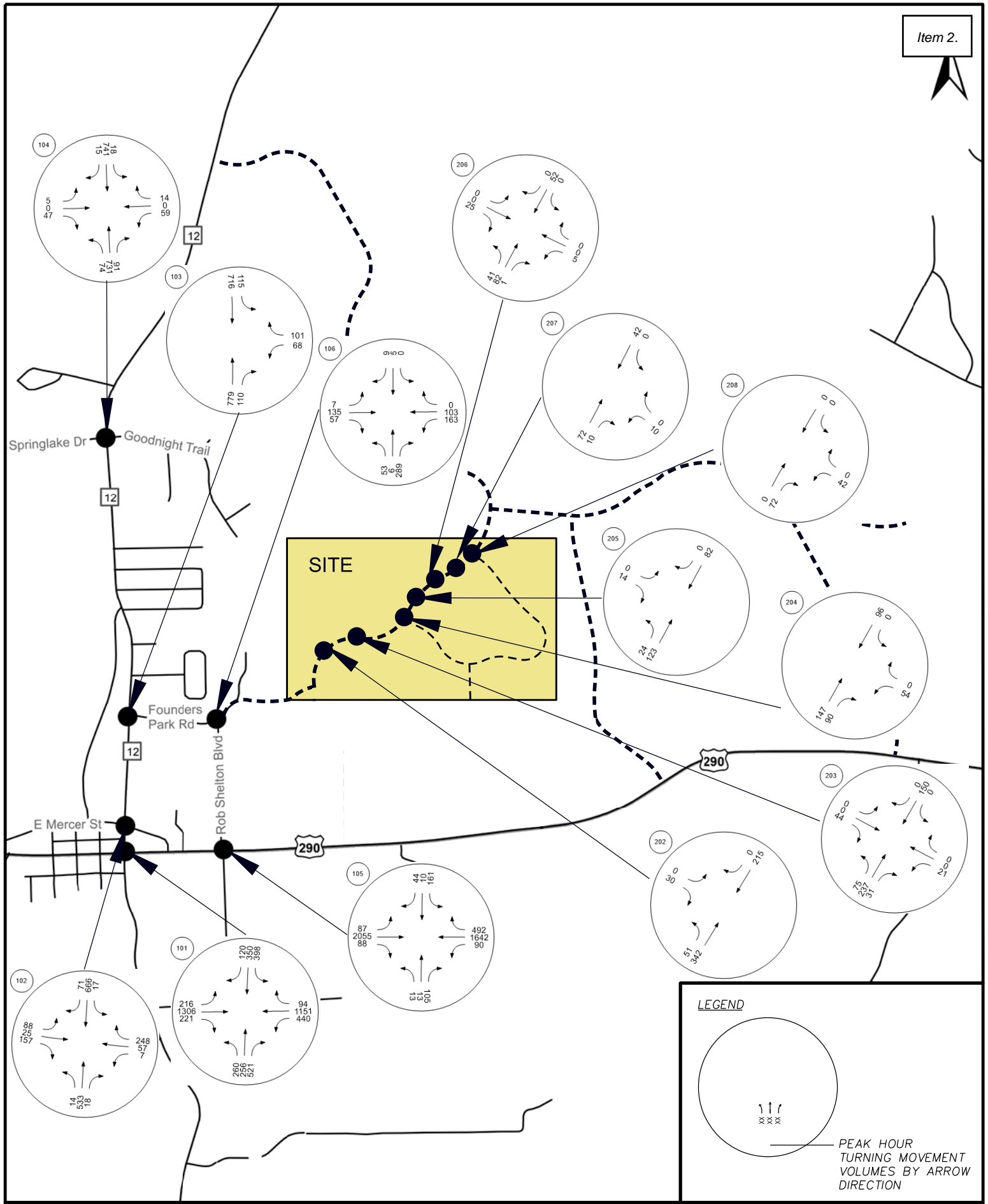


Figure 11: Access Scenario 1 - PM Peak B+S Traffic (2005)

Access Scenario 2 (2025) – Founders Park Road, Rob Shelton Boulevard, and Proposed Cannon Tract Roadway

In this scenario, the proposed north/south street which runs through the Cannon Tract to US 290 is assumed to be constructed by full build-out of Big Sky Ranch (2025). Accordingly, this scenario reflects access for the development provided via Founders Park Road to Ranch Road 12, via Rob Shelton Boulevard to US 290, as well as via the proposed north/south street which runs through the Cannon Tract to US 290.

Projected peak hour turning volumes for Background, Site, and Background + Site are illustrated in **Figure 12** through **Figure 17**. The results from this analysis are presented in **Table 12**. Analysis worksheets are provided in **Appendix F** and **Appendix H**.

Table 12: Scenario 2 Build-Out (2025) Projected Levels of Service

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
101	US 290 and Ranch Road 12	Signalized	Intersection	LOS	LOS	F	F	F	F	D	D
				Delay(s)	Delay (s)	89.3	151.1	104.0	168.0	40.1	54.2
102	Ranch Road 12 & Mercer Street	Signalized	Intersection	-	LOS	B	C	C	C	-	-
				Delay (s)	Delay (s)	18.1	21.4	22.7	23.2	-	-
103	Founders Park Road and Ranch Road 12	Un-signalized	Intersection	-	LOS	A	A	F	B	B	B
				Delay (s)	Delay (s)	1.0	1.3	47.6	11.9	20.9	4.6
			Westbound	Left/Right	LOS	D	C	F	F	F	F
					Delay (s)	Delay (s)	27.8	21.3	538.7	150.5	391.0
			Northbound	Through/ Right	LOS	A	A	A	A	A	B
					Delay(s)	Delay(s)	0.0	0.0	0.0	0.0	0.0
Southbound	Left/Through	LOS	B	A	B	A	B	B			
		Delay(s)	Delay(s)	10.1	9.9	10.3	10.5	10.3	10.5		
104	Ranch Road 12 and Springlake Drive/Goodnight Trail	Un-signalized/ Signalized	Intersection	-	LOS	A	A	A	C	B	B
				Delay(s)	Delay(s)	17.4	5.3	53.7	6.3	16.7	13.6
			Eastbound	Left/Through/ Right	LOS	D	C	F	C	-	-
					Delay (s)	Delay (s)	34.9	19.7	88.6	20.8	-
			Westbound	Left/Through/ Right	LOS	F	F	F	F	-	-
					Delay (s)	Delay (s)	218.4	118.3	957.4	147.6	-
			Northbound	Left	LOS	B	A	B	A	-	-
					Delay(s)	Delay(s)	10.2	9.4	10.2	9.5	-
				Through/ Right	LOS	A	A	A	A	-	-
					Delay(s)	Delay(s)	0.0	0.0	0.0	0.0	-
Southbound	Left	LOS	A	A	A	A	-	-			
		Delay(s)	Delay(s)	8.0	9.4	9.7	9.4	-	-		
	Through/ Right	LOS	A	A	A	A	-	-			
		Delay(s)	Delay(s)	0.0	0.0	0.0	0.0	-	-		
105	US 290 and Rob Shelton Boulevard	Signalized	Intersection	-	LOS	C	D	C	E	C	C
				Delay (s)	Delay (s)	21.9	44.5	33.0	72.0	30.8	33.5

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
106	Rob Shelton Boulevard and Founders Park Road	Un-signalized	Intersection (stop)	-	LOS	A	A	A	A	-	-
					Delay(s)	3.4	5.3	4.2	6.4	-	-
			Intersection (roundabout)	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	6.7	6.8	-	-
			Eastbound	Left/Through/Right	LOS	A	A	A	A	-	-
			Westbound	Left/Through/Right	LOS	A	A	A	A	-	-
			Northbound	Left/Through/Right	LOS	A	A	B	B	-	-
Southbound	Left/Through/Right	LOS	A	A	B	B	-	-			
107	US 290 & Proposed Cannon Tract Road	Un-signalized/Signalized	Intersection	-	LOS	-	-	F	E	B	D
					Delay(s)	-	-	177.6	43.4	18.2	35.2
			Eastbound	Left	LOS	-	-	C	F	-	-
					Delay(s)	-	-	21.1	145.9	-	-
			Westbound	Through/Right	LOS	-	-	A	B	-	-
					Delay(s)	-	-	0.0	0.0	-	-
			Southbound	Left/Right	LOS	-	-	F	F	-	-
Delay(s)	-	-	1857.7	502.6	-	-					
201	Founders Park Road and Internal Site Roadway/Driveway 1	Un-signalized	Intersection	-	LOS	-	-	B	A	-	-
					Delay(s)	-	-	11.0	4.8	-	-
			Northbound	Through/Right	LOS	-	-	A	A	-	-
			Eastbound	Left/Right	LOS	-	-	B	B	-	-
			Southbound	Left/Through	LOS	-	-	A	A	-	-
202	Driveway 2 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	1.3	1.2	-	-
			Eastbound	Left/Right	LOS	-	-	B	B	-	-
			Northbound	Left/Right	LOS	-	-	A	A	-	-
			Southbound	Through/right	LOS	-	-	A	A	-	-

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
203	Driveway 3 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
			Southwest bound	Left/Through/Right	LOS	-	-	2.2	2.1	-	-
			Southwest bound	Left/Through/Right	Delay (s)	-	-	10.4	9.5	-	-
			Northwest bound	Left/Through/Right	LOS	-	-	B	B	-	-
			Northwest bound	Left/Through/Right	Delay (s)	-	-	12.1	12.5	-	-
			Northeast bound	Left/Through/Right	LOS	-	-	A	A	-	-
Northeast bound	Left/Through/Right	Delay (s)	-	-	7.8	1.6	-	-			
Southwest bound	Left/Through/Right	LOS	-	-	A	A	-	-			
Southwest bound	Left/Through/Right	Delay (s)	-	-	7.4	0.2	-	-			
204	Driveway 4 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
			Southwest bound	Left/Through/Right	LOS	-	-	1.9	1.1	-	-
			Southwest bound	Left/Through/Right	Delay(s)	-	-	10.8	11.8	-	-
			Northwest bound	Left/Right	LOS	-	-	B	B	-	-
			Northwest bound	Left/Right	Delay(s)	-	-	10.8	11.8	-	-
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-
Northeast bound	Through/Right	Delay(s)	-	-	0.0	0.0	-	-			
Southwest bound	Left/Through	LOS	-	-	A	A	-	-			
Southwest bound	Left/Through	Delay(s)	-	-	0.0	0.3	-	-			
205	Driveway 5 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
			Southwest bound	Left/Through	LOS	-	-	0.9	0.7	-	-
			Southwest bound	Left/Through	Delay (s)	-	-	9.5	9.4	-	-
			Northeast bound	Left/Through	Los	-	-	A	A	-	-
			Northeast bound	Left/Through	Delay(s)	-	-	7.6	0.7	-	-
			Southwest bound	Through/Right	LOS	-	-	A	A	-	-
Southwest bound	Through/Right	Delay(s)	-	-	0.0	0.0	-	-			
206	Driveway 6 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
			Southwest bound	Left/Through/Right	LOS	-	-	2.4	1.8	-	-
			Southwest bound	Left/Through/Right	Delay (s)	-	-	9.1	9.1	-	-
			Northwest bound	Left/Through/Right	LOS	-	-	B	B	-	-
			Northwest bound	Left/Through/Right	Delay(s)	-	-	10.6	11.9	-	-
			Northeast bound	Left/Through/Right	LOS	-	-	A	A	-	-
Northeast bound	Left/Through/Right	Delay(s)	-	-	7.5	1.6	-	-			
Southwest bound	North/Through/Right	LOS	-	-	A	A	-	-			
Southwest bound	North/Through/Right	Delay(s)	-	-	0.0	0.0	-	-			
207	Driveway 7 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
			Southwest bound	Left/Through	LOS	-	-	0.9	0.4	-	-
			Southwest bound	Left/Through	Delay (s)	-	-	9.5	10.0	-	-
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-
			Northeast bound	Through/Right	Delay(s)	-	-	0.0	0.0	-	-
Southwest bound	Left/Through	LOS	-	-	A	A	-	-			
Southwest bound	Left/Through	Delay(s)	-	-	7.4	0.1	-	-			

ID	Intersection	Type of Control	Approach	Movement	MOE	Background		Background + Site		Background + Site w/ Improvements	
						AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
208	Driveway 8 & Proposed Roadway	Un-signalized	Intersection	-	LOS	-	-	A	A	-	-
					Delay(s)	-	-	3.3	1.7	-	-
			Northwest bound	Left/Right	LOS	-	-	A	A	-	-
					Delay (s)	-	-	9.4	9.9	-	-
			Northeast bound	Through/Right	LOS	-	-	A	A	-	-
					Delay(s)	-	-	0.0	0.0	-	-
Southwest bound	Left/Through	LOS	-	-	A	A	-	-			
		Delay(s)	-	-	7.3	0.8	-	-			
209	Driveway 1 & Proposed Roadway	Un-signalized	Intersection	-		-	-	A	A	-	-
						-	-	1.9	1.2	-	-
			Northbound	Through/Right		-	-	A	A	-	-
						-	-	0.0	0.0	-	-
			Westbound	Left/Right		-	-	B	B	-	-
						-	-	14.1	14.3	-	-
Southbound	Through/Left		-	-	A	A	-	-			
			-	-	7.6	0.1	-	-			

As indicated in **Table 12**, four intersections are anticipated to operate with an unacceptable LOS in at least one of the peak hours under 2025 build-out conditions, while two of those intersections are anticipated to operate with an unacceptable LOS under background conditions without the site.

The proposed access points were evaluated against the criteria in the TxDOT Access Management Manual to determine the need for right-turn deceleration and/or acceleration lane(s) to accommodate the full build-out of the development. Per the Access Management Manual, the minimum threshold volumes are 200 vehicles per hour (vph) for egress (acceleration lane) and 50 vph for ingress (deceleration lane). The volumes are shown in **Table 13**.

Table 13: Auxiliary Lane Threshold Evaluation

TxDOT Volume Threshold Criteria* (vph)	Right Turn Projected Volumes to or from Property		
		Acceleration	Deceleration
		Right-turn egress >200 vph	For speed limit >45 mph where right-turn ingress volumes is >50 vph
		Exiting	Entering
Ranch Road 12 and Founders Park Road	AM	57	29
	PM	79	94

*TxDOT Criteria obtained from TxDOT Access Management Manual. Table 2-3 (Auxiliary Lane Threshold)⁽⁴⁾

As indicated in **Table 13**, the access roadway exceeds the threshold for PM ingress volumes. Therefore, a deceleration lane must be considered for this development.

The projected opposing volumes, advancing volumes, and percentage of left-turns from the advancing volumes at the study driveway were evaluated using the criteria contained in Table 3-11 of the TxDOT Roadway Design

Manual(5). The criteria contained in Table 3-11 that pertains to the proposed driveway is shown in **Table 14**. Although the speed limits differ in the northbound and southbound directions, the criteria for a 60 mph design speed was used to provide a conservative analysis.

Table 14: Guide for Left-Turn Lane on Two-Lane Highways

60 mph Design Speed				
Opposing Volume (vph)	Advancing Volume (vph)			
	5% Left Turns	10% Left Turns	15% Left Turns	20% Left Turns
800	230	170	125	115
600	290	210	160	140
400	365	270	200	175
200	450	330	250	215
100	505	370	275	240

The projected opposing volumes, advancing volumes, and percentage of left-turns from the advancing volumes for the study driveway are shown in **Table 14**.

Table 15: Left-Turn Lane Threshold Evaluation

Intersection	AM Peak			PM Peak		
	Opposing Volume	% Left-Turn	Advancing Volume	Opposing Volume	% Left-Turn	Advancing Volume
Ranch Road 12 and Founders Park Road	692	8%	724	846	13%	778

As indicated in **Table 15**, the study driveway exceeds the minimum advancing volume required for the consideration of a left-turn lane during both the AM and PM peak periods.

The following improvements are recommended in order to achieve acceptable LOS or improve operations under 2025 build-out conditions:

- US 290 and Ranch Road 12
 - Add Left-Turn Bay (155 feet) – Northbound
 - Add Left-Turn Bay (35 feet) – Northbound
 - Add Left-Turn Bay (185 feet) – Southbound
 - Add Left-Turn Bay (135 feet)- Southbound
 - Add Right-Turn Bay (100 feet)- Eastbound
 - Modify Signal Timing- Intersection

- Ranch Road 12 and Founders Park Road
 - Add Right-Turn Bay (345 feet) – Northbound
 - Add Left-Turn Bay (180 feet)- Westbound
 - Add Left-Turn Bay (475 feet)- Southbound
- Ranch Road 12 and Springlake Drive/Goodnight Trail
 - Install 4 Approach Traffic Signal
- US 290 and Rob Shelton Boulevard
 - Modify Signal Timing - Intersection
- US 290 and Proposed Cannon Tract Road
 - Add Right-Turn Bay (150 feet) – Westbound
 - Install 3 Approach Traffic Signal
- Proposed Roadway and Driveway 3
 - Add Left-Turn Bay (50 feet) - Northbound
- Proposed Roadway and Driveway 4
 - Add Left-Turn Bay (50 feet) – Eastbound*

*These improvements are recommended based only on comments received from the City of Dripping Springs. The intersections associated with these improvements are anticipated to operate at an acceptable LOS without these recommended improvements.

An engineer's opinion of probable cost for the recommended improvements for the build-out year analysis as well as the developer's pro-rata share cost are shown in **Table 16**.

Table 16: Scenario 2 - Probable Cost for Recommended Improvements (2025)

ID	Location	Improvement	Construction Subtotal	Developer's Pro Rata Share %	Developer's Construction Cost
Existing Intersections:					
101	US 290 and Ranch Road 12	Add Left-Turn Bay (155 feet) – Northbound	\$237,400.00	4.3%	\$10,200.00
		Add Left-Turn Bay (35 feet) – Northbound*			
		Add Left-Turn Bay (185 feet) – Southbound	\$207,800.00		\$8,900.00
		Add Left-Turn Bay (135 feet) – Southbound*			
		Add Right-Turn Bay (100 feet) – Eastbound	\$204,900.00		\$8,800.00
Modify Signal Timing – Intersection	\$5,000.00	\$200.00			
103	Ranch Road 12 and Founders Park Road	Add Right-Turn Bay (345 feet) – Northbound	\$131,100.00	9.6%	\$12,600.00
		Add Left-Turn Bay (180 feet) - Westbound	\$66,300.00		\$6,400.00
		Add Left-Turn Bay (345 feet) - Southbound	\$146,400.00		\$14,000.00
104	Ranch Road 12 and Springlake Drive/Goodnight Trail	Install 4 Approach Traffic Signal	\$250,000.00	3.0%	\$7,500.00
105	US 290 and Rob Shelton Blvd	Modify Signal Timing - Intersection	\$5,000.00	5.8%	\$300.00
Subtotal			\$1,253,900.00	-	\$68,900.00
Future Intersections:					
107	Proposed Cannon Access and US 290	Add Right-Turn Bay (150 feet) – Westbound	\$138,400.00	9.5%	\$13,100.00
		Install 3 Approach Traffic Signal	\$250,000.00		\$23,800.00
Subtotal			\$388,400.00	-	\$36,900.00
Developer Funded Site Improvements					
203	Proposed Roadway and Driveway 3	Add Left-Turn Bay (50 feet) – Northbound	\$38,000.00	100%	\$38,000.00
204	Proposed Roadway and Driveway 4	Add Left-Turn Bay (50 feet) – Eastbound**	\$38,000.00	100%	\$38,000.00
Subtotal			\$76,000.00	-	\$76,000.00
Total			\$1,718,300.00	-	\$181,800.00

*The length of this turn-bay represents the difference in the existing turn-bay length and the total turn-bay length required to meet 95th queue lengths.
 ** These improvements are included based on developer plans to facilitate entry into the Amenity center for the development. This intersection is anticipated to operate at an acceptable LOS without these improvements.

At the request of the City of Dripping Springs, a roundabout was also analyzed at the intersections of Founders Park Road and Rob Shelton Boulevard. Results are presented in **Table 16**. The intersection is anticipated to operate at an acceptable level of service as a two-way stop-controlled intersection under Access Scenario 2- Build-out (2025) conditions. Therefore, the implementation of a roundabout should be reevaluated at a future date and should be contingent on receiving the appropriate funding.

As indicated by **Table 11** and **Table 16**, Access Scenario 2 is anticipated to have similar results and improvements when compared to Access Scenario 1. This is largely due to the high background volumes that can be observed on Ranch Road 12 and US 290 in both access scenarios. The type of improvements that are anticipated to be needed are primarily dictated by background traffic and do not change significantly between the two access scenarios.

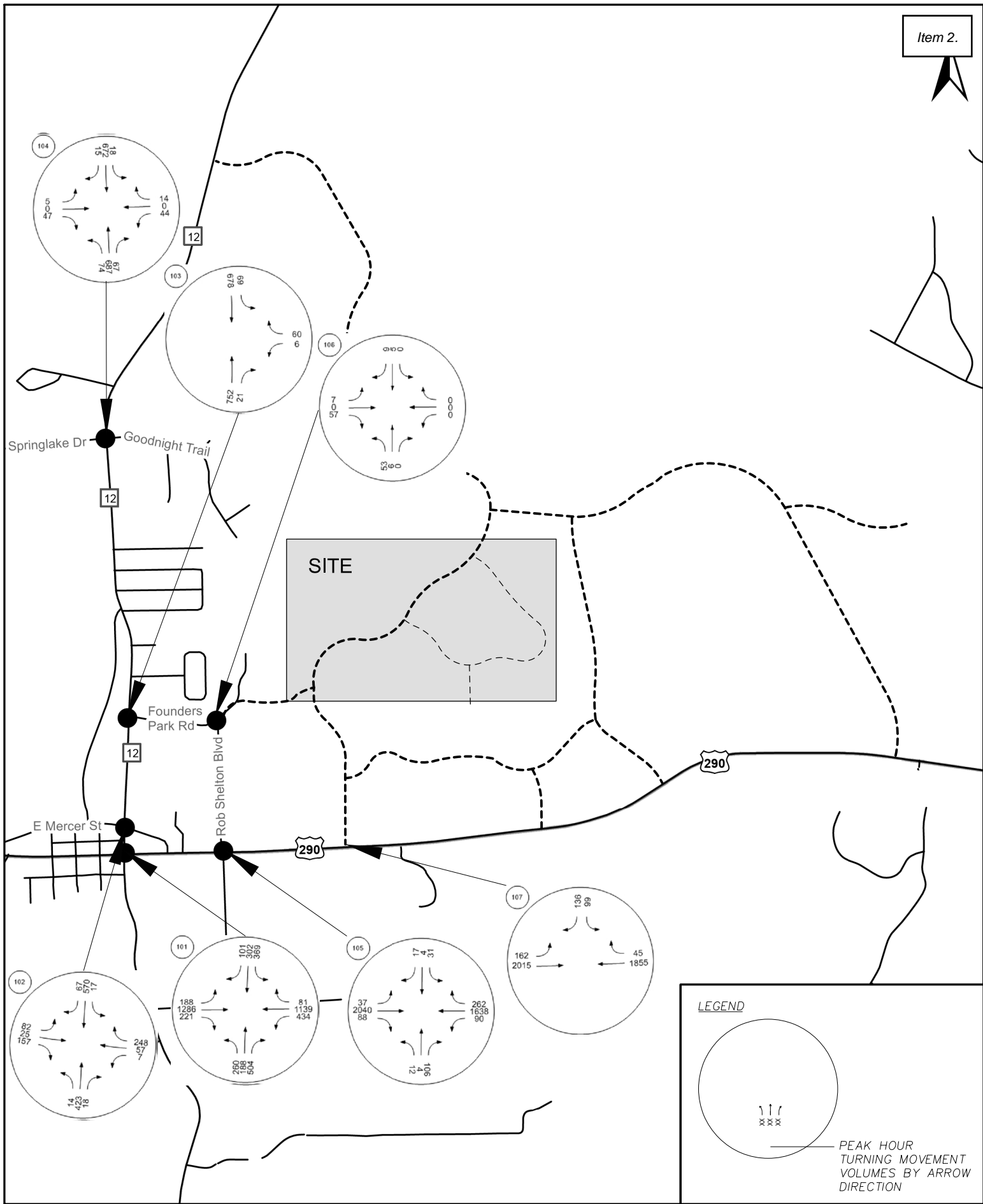


Figure 13: Access Scenario 2 - PM Background Traffic (2025)

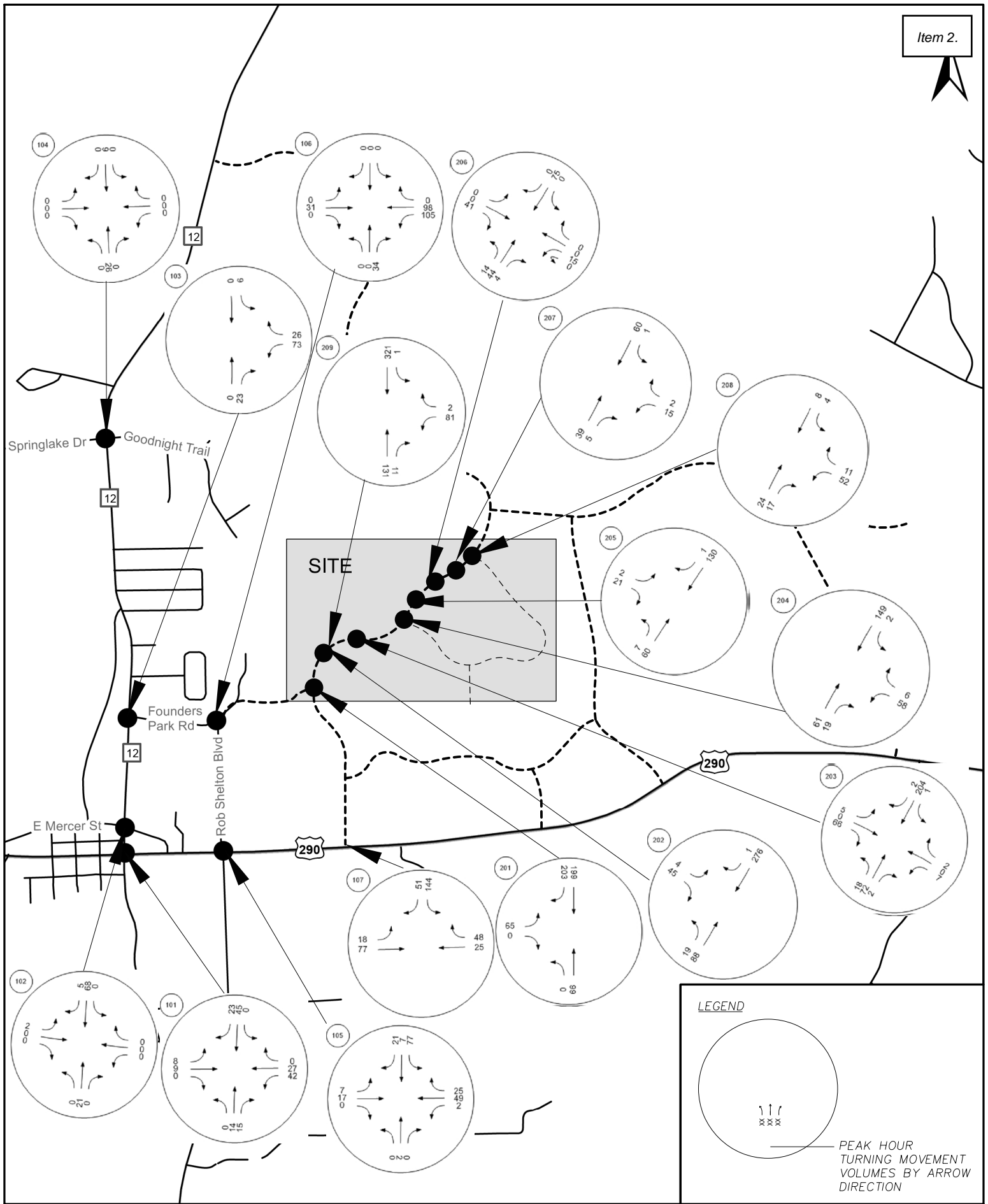


Figure 14: Access Scenario 2 - AM Peak Site Traffic (2005)

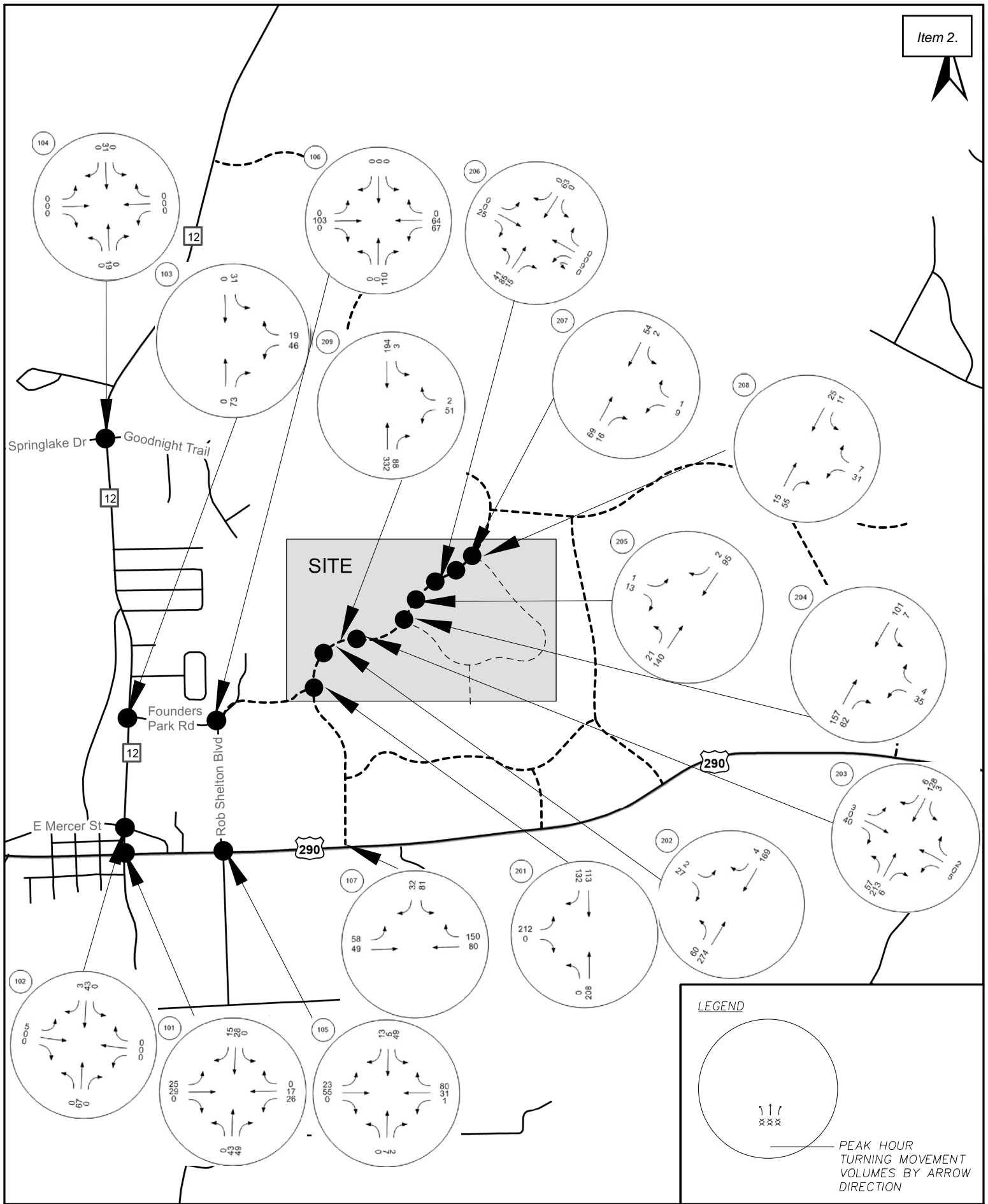


Figure 15: Access Scenario 2 - PM Peak Site Traffic (2005)

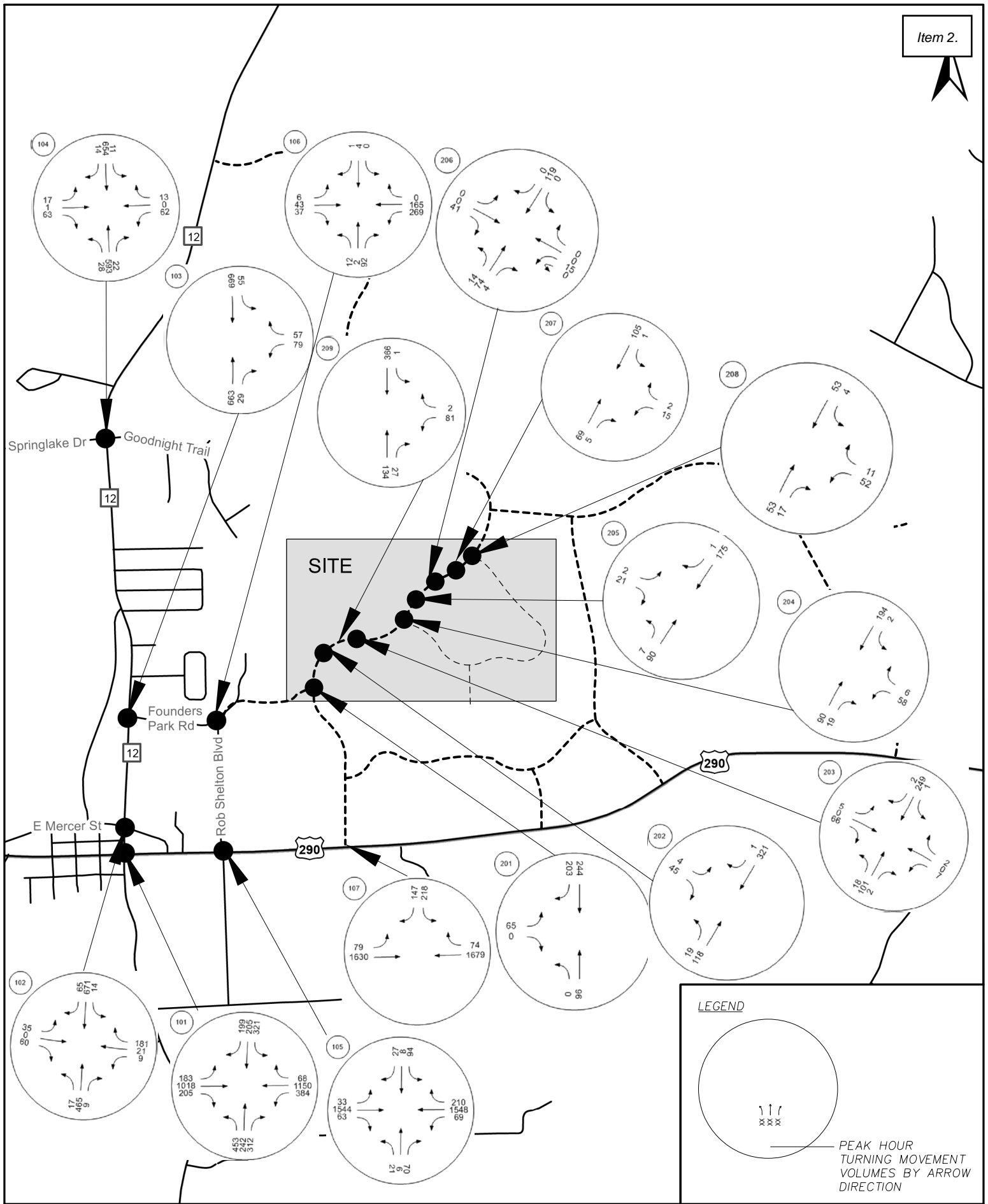


Figure 16: Access Scenario 2 - AM Peak B+S Traffic (2025)

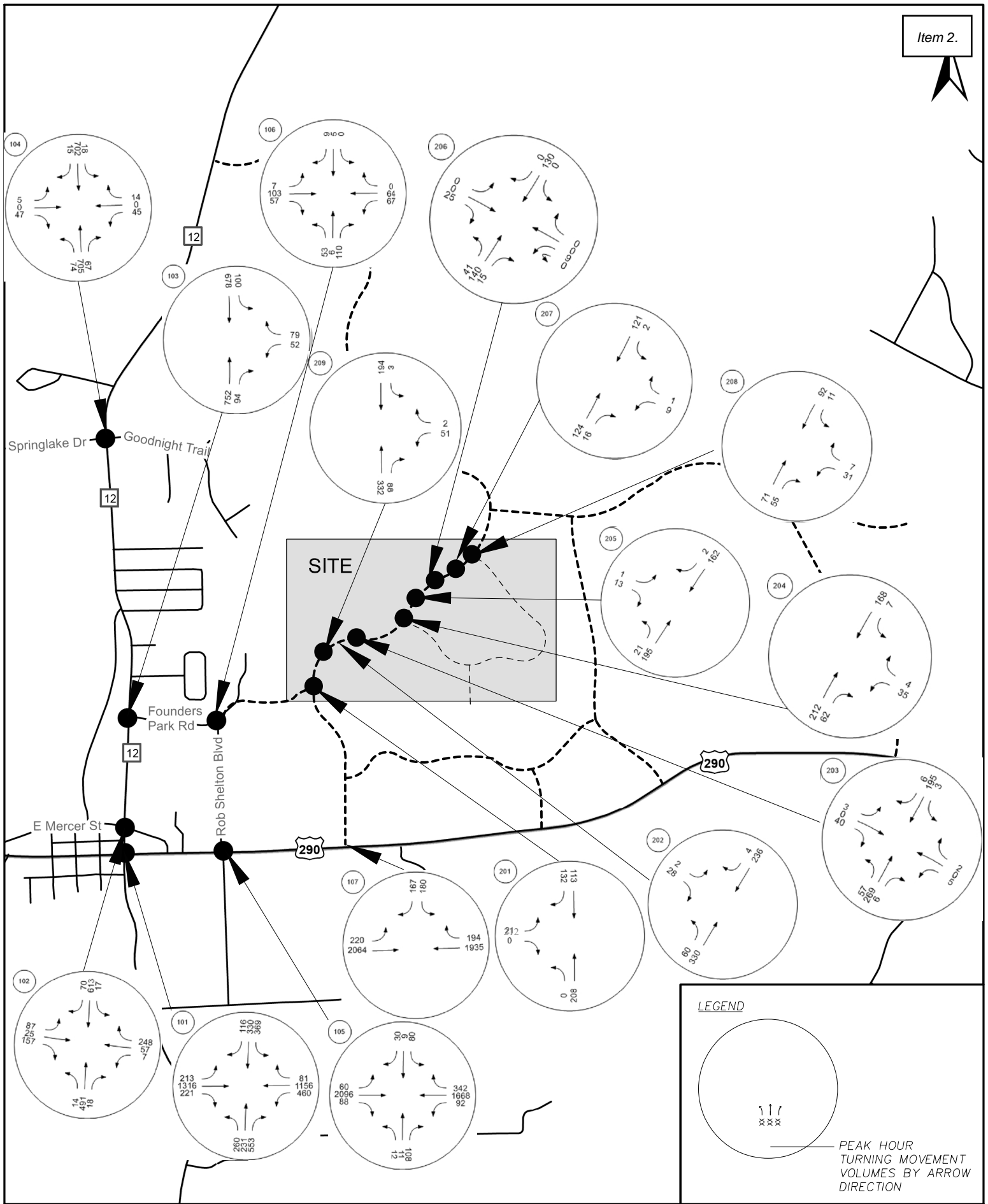


Figure 17: Access Scenario 2 - PM Peak B+S Traffic (2025)

Proposed Roadway Evaluation (2028)

New roadways are proposed with the development of Big Sky Ranch and the adjacent background projects. An evaluation of the roadways' anticipated capacity was performed using projected future year planning phase (2028) peak hour volumes.

The 1994 HCM⁽⁶⁾ provides estimates for service flow rates in passenger cars per hour (pcph), total both directions, for two-lane roadways as they relate to LOS. In addition, the 1994 HCM⁽⁶⁾ provides estimates for service flow rates in passenger cars per hour per lane (pcphpl) for multi-lane roadways as they relate to LOS. **Table 17 and 18** describe traffic flow rates in relation to LOS for two lane roadways and multi-lane roadways, respectively.

The projected peak hour volumes for the proposed roadways are illustrated in **Figure 18**. A summary of the proposed roadways' peak hour volumes and their anticipated required capacity can be found in **Table 19**.

Table 17: Two-Lane Roadways LOS vs. Traffic Flow Rates

LOS	Bi-Directional Flow Rate (pcph)
A	< 112
B	>112 and < 448
C	> 448 and < 896
D	> 896 and < 1,596
E	> 1,596 and < 2,800
F	>2,800

Table 18: Multi-Lane Roadways LOS vs. Traffic Flow Rates

LOS	Bi-Directional Flow Rate (pcphpl)
A	< 540
B	> 660 and < 900
C	> 900 and < 1,260
D	> 1,260 and < 1,500
E	>1,500 and < 1,900
F	>1,900

Table 19: Projected Volume and Capacity

Proposed Roadway ID	Projected Volume			Anticipated Capacity Needed (# of Lanes)*	LOS with Anticipated # of Lanes*	Anticipated Functional Classification**
	AM Peak	PM Peak	Daily Volume			
1	380	815	6,653	Two Lanes	C	Minor Arterial
2	See Figure 19			Two Lanes	C	Major Collector
3	384	675	6,537	Two Lanes	C	Minor Arterial
4	328	612	4,857	Two Lanes	C	Major Collector
5	224	576	4,437	Two Lanes	C	Major Collector
6	437	728	5,618	Two Lanes	C	Minor Arterial

*Anticipated number of lanes and LOS are based on HCM data presented in **Table 17** and **Table 18**.

**Anticipated functional classification are based on Table 2-1 from the Hays County Transportation Plan. The projected daily volumes represent a conservative analysis and should be reevaluated in the future when more detailed land use plans are available.

As indicated by **Table 19**, the proposed roadways are anticipated to perform at an acceptable LOS with two lanes under build-out (2028) conditions.

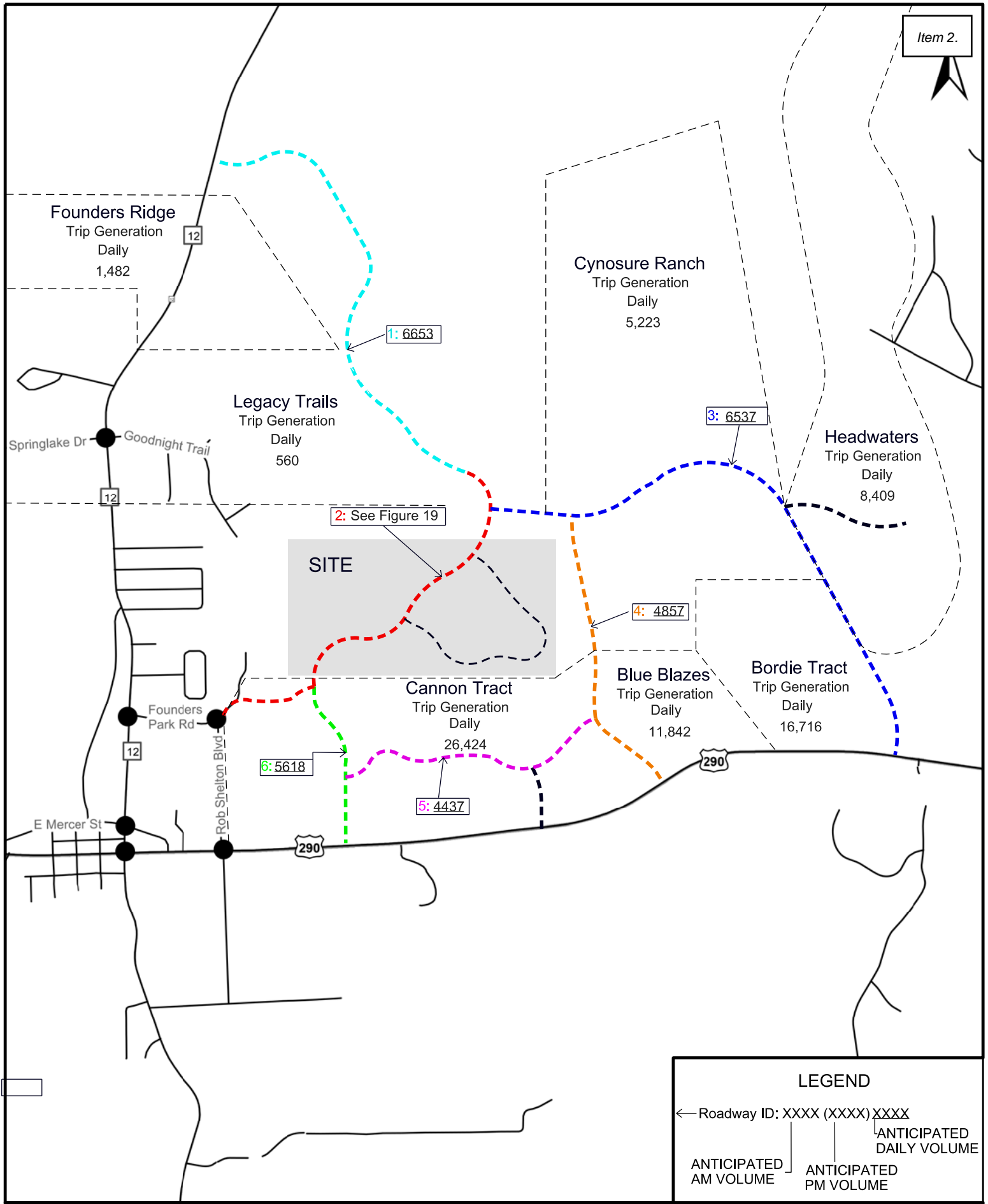
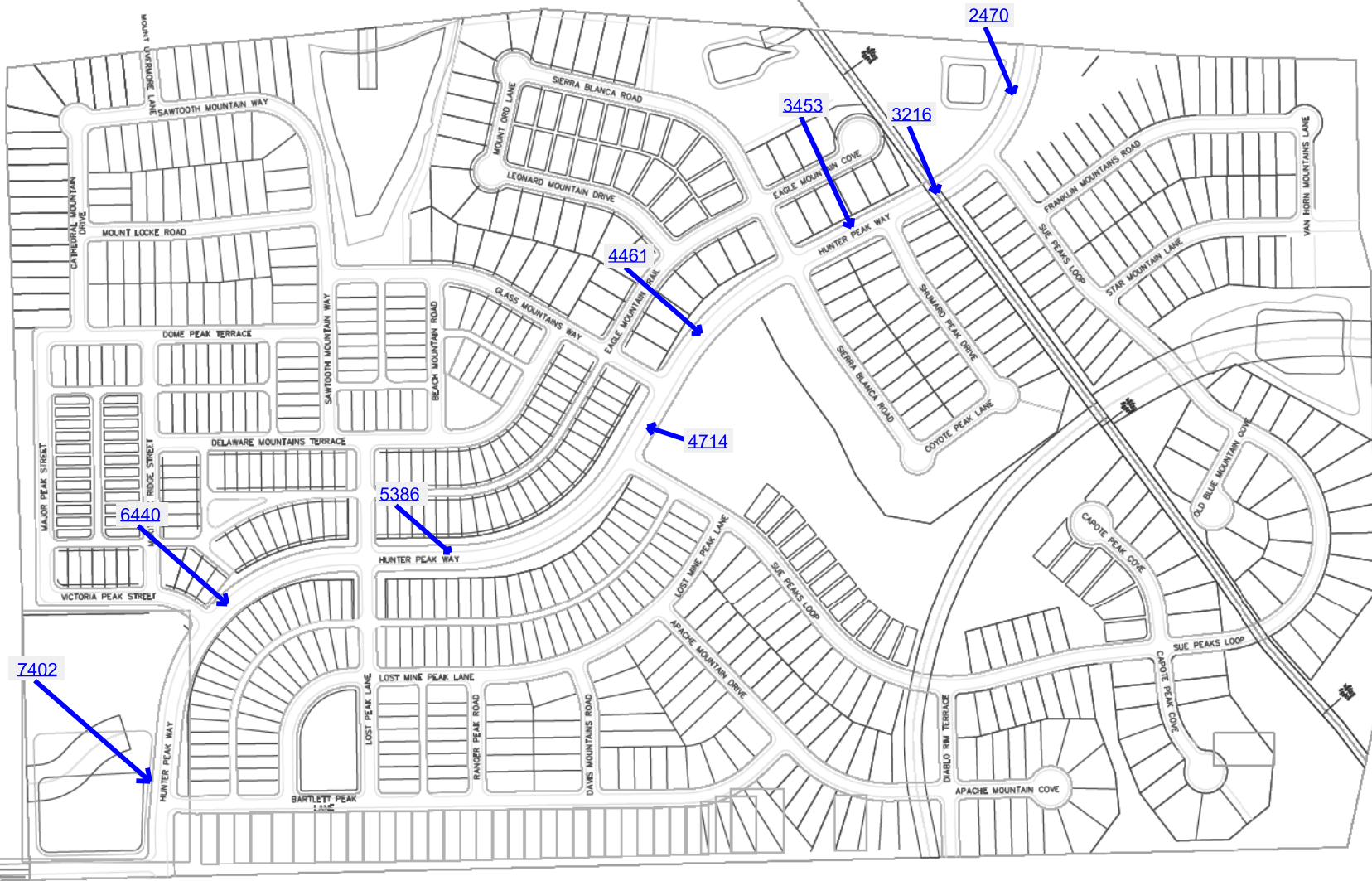


Figure 18: Anticipated Peak Volumes on Proposed Roadways (2020)



LEGEND

← XXXX
ANTICIPATED
DAILY VOLUME

Figure 19: Hunter Peak Way Projected 2028 Daily Traffic Volumes (with background projects included)

CONCLUSIONS

The proposed Big Sky Ranch development and its interaction with the surrounding roadway have been analyzed for build-out (2025) conditions. Improvements to accommodate background and site traffic were made to satisfy LOS criteria and TxDOT access management guidelines. Based on these analyses, the development should be approved as planned in accordance with the recommendations shown in **Table 20**. If the Cannon Tract roadway is not anticipated to be constructed at the time of build-out of Big Sky Ranch, the pro-rata share of costs for Scenario 1 should be utilized. If the Cannon Tract roadway is anticipated to provide access to Big Sky Ranch at the time of full build-out for Big Sky Ranch, then the pro-rata share of costs for Scenario 2 should be utilized.

Table 20: Recommended Improvements

Location	Access Scenario 1 (2025) Improvements	Scenario 1 Developer's Pro Rata Cost	Access Scenario 2 (2025) Improvements	Scenario 2 Developer's Pro Rata Cost		
Existing Intersections:						
US 290 and Ranch Road 12	<ul style="list-style-type: none"> Add Left-Turn Bay (175 feet) – Northbound Add Left-Turn Bay (55 feet) – Northbound* Add Left-Turn Bay (185 feet) – Southbound Add Left-Turn Bay (135 feet) – Southbound* Add Right-Turn Bay (100 feet) – Eastbound Modify Signal Timing – Intersection 	\$27,000.00	<ul style="list-style-type: none"> Add Left-Turn Bay (155 feet) – Northbound Add Left-Turn Bay (35 feet) – Northbound* Add Left-Turn Bay (185 feet) – Southbound Add Left-Turn Bay (135 feet) – Southbound* Add Right-Turn Bay (100 feet) – Eastbound Modify Signal Timing – Intersection 	\$28,100.00		
Ranch Road 12 and Founders Park Road	<ul style="list-style-type: none"> Install 3 Approach Traffic Signal Add Right-Turn Bay (345 feet) – Northbound Add Left-Turn Bay (270 feet) – Westbound Add Left-Turn Bay (475 feet) – Southbound 	\$75,600.00	<ul style="list-style-type: none"> Add Right-Turn Bay (345 feet) – Northbound Add Left-Turn Bay (180 feet) – Westbound Add Left-Turn Bay (345 feet) – Southbound 	\$33,000.00		
Ranch Road 12 and Springlake Drive/ Goodnight Trail	<ul style="list-style-type: none"> Install 4 Approach Traffic Signal 	\$12,800.00	<ul style="list-style-type: none"> Install 4 Approach Traffic Signal 	\$7,500.00		
US 290 and Rob Shelton Blvd	<ul style="list-style-type: none"> Modify Signal Timing – Intersection 	\$500.00	<ul style="list-style-type: none"> Modify Signal Timing – Intersection 	\$300.00		
Subtotal			\$115,900.00	Subtotal		\$68,900.00
Future Intersections:						
Proposed Cannon Access and US 290	N/A	N/A	<ul style="list-style-type: none"> Add Right-Turn Bay (150 feet) – Westbound Install 3 Approach Traffic Signal 	\$36,900.00		
Subtotal			N/A	Subtotal		\$36,900.00
Developer Funded Improvements						
Proposed Roadway and Driveway 3	Add Left-Turn Bay (50 feet) – Northbound	\$38,000.00		\$38,000.00		
Proposed Roadway and Driveway 4	Add Left-Turn Bay (50 feet) – Eastbound**	\$38,000.00		\$38,000.00		
Subtotal			\$76,000.00	Subtotal		\$76,000.00
Total			\$191,900.00	Total		\$181,800.00

*The length of this turn-bay represents the difference in the existing turn-bay length and the total turn-bay length required to meet 95th queue lengths.

** These improvements are included based on developer plans to facilitate entry into the Amenity center for the development. This intersection is anticipated to operate at an acceptable LOS without these improvements.

CERTIFICATION STATEMENT

I hereby certify that this report complies with applicable technical requirements of the Dripping Springs and is complete and accurate to the best of my knowledge.

Alliance Transportation Group, Inc.



Bethany James, P.E.

Transportation Engineer

REFERENCES

- 1) Trip Generation, an Informal Report. 8th Edition, Institute of Transportation Engineers, Washington D.C., 2008.
- 2) Highway Capacity Manual, Transportation Research Board, Washington D.C., 2014.
- 3) “Synchro”, Trafficware Corporation, Sugarland, Texas 2005.
- 4) Access Management Manual, Texas Department of Transportation, Austin, Texas, 2009.
- 5) Roadway Design Manual, Texas Department of Transportation, Austin, Texas, 2010.
- 6) Highway Capacity Manual, Transportation Research Board, Washington D.C., 1994.

Appendix F: Synchro Reports – Existing Conditions

Lanes, Volumes, Timings
1: RR 12 & US 290

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	919	163	92	1016	17	392	186	147	215	138	158
Future Volume (vph)	124	919	163	92	1016	17	392	186	147	215	138	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.973			0.996				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.983		0.950	0.991	
Satd. Flow (prot)	1671	3438	0	1671	3460	0	1633	1690	1553	1665	1765	1482
Flt Permitted	0.070			0.072			0.950	0.983		0.950	0.991	
Satd. Flow (perm)	123	3438	0	127	3460	0	1633	1690	1553	1665	1765	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			2				70			70
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			2594	
Travel Time (s)		45.6			43.5			10.3			39.3	
Peak Hour Factor	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	3%	1%	9%
Adj. Flow (vph)	146	1069	233	108	1254	30	436	221	181	250	182	182
Shared Lane Traffic (%)							26%			15%		
Lane Group Flow (vph)	146	1302	0	108	1284	0	323	334	181	212	220	182
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

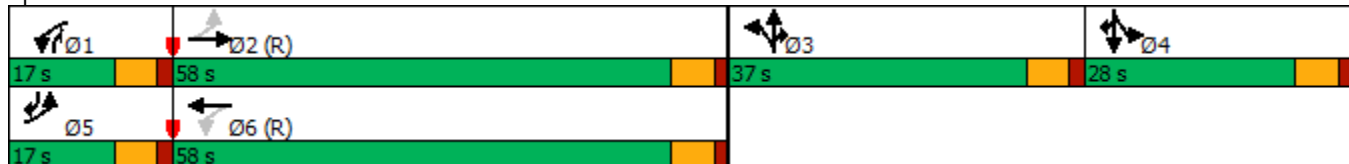


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2				6							
Detector Phase	5	2		1	6		3	3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	26.0		11.0	26.0		28.0	28.0		28.0	28.0	
Total Split (s)	17.0	58.0		17.0	58.0		37.0	37.0		28.0	28.0	
Total Split (%)	12.1%	41.4%		12.1%	41.4%		26.4%	26.4%		20.0%	20.0%	
Maximum Green (s)	11.0	52.0		11.0	52.0		31.0	31.0		22.0	22.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		13.0			13.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	67.5	57.2		64.9	55.9		29.6	29.6	38.6	20.2	20.2	36.6
Actuated g/C Ratio	0.48	0.41		0.46	0.40		0.21	0.21	0.28	0.14	0.14	0.26
v/c Ratio	0.84	0.92		0.68	0.93		0.94	0.94	0.38	0.88	0.87	0.42
Control Delay	61.5	55.6		48.1	53.3		89.0	88.0	15.5	93.0	88.6	28.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	55.6		48.1	53.3		89.0	88.0	15.5	93.0	88.6	28.2
LOS	E	E		D	D		F	F	B	F	F	C
Approach Delay		56.2			52.9			72.7			72.2	
Approach LOS		E			D			E			E	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 60.7
 Intersection LOS: E
 Intersection Capacity Utilization 81.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



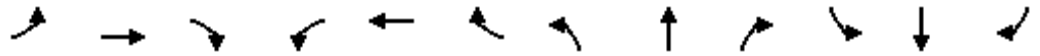
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	146	1302	108	1284	323	334	181	212	220	182
v/c Ratio	0.84	0.92	0.68	0.93	0.94	0.94	0.38	0.88	0.87	0.42
Control Delay	61.5	55.6	48.1	53.3	89.0	88.0	15.5	93.0	88.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.5	55.6	48.1	53.3	89.0	88.0	15.5	93.0	88.6	28.2
Queue Length 50th (ft)	94	658	52	611	303	313	50	198	206	81
Queue Length 95th (ft)	#180	#743	107	609	#487	#438	76	#308	250	146
Internal Link Dist (ft)		2932		2792		599			2514	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	181	1416	182	1381	361	374	514	261	277	437
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.92	0.59	0.93	0.89	0.89	0.35	0.81	0.79	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

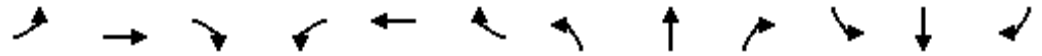
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	919	163	92	1016	17	392	186	147	215	138	158
Future Volume (vph)	124	919	163	92	1016	17	392	186	147	215	138	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1671	3438		1671	3462		1633	1690	1553	1665	1766	1482
Flt Permitted	0.07	1.00		0.07	1.00		0.95	0.98	1.00	0.95	0.99	1.00
Satd. Flow (perm)	123	3438		126	3462		1633	1690	1553	1665	1766	1482
Peak-hour factor, PHF	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Adj. Flow (vph)	146	1069	233	108	1254	30	436	221	181	250	182	182
RTOR Reduction (vph)	0	12	0	0	1	0	0	0	51	0	0	52
Lane Group Flow (vph)	146	1290	0	108	1283	0	323	334	130	212	220	130
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	3%	1%	9%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5
Permitted Phases	2			6								
Actuated Green, G (s)	67.6	57.2		64.8	55.8		29.6	29.6	38.6	20.2	20.2	36.6
Effective Green, g (s)	67.6	57.2		64.8	55.8		29.6	29.6	38.6	20.2	20.2	36.6
Actuated g/C Ratio	0.48	0.41		0.46	0.40		0.21	0.21	0.28	0.14	0.14	0.26
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	174	1404		157	1379		345	357	428	240	254	387
v/s Ratio Prot	c0.06	c0.38		0.04	0.37		c0.20	0.20	0.08	c0.13	0.12	0.09
v/s Ratio Perm	0.34			0.27								
v/c Ratio	0.84	0.92		0.69	0.93		0.94	0.94	0.30	0.88	0.87	0.34
Uniform Delay, d1	35.4	39.2		29.9	40.2		54.3	54.3	40.1	58.7	58.6	41.9
Progression Factor	0.83	1.16		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.9	10.1		9.6	12.5		31.8	31.0	0.1	28.8	24.4	0.2
Delay (s)	54.5	55.8		39.5	52.7		86.0	85.2	40.2	87.5	83.0	42.1
Level of Service	D	E		D	D		F	F	D	F	F	D
Approach Delay (s)		55.6			51.7			75.8			72.4	
Approach LOS		E			D			E			E	

Intersection Summary		
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.92	E
Actuated Cycle Length (s)	140.0	Sum of lost time (s)
Intersection Capacity Utilization	81.0%	24.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		D

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1240	0	0	1141	480	0	0	0	131	0	47
Future Volume (vph)	30	1240	0	0	1141	480	0	0	0	131	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.951							0.883
Flt Protected	0.950									0.950	0.989	
Satd. Flow (prot)	1805	3505	0	1900	3279	0	0	1900	0	1715	1517	0
Flt Permitted	0.087									0.950	0.989	
Satd. Flow (perm)	165	3505	0	1900	3279	0	0	1900	0	1715	1517	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					70							160
Link Speed (mph)		45			45			30				30
Link Distance (ft)		3195			3012			166				1615
Travel Time (s)		48.4			45.6			3.8				36.7
Peak Hour Factor	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	34	1409	0	0	1189	578	0	0	0	147	0	87
Shared Lane Traffic (%)										17%		
Lane Group Flow (vph)	34	1409	0	0	1767	0	0	0	0	122	112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2		1	6		3	3		4	4	
Switch Phase												
Minimum Initial (s)	5.0	12.0		5.0	12.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	18.0		11.0	25.0		30.5	30.5		30.5	30.5	
Total Split (s)	28.0	79.0		11.0	62.0		12.0	12.0		38.0	38.0	
Total Split (%)	20.0%	56.4%		7.9%	44.3%		8.6%	8.6%		27.1%	27.1%	
Maximum Green (s)	22.0	73.0		5.0	56.0		6.5	6.5		32.5	32.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)					7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)					12.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)					0		0	0		0	0	
Act Effct Green (s)	114.1	114.1			107.3					14.4	14.4	
Actuated g/C Ratio	0.82	0.82			0.77					0.10	0.10	
v/c Ratio	0.17	0.49			0.70					0.69	0.37	
Control Delay	4.1	3.1			5.3					80.0	5.5	
Queue Delay	0.0	0.0			0.0					0.0	0.0	
Total Delay	4.1	3.1			5.3					80.0	5.5	
LOS	A	A			A					E	A	
Approach Delay		3.1			5.3						44.3	
Approach LOS		A			A						D	

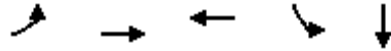
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 7.0
 Intersection Capacity Utilization 61.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	34	1409	1767	122	112
v/c Ratio	0.17	0.49	0.70	0.69	0.37
Control Delay	4.1	3.1	5.3	80.0	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.1	3.1	5.3	80.0	5.5
Queue Length 50th (ft)	4	102	126	114	0
Queue Length 95th (ft)	m9	114	m164	177	16
Internal Link Dist (ft)		3115	2932		1535
Turn Bay Length (ft)	100			1000	
Base Capacity (vph)	392	2856	2529	398	475
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.49	0.70	0.31	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

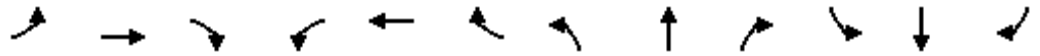
2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1240	0	0	1141	480	0	0	0	131	0	47
Future Volume (vph)	30	1240	0	0	1141	480	0	0	0	131	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0					5.5	5.5	
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	
Frt	1.00	1.00			0.95					1.00	0.88	
Flt Protected	0.95	1.00			1.00					0.95	0.99	
Satd. Flow (prot)	1805	3505			3278					1715	1518	
Flt Permitted	0.09	1.00			1.00					0.95	0.99	
Satd. Flow (perm)	166	3505			3278					1715	1518	
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Adj. Flow (vph)	34	1409	0	0	1189	578	0	0	0	147	0	87
RTOR Reduction (vph)	0	0	0	0	18	0	0	0	0	0	100	0
Lane Group Flow (vph)	34	1409	0	0	1749	0	0	0	0	122	12	0
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	114.1	114.1			104.9					14.4	14.4	
Effective Green, g (s)	114.1	114.1			104.9					14.4	14.4	
Actuated g/C Ratio	0.81	0.81			0.75					0.10	0.10	
Clearance Time (s)	6.0	6.0			6.0					5.5	5.5	
Vehicle Extension (s)	2.0	2.0			2.0					2.0	2.0	
Lane Grp Cap (vph)	172	2856			2456					176	156	
v/s Ratio Prot	0.00	c0.40			c0.53					c0.07	0.01	
v/s Ratio Perm	0.16											
v/c Ratio	0.20	0.49			0.71					0.69	0.07	
Uniform Delay, d1	8.3	4.0			9.4					60.7	56.8	
Progression Factor	0.74	0.58			0.47					1.00	1.00	
Incremental Delay, d2	0.2	0.6			0.8					9.1	0.1	
Delay (s)	6.3	2.9			5.2					69.8	56.8	
Level of Service	A	A			A					E	E	
Approach Delay (s)		2.9			5.2			0.0			63.6	
Approach LOS		A			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	42	1	1	17	4	3	2	572	13	5	572	115
Future Volume (vph)	42	1	1	17	4	3	2	572	13	5	572	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.964			0.996			0.976	
Flt Protected		0.959			0.973		0.950			0.950		
Satd. Flow (prot)	0	1804	0	0	1782	0	1805	1801	0	1805	1789	0
Flt Permitted		0.959			0.973		0.950			0.950		
Satd. Flow (perm)	0	1804	0	0	1782	0	1805	1801	0	1805	1789	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			1015			342	
Travel Time (s)		14.1			35.6			15.4			5.2	
Peak Hour Factor	0.89	0.25	0.25	0.67	0.50	0.25	0.50	0.80	0.60	0.63	0.77	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	8%	0%	4%	2%
Adj. Flow (vph)	47	4	4	25	8	12	4	715	22	8	743	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	45	0	4	737	0	8	887	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	47.1%						ICU Level of Service A					
Analysis Period (min)	15											











Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	42	1	1	17	4	3	2	572	13	5	572	115
Future Vol, veh/h	42	1	1	17	4	3	2	572	13	5	572	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	25	25	67	50	25	50	80	60	63	77	80
Heavy Vehicles, %	0	0	0	0	0	0	0	5	8	0	4	2
Mvmt Flow	47	4	4	25	8	12	4	715	22	8	743	144

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1575	1576	815	1495	1493	726	743	0	0	737	0	0
Stage 1	831	831	-	734	734	-	-	-	-	-	-	-
Stage 2	744	745	-	761	759	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	90	111	381	102	124	428	873	-	-	878	-	-
Stage 1	367	387	-	415	429	-	-	-	-	-	-	-
Stage 2	410	424	-	401	418	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	82	109	381	97	122	428	873	-	-	878	-	-
Mov Cap-2 Maneuver	82	109	-	97	122	-	-	-	-	-	-	-
Stage 1	365	384	-	413	427	-	-	-	-	-	-	-
Stage 2	389	422	-	389	414	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	94.4		47.8		0		0.1	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	873	-	-	90	128	878	-
HCM Lane V/C Ratio	0.005	-	-	0.613	0.354	0.009	-
HCM Control Delay (s)	9.1	-	-	94.4	47.8	9.1	-
HCM Lane LOS	A	-	-	F	E	A	-
HCM 95th %tile Q(veh)	0	-	-	2.9	1.4	0	-

Lanes, Volumes, Timings
4: RR 12 & Brookside

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	5	606	5	5	688
Future Volume (vph)	19	5	606	5	5	688
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.966		0.999			
Flt Protected	0.964				0.950	
Satd. Flow (prot)	1580	0	1775	0	1805	1776
Flt Permitted	0.964				0.950	
Satd. Flow (perm)	1580	0	1775	0	1805	1776
Link Speed (mph)	25		45			45
Link Distance (ft)	1288		342			958
Travel Time (s)	35.1		5.2			14.5
Peak Hour Factor	0.53	0.42	0.77	0.63	0.42	0.91
Heavy Vehicles (%)	16%	0%	7%	0%	0%	7%
Adj. Flow (vph)	36	12	787	8	12	756
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	795	0	12	756
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	46.2%		ICU Level of Service A			
Analysis Period (min)	15					

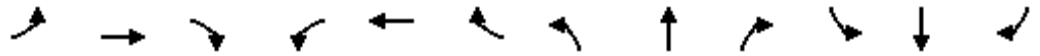
Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑		↔	↑
Traffic Vol, veh/h	19	5	606	5	5	688
Future Vol, veh/h	19	5	606	5	5	688
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	42	77	63	42	91
Heavy Vehicles, %	16	0	7	0	0	7
Mvmt Flow	36	12	787	8	12	756

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1571	791	0	0	795
Stage 1	791	-	-	-	-
Stage 2	780	-	-	-	-
Critical Hdwy	6.56	6.2	-	-	4.1
Critical Hdwy Stg 1	5.56	-	-	-	-
Critical Hdwy Stg 2	5.56	-	-	-	-
Follow-up Hdwy	3.644	3.3	-	-	2.2
Pot Cap-1 Maneuver	113	393	-	-	835
Stage 1	423	-	-	-	-
Stage 2	428	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	111	393	-	-	835
Mov Cap-2 Maneuver	243	-	-	-	-
Stage 1	423	-	-	-	-
Stage 2	422	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	269	835
HCM Lane V/C Ratio	-	-	0.178	0.014
HCM Control Delay (s)	-	-	21.2	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.6	0

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	123	1	6	514	8	1	0	1	4	0	3
Future Volume (vph)	9	123	1	6	514	8	1	0	1	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.932			0.932	
Flt Protected		0.995			0.999			0.976			0.976	
Satd. Flow (prot)	0	1808	0	0	1841	0	0	1728	0	0	1536	0
Flt Permitted		0.995			0.999			0.976			0.976	
Satd. Flow (perm)	0	1808	0	0	1841	0	0	1728	0	0	1536	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			1309	
Travel Time (s)		5.2			10.9			5.0			29.8	
Peak Hour Factor	0.45	0.72	0.25	0.50	0.83	0.50	0.25	0.92	0.25	0.50	0.92	0.38
Heavy Vehicles (%)	33%	1%	0%	0%	1%	75%	0%	0%	0%	25%	0%	0%
Adj. Flow (vph)	20	171	4	12	619	16	4	0	4	8	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	0	0	647	0	0	8	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 39.1% ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	123	1	6	514	8	1	0	1	4	0	3
Future Vol, veh/h	9	123	1	6	514	8	1	0	1	4	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	72	25	50	83	50	25	92	25	50	92	38
Heavy Vehicles, %	33	1	0	0	1	75	0	0	0	25	0	0
Mvmt Flow	20	171	4	12	619	16	4	0	4	8	0	8

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	635	0	0	175
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.43	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.497	-	-	2.2
Pot Cap-1 Maneuver	816	-	-	1414
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	816	-	-	1414
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.1	14.1	16.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	403	816	-	-	1414	-	-	322
HCM Lane V/C Ratio	0.02	0.025	-	-	0.008	-	-	0.049
HCM Control Delay (s)	14.1	9.5	0	-	7.6	0	-	16.8
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1076	22	19	938	56	24	9	32	78	2	36
Future Volume (vph)	30	1076	22	19	938	56	24	9	32	78	2	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.990				0.850		0.858	
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	1752	3299	0	1719	3265	0	0	1684	1429	1703	986	0
Flt Permitted	0.195			0.188				0.964		0.950		
Satd. Flow (perm)	360	3299	0	340	3265	0	0	1684	1429	1703	986	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			6				168			72
Link Speed (mph)		45			45			35				30
Link Distance (ft)		866			3195			957				1336
Travel Time (s)		13.1			48.4			18.6				30.4
Peak Hour Factor	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Adj. Flow (vph)	48	1170	28	28	1066	76	36	12	56	88	4	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	1198	0	28	1142	0	0	48	56	88	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split		NA
Protected Phases	5	2		1	6		8	8		7		7

Lanes, Volumes, Timings
6: Roger Hanks & US 290

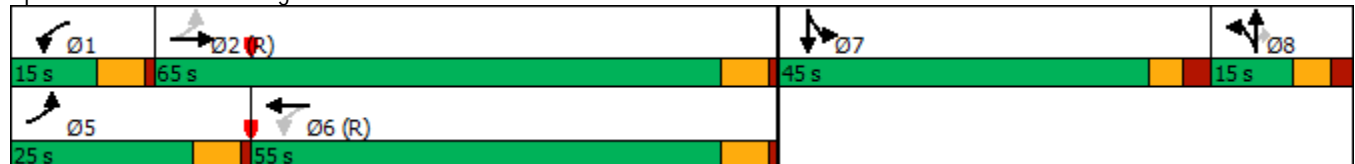


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2		1	6		8	8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	12.0		5.0	12.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	31.0		11.0	24.0		33.5	33.5	33.5	24.5	24.5	
Total Split (s)	25.0	65.0		15.0	55.0		15.0	15.0	15.0	45.0	45.0	
Total Split (%)	17.9%	46.4%		10.7%	39.3%		10.7%	10.7%	10.7%	32.1%	32.1%	
Maximum Green (s)	19.0	59.0		9.0	49.0		8.5	8.5	8.5	38.5	38.5	
Yellow Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5	2.5	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.5	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		18.0					20.0	20.0	20.0			
Pedestrian Calls (#/hr)		0					0	0	0			
Act Effct Green (s)	100.0	96.2		98.0	93.6		8.5	8.5	11.7	11.7		
Actuated g/C Ratio	0.71	0.69		0.70	0.67		0.06	0.06	0.08	0.08		
v/c Ratio	0.15	0.53		0.10	0.52		0.48	0.23	0.62	0.51		
Control Delay	8.0	14.3		8.9	23.7		77.8	2.2	80.1	26.3		
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay	8.0	14.3		8.9	23.7		77.8	2.2	80.1	26.3		
LOS	A	B		A	C		E	A	F	C		
Approach Delay		14.0			23.3		37.1			55.2		
Approach LOS		B			C		D			E		

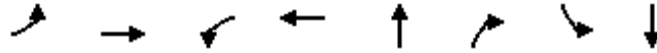
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 33 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 21.5 Intersection LOS: C
 Intersection Capacity Utilization 54.8% ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	1198	28	1142	48	56	88	76
v/c Ratio	0.15	0.53	0.10	0.52	0.48	0.23	0.62	0.51
Control Delay	8.0	14.3	8.9	23.7	77.8	2.2	80.1	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	14.3	8.9	23.7	77.8	2.2	80.1	26.3
Queue Length 50th (ft)	11	303	8	462	43	0	79	3
Queue Length 95th (ft)	20	443	m16	563	71	0	132	2
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	454	2267	333	2184	114	253	468	323
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.53	0.08	0.52	0.42	0.22	0.19	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

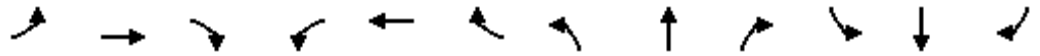
HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290



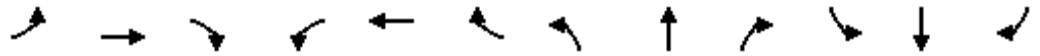
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1076	22	19	938	56	24	9	32	78	2	36
Future Volume (vph)	30	1076	22	19	938	56	24	9	32	78	2	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3300		1719	3265			1684	1429	1703	986	
Flt Permitted	0.20	1.00		0.19	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (perm)	360	3300		340	3265			1684	1429	1703	986	
Peak-hour factor, PHF	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Adj. Flow (vph)	48	1170	28	28	1066	76	36	12	56	88	4	72
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	53	0	66	0
Lane Group Flow (vph)	48	1197	0	28	1140	0	0	48	3	88	10	0
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	97.2	92.4		94.4	91.0			7.5	7.5	11.7	11.7	
Effective Green, g (s)	97.2	92.4		94.4	91.0			7.5	7.5	11.7	11.7	
Actuated g/C Ratio	0.69	0.66		0.67	0.65			0.05	0.05	0.08	0.08	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	297	2178		262	2122			90	76	142	82	
v/s Ratio Prot	c0.01	c0.36		0.00	0.35			c0.03		c0.05	0.01	
v/s Ratio Perm	0.11			0.07					0.00			
v/c Ratio	0.16	0.55		0.11	0.54			0.53	0.04	0.62	0.12	
Uniform Delay, d1	8.3	12.7		8.8	13.2			64.5	62.8	62.0	59.4	
Progression Factor	1.00	1.00		1.18	1.61			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	1.0		0.0	0.7			3.0	0.1	5.6	0.2	
Delay (s)	8.4	13.7		10.4	22.0			67.6	62.9	67.6	59.6	
Level of Service	A	B		B	C			E	E	E	E	
Approach Delay (s)		13.5			21.7			65.1			63.9	
Approach LOS		B			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			22.2			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)		25.0				
Intersection Capacity Utilization			54.8%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	927	181	183	844	22	228	162	167	308	268	95
Future Volume (vph)	151	927	181	183	844	22	228	162	167	308	268	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.969			0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.990		0.950	0.994	
Satd. Flow (prot)	1719	3332	0	1787	3449	0	1665	1749	1583	1698	1761	1495
Flt Permitted	0.119			0.073			0.950	0.990		0.950	0.994	
Satd. Flow (perm)	215	3332	0	137	3449	0	1665	1749	1583	1698	1761	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			4				70			70
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			2605	
Travel Time (s)		45.6			43.5			10.3			39.5	
Peak Hour Factor	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Adj. Flow (vph)	199	997	259	215	1005	44	259	178	223	358	288	117
Shared Lane Traffic (%)							17%			12%		
Lane Group Flow (vph)	199	1256	0	215	1049	0	215	222	223	315	331	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

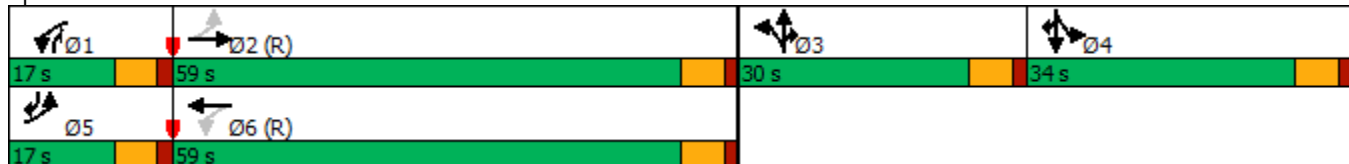


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2	1		6	3		3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0		15.0	5.0		5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	26.0	11.0		26.0	28.0		28.0	28.0		28.0	28.0
Total Split (s)	17.0	59.0	17.0		59.0	30.0		30.0	34.0		34.0	
Total Split (%)	12.1%	42.1%	12.1%		42.1%	21.4%		21.4%	24.3%		24.3%	
Maximum Green (s)	11.0	53.0	11.0		53.0	24.0		24.0	28.0		28.0	
Yellow Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5		4.5	
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead		Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None		None	
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	13.0		13.0		15.0		15.0		15.0		15.0	
Pedestrian Calls (#/hr)	0		0		0		0		0		0	
Act Effct Green (s)	64.9	53.0	67.9		54.8	21.1		21.1	34.8	28.2	28.2	46.1
Actuated g/C Ratio	0.46	0.38	0.48		0.39	0.15		0.15	0.25	0.20	0.20	0.33
v/c Ratio	0.88	0.98	0.94		0.78	0.86		0.84	0.50	0.92	0.93	0.22
Control Delay	51.8	60.6	84.8		42.4	87.3		84.5	20.3	86.9	88.2	15.9
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	60.6	84.8		42.4	87.3		84.5	20.3	86.9	88.2	15.9
LOS	D	E	F		D	F		F	C	F	F	B
Approach Delay	59.4		49.6		63.7		76.6					
Approach LOS	E		D		E		E					

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 60.3
 Intersection LOS: E
 Intersection Capacity Utilization 87.7%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290

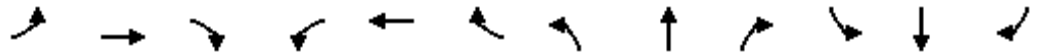


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	199	1256	215	1049	215	222	223	315	331	117
v/c Ratio	0.88	0.98	0.94	0.78	0.86	0.84	0.50	0.92	0.93	0.22
Control Delay	51.8	60.6	84.8	42.4	87.3	84.5	20.3	86.9	88.2	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	60.6	84.8	42.4	87.3	84.5	20.3	86.9	88.2	15.9
Queue Length 50th (ft)	140	572	~175	444	201	206	70	295	312	30
Queue Length 95th (ft)	m#164	#741	#311	481	#307	#320	90	#453	#514	65
Internal Link Dist (ft)		2932		2792		599			2525	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	227	1278	228	1353	285	299	477	348	361	532
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.98	0.94	0.78	0.75	0.74	0.47	0.91	0.92	0.22

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	927	181	183	844	22	228	162	167	308	268	95
Future Volume (vph)	151	927	181	183	844	22	228	162	167	308	268	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1719	3332		1787	3448		1665	1749	1583	1698	1760	1495
Flt Permitted	0.12	1.00		0.07	1.00		0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	215	3332		137	3448		1665	1749	1583	1698	1760	1495
Peak-hour factor, PHF	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Adj. Flow (vph)	199	997	259	215	1005	44	259	178	223	358	288	117
RTOR Reduction (vph)	0	17	0	0	2	0	0	0	53	0	0	47
Lane Group Flow (vph)	199	1239	0	215	1047	0	215	222	170	315	331	70
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5
Permitted Phases	2			6								
Actuated Green, G (s)	64.9	53.0		68.5	54.8		21.1	21.1	34.8	28.2	28.2	46.1
Effective Green, g (s)	64.9	53.0		68.5	54.8		21.1	21.1	34.8	28.2	28.2	46.1
Actuated g/C Ratio	0.46	0.38		0.49	0.39		0.15	0.15	0.25	0.20	0.20	0.33
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	227	1261		228	1349		250	263	393	342	354	492
v/s Ratio Prot	0.07	c0.37		c0.09	0.30		c0.13	0.13	0.11	0.19	c0.19	0.05
v/s Ratio Perm	0.33			0.37								
v/c Ratio	0.88	0.98		0.94	0.78		0.86	0.84	0.43	0.92	0.94	0.14
Uniform Delay, d1	28.1	43.0		42.1	37.2		58.0	57.8	44.3	54.8	55.0	33.0
Progression Factor	1.01	1.05		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.6	16.8		43.3	4.4		23.5	20.4	0.3	29.0	31.0	0.0
Delay (s)	48.9	61.9		85.4	41.7		81.5	78.3	44.6	83.8	86.0	33.1
Level of Service	D	E		F	D		F	E	D	F	F	C
Approach Delay (s)		60.1			49.1			68.0			77.0	
Approach LOS		E			D			E			E	

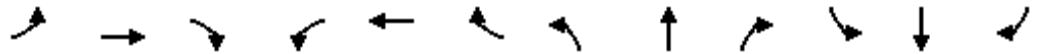
Intersection Summary			
HCM 2000 Control Delay	61.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1171	6	6	1113	161	1	0	1	402	0	30
Future Volume (vph)	27	1171	6	6	1113	161	1	0	1	402	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.972			0.932			0.976	
Flt Protected	0.950			0.950				0.976		0.950	0.960	
Satd. Flow (prot)	1805	3422	0	1203	3453	0	0	1728	0	1649	1636	0
Flt Permitted	0.050			0.077				0.976		0.950	0.960	
Satd. Flow (perm)	95	3422	0	98	3453	0	0	1728	0	1649	1636	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			30			160			160	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		3195			3012			166			1615	
Travel Time (s)		48.4			45.6			3.8			36.7	
Peak Hour Factor	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	52	1541	8	16	1357	310	4	0	4	648	0	56
Shared Lane Traffic (%)										45%		
Lane Group Flow (vph)	52	1549	0	16	1667	0	0	8	0	356	348	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2	1		6	3		3	4		4	
Switch Phase												
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	18.0	11.0		25.0	30.5		30.5	30.5		30.5	30.5
Total Split (s)	18.0	87.0	11.0		80.0	12.0		12.0	30.0		30.0	
Total Split (%)	12.9%	62.1%	7.9%		57.1%	8.6%		8.6%	21.4%		21.4%	
Maximum Green (s)	12.0	81.0	5.0		74.0	6.5		6.5	24.5		24.5	
Yellow Time (s)	4.5	4.5	4.5		4.5	4.0		4.0	4.0		4.0	
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	5.5		5.5	5.5		5.5	
Lead/Lag	Lead	Lag	Lead		Lag	Lead		Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None		None	
Walk Time (s)					7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)					12.0	18.0		18.0	18.0		18.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	90.4	87.6	86.1		82.1	5.0		5.0	34.4		34.4	
Actuated g/C Ratio	0.65	0.63	0.62		0.59	0.04		0.04	0.25		0.25	
v/c Ratio	0.39	0.72	0.16		0.82	0.04		0.04	0.88		0.67	
Control Delay	21.5	36.6	7.5		13.1	0.5		0.5	73.8		32.6	
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Delay	21.5	36.6	7.5		13.1	0.5		0.5	73.8		32.6	
LOS	C	D	A		B	A		A	E		C	
Approach Delay	36.1		13.0				0.5		53.5			
Approach LOS	D		B				A		D			

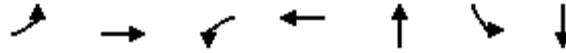
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 46 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 29.4 Intersection LOS: C
 Intersection Capacity Utilization 64.2% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	52	1549	16	1667	8	356	348
v/c Ratio	0.39	0.72	0.16	0.82	0.04	0.88	0.67
Control Delay	21.5	36.6	7.5	13.1	0.5	73.8	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	36.6	7.5	13.1	0.5	73.8	32.6
Queue Length 50th (ft)	29	707	2	632	0	323	161
Queue Length 95th (ft)	27	707	2	406	0	#328	#338
Internal Link Dist (ft)		3115		2932	86		1535
Turn Bay Length (ft)	100		100			1000	
Base Capacity (vph)	209	2141	99	2037	232	404	522
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.72	0.16	0.82	0.03	0.88	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1171	6	6	1113	161	1	0	1	402	0	30
Future Volume (vph)	27	1171	6	6	1113	161	1	0	1	402	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	
Frt	1.00	1.00		1.00	0.97			0.93		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	
Satd. Flow (prot)	1805	3422		1203	3453			1729		1649	1636	
Flt Permitted	0.05	1.00		0.08	1.00			0.98		0.95	0.96	
Satd. Flow (perm)	95	3422		97	3453			1729		1649	1636	
Peak-hour factor, PHF	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Adj. Flow (vph)	52	1541	8	16	1357	310	4	0	4	648	0	56
RTOR Reduction (vph)	0	0	0	0	14	0	0	8	0	0	121	0
Lane Group Flow (vph)	52	1549	0	16	1653	0	0	0	0	356	227	0
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	84.7	79.6		78.5	76.5			1.0		34.4	34.4	
Effective Green, g (s)	84.7	79.6		78.5	76.5			1.0		34.4	34.4	
Actuated g/C Ratio	0.61	0.57		0.56	0.55			0.01		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	119	1945		70	1886			12		405	401	
v/s Ratio Prot	c0.02	c0.45		0.00	c0.48			c0.00		c0.22	0.14	
v/s Ratio Perm	0.25			0.12								
v/c Ratio	0.44	0.80		0.23	0.88			0.00		0.88	0.57	
Uniform Delay, d1	25.2	23.8		20.2	27.6			69.0		50.8	46.3	
Progression Factor	1.40	1.82		0.54	0.42			1.00		1.00	1.00	
Incremental Delay, d2	0.8	2.9		0.5	5.0			0.1		18.5	1.1	
Delay (s)	35.9	46.2		11.3	16.6			69.1		69.3	47.4	
Level of Service	D	D		B	B			E		E	D	
Approach Delay (s)		45.9			16.6			69.1			58.4	
Approach LOS		D			B			E			E	

Intersection Summary

HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	79	3	4	11	3	4	5	581	22	6	605	97
Future Volume (vph)	79	3	4	11	3	4	5	581	22	6	605	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.951			0.990			0.978	
Flt Protected		0.960			0.975		0.950			0.950		
Satd. Flow (prot)	0	1800	0	0	1762	0	1805	1847	0	1805	1837	0
Flt Permitted		0.960			0.975		0.950			0.950		
Satd. Flow (perm)	0	1800	0	0	1762	0	1805	1847	0	1805	1837	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			1002			342	
Travel Time (s)		14.1			35.6			15.2			5.2	
Peak Hour Factor	0.73	0.38	0.33	0.63	0.75	0.33	0.42	0.94	0.50	0.50	0.86	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	2%
Adj. Flow (vph)	108	8	12	17	4	12	12	618	44	12	703	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	33	0	12	662	0	12	827	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 51.2% ICU Level of Service A
 Analysis Period (min) 15

Intersection

Int Delay, s/veh 16.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	79	3	4	11	3	4	5	581	22	6	605	97
Future Vol, veh/h	79	3	4	11	3	4	5	581	22	6	605	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	38	33	63	75	33	42	94	50	50	86	78
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	2
Mvmt Flow	108	8	12	17	4	12	12	618	44	12	703	124

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1461	1475	765	1395	1391	640	703	0	0	662	0	0
Stage 1	789	789	-	664	664	-	-	-	-	-	-	-
Stage 2	672	686	-	731	727	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 108	128	406	120	143	479	904	-	-	936	-	-
Stage 1	387	405	-	453	461	-	-	-	-	-	-	-
Stage 2	449	451	-	416	432	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 101	125	406	109	139	479	904	-	-	936	-	-
Mov Cap-2 Maneuver	~ 101	125	-	109	139	-	-	-	-	-	-	-
Stage 1	382	400	-	447	455	-	-	-	-	-	-	-
Stage 2	428	445	-	391	426	-	-	-	-	-	-	-











Approach	EB	WB	NB	SB
HCM Control Delay, s	206.8	34.1	0.2	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	904	-	-	111	157	936	-
HCM Lane V/C Ratio	0.013	-	-	1.155	0.214	0.013	-
HCM Control Delay (s)	9	-	-	206.8	34.1	8.9	-
HCM Lane LOS	A	-	-	F	D	A	-
HCM 95th %tile Q(veh)	0	-	-	8.1	0.8	0	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	9	6	695	19	3	740
Future Volume (vph)	9	6	695	19	3	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.995			
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1638	0	1813	0	1805	1827
Flt Permitted	0.976				0.950	
Satd. Flow (perm)	1638	0	1813	0	1805	1827
Link Speed (mph)	25		45			45
Link Distance (ft)	1288		342			958
Travel Time (s)	35.1		5.2			14.5
Peak Hour Factor	0.75	0.50	0.93	0.68	0.38	0.89
Heavy Vehicles (%)	11%	0%	4%	11%	0%	4%
Adj. Flow (vph)	12	12	747	28	8	831
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	775	0	8	831
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.9%		ICU Level of Service A			
Analysis Period (min)	15					

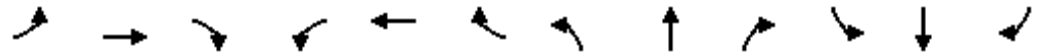
Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑		↘↗	↑
Traffic Vol, veh/h	9	6	695	19	3	740
Future Vol, veh/h	9	6	695	19	3	740
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	50	93	68	38	89
Heavy Vehicles, %	11	0	4	11	0	4
Mvmt Flow	12	12	747	28	8	831

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1608	761	0	0	775
Stage 1	761	-	-	-	-
Stage 2	847	-	-	-	-
Critical Hdwy	6.51	6.2	-	-	4.1
Critical Hdwy Stg 1	5.51	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-
Follow-up Hdwy	3.599	3.3	-	-	2.2
Pot Cap-1 Maneuver	110	409	-	-	850
Stage 1	446	-	-	-	-
Stage 2	406	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	109	409	-	-	850
Mov Cap-2 Maneuver	243	-	-	-	-
Stage 1	446	-	-	-	-
Stage 2	402	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	305	850
HCM Lane V/C Ratio	-	-	0.079	0.009
HCM Control Delay (s)	-	-	17.8	9.3
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	13	347	9	16	196	68	5	2	18	3	1	2
Future Volume (vph)	13	347	9	16	196	68	5	2	18	3	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.953			0.905			0.955	
Flt Protected		0.998			0.998			0.990			0.984	
Satd. Flow (prot)	0	1822	0	0	1767	0	0	1702	0	0	1785	0
Flt Permitted		0.998			0.998			0.990			0.984	
Satd. Flow (perm)	0	1822	0	0	1767	0	0	1702	0	0	1785	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			1309	
Travel Time (s)		5.2			10.9			5.0			29.8	
Peak Hour Factor	0.54	0.59	0.75	0.80	0.65	0.40	0.63	0.50	0.64	0.75	0.25	0.50
Heavy Vehicles (%)	0%	4%	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	24	588	12	20	302	170	8	4	28	4	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	624	0	0	492	0	0	40	0	0	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 32.8% ICU Level of Service A

Analysis Period (min) 15

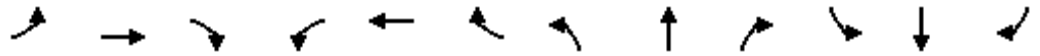
Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	347	9	16	196	68	5	2	18	3	1	2
Future Vol, veh/h	13	347	9	16	196	68	5	2	18	3	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	54	59	75	80	65	40	63	50	64	75	25	50
Heavy Vehicles, %	0	4	0	0	2	3	0	0	0	0	0	0
Mvmt Flow	24	588	12	20	302	170	8	4	28	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	472	0	0	600	0	0	1073	1154	594	1085	1075	387
Stage 1	-	-	-	-	-	-	642	642	-	427	427	-
Stage 2	-	-	-	-	-	-	431	512	-	658	648	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1100	-	-	987	-	-	200	199	509	196	221	665
Stage 1	-	-	-	-	-	-	466	472	-	610	589	-
Stage 2	-	-	-	-	-	-	607	540	-	457	469	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1100	-	-	987	-	-	187	187	509	174	208	665
Mov Cap-2 Maneuver	-	-	-	-	-	-	187	187	-	174	208	-
Stage 1	-	-	-	-	-	-	451	456	-	590	573	-
Stage 2	-	-	-	-	-	-	582	525	-	414	454	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.4			17.2			20.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	336	1100	-	-	987	-	-	249
HCM Lane V/C Ratio	0.119	0.022	-	-	0.02	-	-	0.048
HCM Control Delay (s)	17.2	8.3	0	-	8.7	0	-	20.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.2

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	980	62	38	1102	53	20	0	24	91	20	27
Future Volume (vph)	29	980	62	38	1102	53	20	0	24	91	20	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.992				0.850		0.916	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1805	3268	0	1805	3386	0	0	1805	1553	1597	1605	0
Flt Permitted	0.156			0.141				0.950		0.950		
Satd. Flow (perm)	296	3268	0	268	3386	0	0	1805	1553	1597	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			7				121		36	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Adj. Flow (vph)	60	1241	103	56	1211	72	32	0	32	157	28	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1344	0	56	1283	0	0	32	32	157	64	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	31.0	11.0		18.0	33.5		33.5	33.5	11.5	11.5	
Total Split (s)	16.0	80.0	16.0		80.0	22.0		22.0	22.0	22.0	22.0	22.0
Total Split (%)	11.4%	57.1%	11.4%		57.1%	15.7%		15.7%	15.7%	15.7%	15.7%	15.7%
Maximum Green (s)	10.0	74.0	10.0		74.0	15.5		15.5	15.5	15.5	15.5	15.5
Yellow Time (s)	5.0	5.0	5.0		5.0	4.0		4.0	4.0	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0		1.0	2.5		2.5	2.5	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.5		6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead		Lag	Lag		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	None
Walk Time (s)	7.0						7.0	7.0	7.0			
Flash Dont Walk (s)	18.0						20.0	20.0	20.0			
Pedestrian Calls (#/hr)	0						0	0	0			
Act Effct Green (s)	96.4	91.4	96.2		91.3	7.1		7.1	15.1	15.1		
Actuated g/C Ratio	0.69	0.65	0.69		0.65	0.05		0.05	0.11	0.11		
v/c Ratio	0.22	0.63	0.22		0.58	0.35		0.17	0.92	0.31		
Control Delay	8.8	17.6	5.0		5.5	74.0		1.8	110.8	33.4		
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Total Delay	8.8	17.6	5.0		5.5	74.0		1.8	110.8	33.4		
LOS	A	B	A		A	E		A	F	C		
Approach Delay	17.3						37.9		88.4			
Approach LOS	B						D		F			

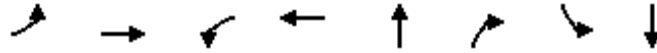
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 86 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 17.7
 Intersection LOS: B
 Intersection Capacity Utilization 54.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	1344	56	1283	32	32	157	64
v/c Ratio	0.22	0.63	0.22	0.58	0.35	0.17	0.92	0.31
Control Delay	8.8	17.6	5.0	5.5	74.0	1.8	110.8	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	17.6	5.0	5.5	74.0	1.8	110.8	33.4
Queue Length 50th (ft)	15	391	6	75	29	0	143	23
Queue Length 95th (ft)	17	404	m8	97	64	0	138	49
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	317	2136	299	2210	199	279	176	209
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.63	0.19	0.58	0.16	0.11	0.89	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290



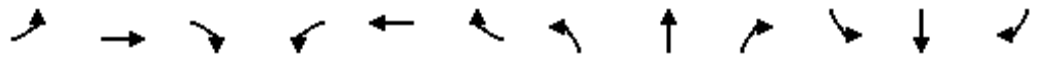
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	980	62	38	1102	53	20	0	24	91	20	27
Future Volume (vph)	29	980	62	38	1102	53	20	0	24	91	20	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3267		1805	3384			1805	1553	1597	1604	
Flt Permitted	0.16	1.00		0.14	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (perm)	296	3267		269	3384			1805	1553	1597	1604	
Peak-hour factor, PHF	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Adj. Flow (vph)	60	1241	103	56	1211	72	32	0	32	157	28	36
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	31	0	32	0
Lane Group Flow (vph)	60	1341	0	56	1280	0	0	32	1	157	32	0
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	93.9	88.9		93.7	88.8			6.1	6.1	15.1	15.1	
Effective Green, g (s)	93.9	88.9		93.7	88.8			6.1	6.1	15.1	15.1	
Actuated g/C Ratio	0.67	0.64		0.67	0.63			0.04	0.04	0.11	0.11	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	252	2074		233	2146			78	67	172	173	
v/s Ratio Prot	c0.01	c0.41		0.01	0.38			c0.02		c0.10	0.02	
v/s Ratio Perm	0.15			0.15					0.00			
v/c Ratio	0.24	0.65		0.24	0.60			0.41	0.02	0.91	0.18	
Uniform Delay, d1	10.4	15.8		10.9	15.1			65.2	64.1	61.8	56.8	
Progression Factor	1.00	1.00		0.56	0.32			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	1.6		0.1	0.7			1.3	0.0	43.5	0.2	
Delay (s)	10.6	17.4		6.2	5.5			66.5	64.1	105.3	57.0	
Level of Service	B	B		A	A			E	E	F	E	
Approach Delay (s)		17.1			5.5			65.3			91.3	
Approach LOS		B			A			E			F	

Intersection Summary

HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix G: Synchro Reports – 2026 No-Build Conditions

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1170	207	136	1307	22	495	250	195	272	242	228
Future Volume (vph)	166	1170	207	136	1307	22	495	250	195	272	242	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.973			0.996				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.985		0.950	0.995	
Satd. Flow (prot)	1671	3438	0	1671	3460	0	1633	1693	1553	1665	1775	1482
Flt Permitted	0.077			0.077			0.950	0.985		0.950	0.995	
Satd. Flow (perm)	135	3438	0	135	3460	0	1633	1693	1553	1665	1775	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			2				70			70
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			2623	
Travel Time (s)		45.6			43.5			10.3			39.7	
Peak Hour Factor	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	3%	1%	9%
Adj. Flow (vph)	195	1360	296	160	1614	39	550	298	241	316	318	262
Shared Lane Traffic (%)							24%			10%		
Lane Group Flow (vph)	195	1656	0	160	1653	0	418	430	241	284	350	262
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

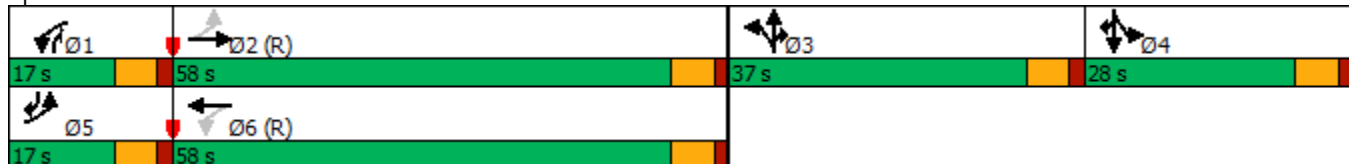


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2				6							
Detector Phase	5	2			1	6	3	3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0			5.0	15.0	5.0	5.0			5.0	5.0
Minimum Split (s)	11.0	26.0			11.0	26.0	28.0	28.0			28.0	28.0
Total Split (s)	17.0	58.0			17.0	58.0	37.0	37.0			28.0	28.0
Total Split (%)	12.1%	41.4%			12.1%	41.4%	26.4%	26.4%			20.0%	20.0%
Maximum Green (s)	11.0	52.0			11.0	52.0	31.0	31.0			22.0	22.0
Yellow Time (s)	4.5	4.5			4.5	4.5	4.5	4.5			4.5	4.5
All-Red Time (s)	1.5	1.5			1.5	1.5	1.5	1.5			1.5	1.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	6.0	6.0			6.0	6.0	6.0	6.0			6.0	6.0
Lead/Lag	Lead	Lag			Lead	Lag	Lead	Lead			Lag	Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes	Yes			Yes	Yes
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0	2.0			2.0	2.0
Recall Mode	None	C-Max			None	C-Max	None	None			None	None
Walk Time (s)	7.0				7.0		7.0	7.0			7.0	7.0
Flash Dont Walk (s)	13.0				13.0		15.0	15.0			15.0	15.0
Pedestrian Calls (#/hr)	0				0		0	0			0	0
Act Effct Green (s)	63.1	52.1			62.9	52.0	31.0	31.0	41.9	22.0	22.0	39.0
Actuated g/C Ratio	0.45	0.37			0.45	0.37	0.22	0.22	0.30	0.16	0.16	0.28
v/c Ratio	1.08	1.28			0.89	1.29	1.16	1.15	0.47	1.09	1.26	0.57
Control Delay	112.5	169.9			77.3	171.4	145.2	141.7	18.5	135.0	189.1	36.6
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.5	169.9			77.3	171.4	145.2	141.7	18.5	135.0	189.1	36.6
LOS	F	F			E	F	F	F	B	F	F	D
Approach Delay	163.9				163.1		115.8				127.4	
Approach LOS	F				F		F				F	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 148.6 Intersection LOS: F
 Intersection Capacity Utilization 100.6% ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



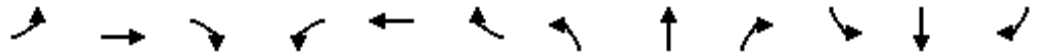
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	195	1656	160	1653	418	430	241	284	350	262
v/c Ratio	1.08	1.28	0.89	1.29	1.16	1.15	0.47	1.09	1.26	0.57
Control Delay	112.5	169.9	77.3	171.4	145.2	141.7	18.5	135.0	189.1	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.5	169.9	77.3	171.4	145.2	141.7	18.5	135.0	189.1	36.6
Queue Length 50th (ft)	~145	~1028	97	~1008	~471	~482	78	~304	~418	150
Queue Length 95th (ft)	#277	#1078	#208	#969	#694	#635	111	#467	#488	233
Internal Link Dist (ft)		2932		2792		599			2543	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	181	1293	181	1286	361	374	514	261	278	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	1.28	0.88	1.29	1.16	1.15	0.47	1.09	1.26	0.57

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

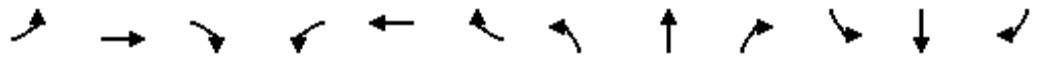
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1170	207	136	1307	22	495	250	195	272	242	228
Future Volume (vph)	166	1170	207	136	1307	22	495	250	195	272	242	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	3438		1671	3462		1633	1693	1553	1665	1776	1482
Flt Permitted	0.08	1.00		0.08	1.00		0.95	0.98	1.00	0.95	1.00	1.00
Satd. Flow (perm)	135	3438		135	3462		1633	1693	1553	1665	1776	1482
Peak-hour factor, PHF	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Adj. Flow (vph)	195	1360	296	160	1614	39	550	298	241	316	318	262
RTOR Reduction (vph)	0	13	0	0	1	0	0	0	49	0	0	51
Lane Group Flow (vph)	195	1643	0	160	1652	0	418	430	192	284	350	212
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	3%	1%	9%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5
Permitted Phases	2			6								
Actuated Green, G (s)	63.1	52.1		62.9	52.0		31.0	31.0	41.9	22.0	22.0	39.0
Effective Green, g (s)	63.1	52.1		62.9	52.0		31.0	31.0	41.9	22.0	22.0	39.0
Actuated g/C Ratio	0.45	0.37		0.45	0.37		0.22	0.22	0.30	0.16	0.16	0.28
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	181	1279		180	1285		361	374	464	261	279	412
v/s Ratio Prot	c0.08	c0.48		0.07	0.48		c0.26	0.25	0.12	0.17	c0.20	0.14
v/s Ratio Perm	0.40			0.33								
v/c Ratio	1.08	1.28		0.89	1.29		1.16	1.15	0.41	1.09	1.25	0.51
Uniform Delay, d1	41.0	44.0		37.4	44.0		54.5	54.5	39.2	59.0	59.0	42.5
Progression Factor	0.87	1.09		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.3	132.8		36.3	134.5		97.7	93.9	0.2	81.2	140.4	0.5
Delay (s)	116.9	180.7		73.7	178.5		152.2	148.4	39.4	140.2	199.4	43.0
Level of Service	F	F		E	F		F	F	D	F	F	D
Approach Delay (s)		174.0			169.2			125.7			134.9	
Approach LOS		F			F			F			F	

Intersection Summary		
HCM 2000 Control Delay	157.0	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	1.23	F
Actuated Cycle Length (s)	140.0	Sum of lost time (s)
Intersection Capacity Utilization	100.6%	ICU Level of Service
Analysis Period (min)	15	G
c Critical Lane Group		

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1584	0	0	1494	608	0	0	0	166	0	59
Future Volume (vph)	38	1584	0	0	1494	608	0	0	0	166	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.952							0.884
Flt Protected	0.950									0.950	0.989	
Satd. Flow (prot)	1805	3505	0	1900	3281	0	0	1900	0	1715	1519	0
Flt Permitted	0.037									0.950	0.989	
Satd. Flow (perm)	70	3505	0	1900	3281	0	0	1900	0	1715	1519	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					67							160
Link Speed (mph)		45			45			30				30
Link Distance (ft)		3195			3012			166				1615
Travel Time (s)		48.4			45.6			3.8				36.7
Peak Hour Factor	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	43	1800	0	0	1556	733	0	0	0	187	0	109
Shared Lane Traffic (%)										17%		
Lane Group Flow (vph)	43	1800	0	0	2289	0	0	0	0	155	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2	1		6	3		3	4		4	
Switch Phase												
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	18.0	11.0		25.0	30.5		30.5	30.5		30.5	30.5
Total Split (s)	28.0	79.0	11.0		62.0	12.0		12.0	38.0		38.0	
Total Split (%)	20.0%	56.4%	7.9%		44.3%	8.6%		8.6%	27.1%		27.1%	
Maximum Green (s)	22.0	73.0	5.0		56.0	6.5		6.5	32.5		32.5	
Yellow Time (s)	4.5	4.5	4.5		4.5	4.0		4.0	4.0		4.0	
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	5.5		5.5	5.5		5.5	
Lead/Lag	Lead	Lag	Lead		Lag	Lead		Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None		None	
Walk Time (s)					7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)					12.0	18.0		18.0	18.0		18.0	
Pedestrian Calls (#/hr)					0	0		0	0		0	
Act Effct Green (s)	111.4	111.4	102.2								17.1	17.1
Actuated g/C Ratio	0.80	0.80	0.73								0.12	0.12
v/c Ratio	0.35	0.65	0.95								0.74	0.43
Control Delay	25.9	4.4	13.8								79.4	9.3
Queue Delay	0.0	0.0	0.0								0.0	0.0
Total Delay	25.9	4.4	13.8								79.4	9.3
LOS	C	A	B								E	A
Approach Delay	4.9		13.8								46.0	
Approach LOS	A		B								D	

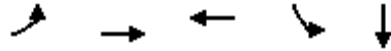
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 12.3 Intersection LOS: B
 Intersection Capacity Utilization 76.7% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	43	1800	2289	155	141
v/c Ratio	0.35	0.65	0.95	0.74	0.43
Control Delay	25.9	4.4	13.8	79.4	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	4.4	13.8	79.4	9.3
Queue Length 50th (ft)	5	134	253	145	0
Queue Length 95th (ft)	m27	195	m176	215	47
Internal Link Dist (ft)		3115	2932		1535
Turn Bay Length (ft)	100			1000	
Base Capacity (vph)	328	2788	2413	398	475
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.13	0.65	0.95	0.39	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1584	0	0	1494	608	0	0	0	166	0	59
Future Volume (vph)	38	1584	0	0	1494	608	0	0	0	166	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0					5.5	5.5	
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	
Frt	1.00	1.00			0.95					1.00	0.88	
Flt Protected	0.95	1.00			1.00					0.95	0.99	
Satd. Flow (prot)	1805	3505			3280					1715	1519	
Flt Permitted	0.04	1.00			1.00					0.95	0.99	
Satd. Flow (perm)	71	3505			3280					1715	1519	
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Adj. Flow (vph)	43	1800	0	0	1556	733	0	0	0	187	0	109
RTOR Reduction (vph)	0	0	0	0	19	0	0	0	0	0	124	0
Lane Group Flow (vph)	43	1800	0	0	2270	0	0	0	0	155	17	0
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	111.4	111.4			101.0					17.1	17.1	
Effective Green, g (s)	111.4	111.4			101.0					17.1	17.1	
Actuated g/C Ratio	0.80	0.80			0.72					0.12	0.12	
Clearance Time (s)	6.0	6.0			6.0					5.5	5.5	
Vehicle Extension (s)	2.0	2.0			2.0					2.0	2.0	
Lane Grp Cap (vph)	110	2788			2366					209	185	
v/s Ratio Prot	0.01	c0.51			c0.69					c0.09	0.01	
v/s Ratio Perm	0.30											
v/c Ratio	0.39	0.65			0.96					0.74	0.09	
Uniform Delay, d1	29.4	6.0			17.7					59.3	54.6	
Progression Factor	2.37	0.53			0.64					1.00	1.00	
Incremental Delay, d2	0.7	0.9			1.5					11.7	0.1	
Delay (s)	70.5	4.1			12.8					71.0	54.6	
Level of Service	E	A			B					E	D	
Approach Delay (s)		5.6			12.8			0.0			63.2	
Approach LOS		A			B			A			E	

Intersection Summary

HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	53	1	1	22	5	4	3	789	16	7	739	145
Future Volume (vph)	53	1	1	22	5	4	3	789	16	7	739	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.963			0.996			0.976	
Flt Protected		0.958			0.973		0.950			0.950		
Satd. Flow (prot)	0	1806	0	0	1780	0	1805	1801	0	1805	1789	0
Flt Permitted		0.958			0.973		0.950			0.950		
Satd. Flow (perm)	0	1806	0	0	1780	0	1805	1801	0	1805	1789	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			990			342	
Travel Time (s)		14.1			35.6			15.0			5.2	
Peak Hour Factor	0.89	0.25	0.25	0.67	0.50	0.25	0.50	0.80	0.60	0.63	0.77	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	8%	0%	4%	2%
Adj. Flow (vph)	60	4	4	33	10	16	6	986	27	11	960	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	59	0	6	1013	0	11	1141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM 6th TWSC
3: RR 12 & Old Fitzhugh/Timberline

Intersection												
Int Delay, s/veh	27.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	53	1	1	22	5	4	3	789	16	7	739	145
Future Vol, veh/h	53	1	1	22	5	4	3	789	16	7	739	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	25	25	67	50	25	50	80	60	63	77	80
Heavy Vehicles, %	0	0	0	0	0	0	0	5	8	0	4	2
Mvmt Flow	60	4	4	33	10	16	6	986	27	11	960	181











Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2098	2098	1051	1996	1994	1000	960	0	0	1013	0	0
Stage 1	1073	1073	-	1012	1012	-	-	-	-	-	-	-
Stage 2	1025	1025	-	984	982	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 38	53	278	45	61	298	725	-	-	692	-	-
Stage 1	269	299	-	291	319	-	-	-	-	-	-	-
Stage 2	286	315	-	302	330	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 31	52	278	41	60	298	725	-	-	692	-	-
Mov Cap-2 Maneuver	~ 31	52	-	41	60	-	-	-	-	-	-	-
Stage 1	267	294	-	289	316	-	-	-	-	-	-	-
Stage 2	260	312	-	289	325	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	712.3	238.7	0.1	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	725	-	-	34	58	692	-
HCM Lane V/C Ratio	0.008	-	-	1.987	1.014	0.016	-
HCM Control Delay (s)	10	-	-	\$ 712.3	238.7	10.3	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0	-	-	7.5	4.8	0	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	24	6	832	6	6	886
Future Volume (vph)	24	6	832	6	6	886
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968		0.999			
Flt Protected	0.963				0.950	
Satd. Flow (prot)	1579	0	1775	0	1805	1776
Flt Permitted	0.963				0.950	
Satd. Flow (perm)	1579	0	1775	0	1805	1776
Link Speed (mph)	25		45			45
Link Distance (ft)	1288		342			958
Travel Time (s)	35.1		5.2			14.5
Peak Hour Factor	0.53	0.42	0.77	0.63	0.42	0.91
Heavy Vehicles (%)	16%	0%	7%	0%	0%	7%
Adj. Flow (vph)	45	14	1081	10	14	974
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	0	1091	0	14	974
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	56.6%		ICU Level of Service B			
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 1

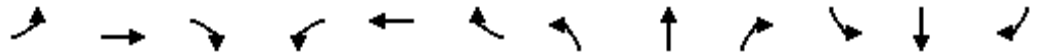
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑		↔	↑
Traffic Vol, veh/h	24	6	832	6	6	886
Future Vol, veh/h	24	6	832	6	6	886
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	42	77	63	42	91
Heavy Vehicles, %	16	0	7	0	0	7
Mvmt Flow	45	14	1081	10	14	974

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2088	1086	0
Stage 1	1086	-	-
Stage 2	1002	-	-
Critical Hdwy	6.56	6.2	-
Critical Hdwy Stg 1	5.56	-	-
Critical Hdwy Stg 2	5.56	-	-
Follow-up Hdwy	3.644	3.3	-
Pot Cap-1 Maneuver	53	265	-
Stage 1	304	-	-
Stage 2	335	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	52	265	-
Mov Cap-2 Maneuver	168	-	-
Stage 1	304	-	-
Stage 2	328	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.7	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	184	647
HCM Lane V/C Ratio	-	-	0.324	0.022
HCM Control Delay (s)	-	-	33.7	10.7
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	1.3	0.1

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	156	1	8	650	10	1	0	1	5	0	4
Future Volume (vph)	11	156	1	8	650	10	1	0	1	5	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.932			0.929	
Flt Protected		0.995			0.999			0.976			0.977	
Satd. Flow (prot)	0	1828	0	0	1841	0	0	1728	0	0	1541	0
Flt Permitted		0.995			0.999			0.976			0.977	
Satd. Flow (perm)	0	1828	0	0	1841	0	0	1728	0	0	1541	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			1309	
Travel Time (s)		5.2			10.9			5.0			29.8	
Peak Hour Factor	0.45	0.72	0.25	0.50	0.83	0.50	0.25	0.92	0.25	0.50	0.92	0.38
Heavy Vehicles (%)	33%	0%	0%	0%	1%	75%	0%	0%	0%	25%	0%	0%
Adj. Flow (vph)	24	217	4	16	783	20	4	0	4	10	0	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	819	0	0	8	0	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 47.0% ICU Level of Service A

Analysis Period (min) 15

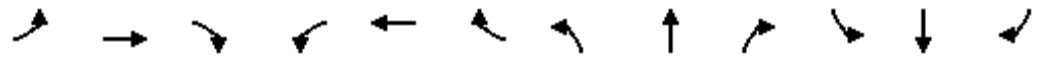
Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	156	1	8	650	10	1	0	1	5	0	4
Future Vol, veh/h	11	156	1	8	650	10	1	0	1	5	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	72	25	50	83	50	25	92	25	50	92	38
Heavy Vehicles, %	33	0	0	0	1	75	0	0	0	25	0	0
Mvmt Flow	24	217	4	16	783	20	4	0	4	10	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	803	0	0	221	0	0	1098	1102	219	1094	1094	793
Stage 1	-	-	-	-	-	-	267	267	-	825	825	-
Stage 2	-	-	-	-	-	-	831	835	-	269	269	-
Critical Hdwy	4.43	-	-	4.1	-	-	7.1	6.5	6.2	7.35	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.35	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.35	5.5	-
Follow-up Hdwy	2.497	-	-	2.2	-	-	3.5	4	3.3	3.725	4	3.3
Pot Cap-1 Maneuver	700	-	-	1360	-	-	192	213	826	173	216	392
Stage 1	-	-	-	-	-	-	743	692	-	335	390	-
Stage 2	-	-	-	-	-	-	367	386	-	689	690	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	700	-	-	1360	-	-	178	200	826	164	203	392
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	200	-	164	203	-
Stage 1	-	-	-	-	-	-	714	665	-	322	382	-
Stage 2	-	-	-	-	-	-	350	378	-	659	663	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.1			17.6			21.9		
HCM LOS							C			C		

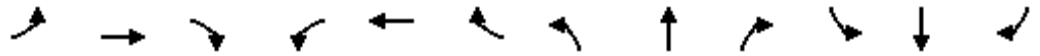
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	293	700	-	-	1360	-	-	234
HCM Lane V/C Ratio	0.027	0.035	-	-	0.012	-	-	0.088
HCM Control Delay (s)	17.6	10.3	0	-	7.7	0	-	21.9
HCM Lane LOS	C	B	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1377	28	24	1237	71	30	11	40	99	3	46
Future Volume (vph)	38	1377	28	24	1237	71	30	11	40	99	3	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.990				0.850		0.859	
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	1752	3302	0	1719	3264	0	0	1684	1429	1703	990	0
Flt Permitted	0.101			0.098				0.964		0.950		
Satd. Flow (perm)	186	3302	0	177	3264	0	0	1684	1429	1703	990	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			5				168			92
Link Speed (mph)		45			45			35				30
Link Distance (ft)		866			3195			957				1336
Travel Time (s)		13.1			48.4			18.6				30.4
Peak Hour Factor	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Adj. Flow (vph)	60	1497	35	35	1406	96	45	15	70	111	6	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1532	0	35	1502	0	0	60	70	111	98	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split		NA
Protected Phases	5	2		1	6		8	8		7		7

Lanes, Volumes, Timings
6: Roger Hanks & US 290

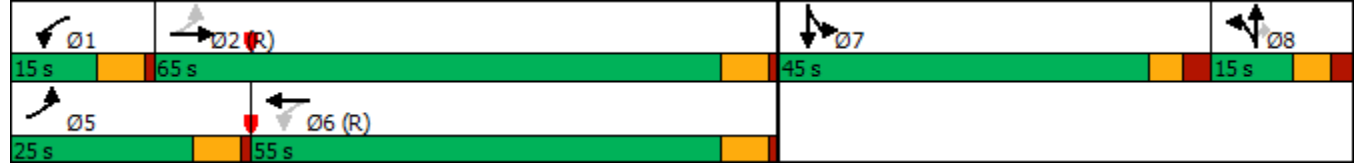


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Permitted Phases	2		6				8		8		7		7
Detector Phase	5	2	1				6	8	8	8	7	7	
Switch Phase													
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	31.0	11.0		24.0	33.5		33.5	33.5	24.5	24.5		
Total Split (s)	25.0	65.0	15.0		55.0	15.0		15.0	15.0	45.0	45.0		
Total Split (%)	17.9%	46.4%	10.7%		39.3%	10.7%		10.7%	10.7%	32.1%	32.1%		
Maximum Green (s)	19.0	59.0	9.0		49.0	8.5		8.5	8.5	38.5	38.5		
Yellow Time (s)	5.0	5.0	5.0		5.0	4.0		4.0	4.0	3.5	3.5		
All-Red Time (s)	1.0	1.0	1.0		1.0	2.5		2.5	2.5	3.0	3.0		
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.5		6.5	6.5	6.5	6.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	None	
Walk Time (s)	7.0						7.0	7.0	7.0				
Flash Dont Walk (s)	18.0						20.0	20.0	20.0				
Pedestrian Calls (#/hr)	0						0	0	0				
Act Effct Green (s)	93.7	88.6	92.6		88.0	9.5		9.5	13.6	13.6			
Actuated g/C Ratio	0.67	0.63	0.66		0.63	0.07		0.07	0.10	0.10			
v/c Ratio	0.31	0.73	0.20		0.73	0.53		0.28	0.67	0.55			
Control Delay	12.3	22.5	12.9		32.5	79.0		2.7	80.1	24.1			
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0			
Total Delay	12.3	22.5	12.9		32.5	79.0		2.7	80.1	24.1			
LOS	B	C	B		C	E		A	F	C			
Approach Delay	22.1		32.0				37.9		53.8				
Approach LOS	C		C				D		D				

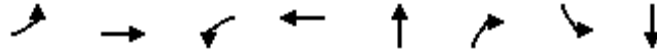
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 33 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 29.0
 Intersection LOS: C
 Intersection Capacity Utilization 64.4%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



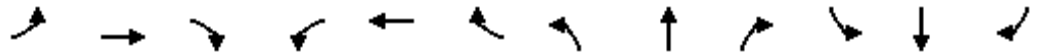
Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	1532	35	1502	60	70	111	98
v/c Ratio	0.31	0.73	0.20	0.73	0.53	0.28	0.67	0.55
Control Delay	12.3	22.5	12.9	32.5	79.0	2.7	80.1	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.3	22.5	12.9	32.5	79.0	2.7	80.1	24.1
Queue Length 50th (ft)	16	494	11	655	54	0	99	5
Queue Length 95th (ft)	26	721	m18	m762	83	0	158	0
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	342	2090	219	2053	123	259	468	338
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.73	0.16	0.73	0.49	0.27	0.24	0.29

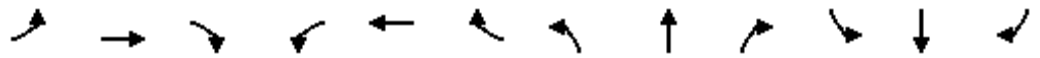
Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Roger Hanks & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1377	28	24	1237	71	30	11	40	99	3	46
Future Volume (vph)	38	1377	28	24	1237	71	30	11	40	99	3	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3301		1719	3266			1684	1429	1703	991	
Flt Permitted	0.10	1.00		0.10	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (perm)	186	3301		177	3266			1684	1429	1703	991	
Peak-hour factor, PHF	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Adj. Flow (vph)	60	1497	35	35	1406	96	45	15	70	111	6	92
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	65	0	83	0
Lane Group Flow (vph)	60	1531	0	35	1500	0	0	60	5	111	15	0
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	92.5	87.3		91.3	86.7			9.5	9.5	13.6	13.6	
Effective Green, g (s)	92.5	87.3		91.3	86.7			9.5	9.5	13.6	13.6	
Actuated g/C Ratio	0.66	0.62		0.65	0.62			0.07	0.07	0.10	0.10	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	181	2058		166	2022			114	96	165	96	
v/s Ratio Prot	c0.01	c0.46		0.01	0.46			c0.04		c0.07	0.02	
v/s Ratio Perm	0.21			0.13					0.00			
v/c Ratio	0.33	0.74		0.21	0.74			0.53	0.05	0.67	0.16	
Uniform Delay, d1	14.2	18.5		13.9	18.8			63.1	61.0	61.1	57.9	
Progression Factor	1.00	1.00		1.42	1.54			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	2.5		0.1	1.0			2.0	0.1	8.2	0.3	
Delay (s)	14.5	21.0		19.8	29.9			65.1	61.1	69.2	58.2	
Level of Service	B	C		B	C			E	E	E	E	
Approach Delay (s)		20.7			29.7			62.9			64.1	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			28.9	HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			140.0	Sum of lost time (s)				25.0				
Intersection Capacity Utilization			64.4%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	1195	229	244	1081	27	289	261	240	390	380	138
Future Volume (vph)	219	1195	229	244	1081	27	289	261	240	390	380	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.970			0.994				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.995		0.950	0.995	
Satd. Flow (prot)	1719	3335	0	1787	3449	0	1665	1759	1583	1698	1762	1495
Flt Permitted	0.075			0.075			0.950	0.995		0.950	0.995	
Satd. Flow (perm)	136	3335	0	141	3449	0	1665	1759	1583	1698	1762	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			3				70			70
Link Speed (mph)		45			45			45				45
Link Distance (ft)		3012			2872			679			2607	
Travel Time (s)		45.6			43.5			10.3			39.5	
Peak Hour Factor	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Adj. Flow (vph)	288	1285	327	287	1287	54	328	287	320	453	409	170
Shared Lane Traffic (%)							10%			10%		
Lane Group Flow (vph)	288	1612	0	287	1341	0	295	320	320	408	454	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

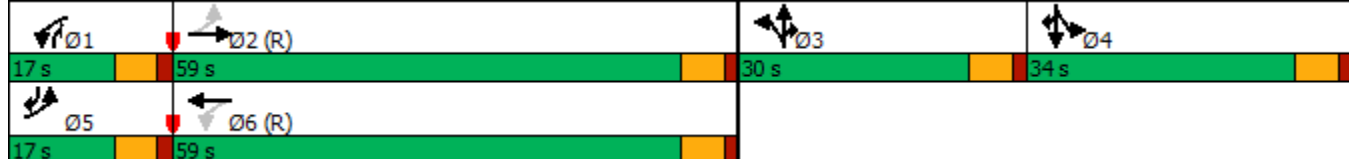


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2	1		6	3		3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0		15.0	5.0		5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	26.0	11.0		26.0	28.0		28.0	28.0		28.0	28.0
Total Split (s)	17.0	59.0	17.0		59.0	30.0		30.0	34.0		34.0	
Total Split (%)	12.1%	42.1%	12.1%		42.1%	21.4%		21.4%	24.3%		24.3%	
Maximum Green (s)	11.0	53.0	11.0		53.0	24.0		24.0	28.0		28.0	
Yellow Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5		4.5	
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead		Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None		None	
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	13.0		13.0		15.0		15.0		15.0		15.0	
Pedestrian Calls (#/hr)	0		0		0		0		0		0	
Act Effct Green (s)	64.0	53.0	64.0		53.0	24.0		24.0	35.0	28.0	28.0	45.0
Actuated g/C Ratio	0.46	0.38	0.46		0.38	0.17		0.17	0.25	0.20	0.20	0.32
v/c Ratio	1.55	1.26	1.49		1.03	1.04		1.06	0.71	1.20	1.29	0.32
Control Delay	281.8	154.7	274.2		74.2	118.2		123.7	30.1	163.2	194.2	22.6
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	281.8	154.7	274.2		74.2	118.2		123.7	30.1	163.2	194.2	22.6
LOS	F	F	F		E	F		F	C	F	F	C
Approach Delay	173.9		109.5		89.9		153.6					
Approach LOS	F		F		F		F					

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.55
 Intersection Signal Delay: 136.7
 Intersection LOS: F
 Intersection Capacity Utilization 109.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



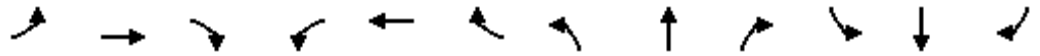
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	288	1612	287	1341	295	320	320	408	454	170
v/c Ratio	1.55	1.26	1.49	1.03	1.04	1.06	0.71	1.20	1.29	0.32
Control Delay	281.8	154.7	274.2	74.2	118.2	123.7	30.1	163.2	194.2	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	281.8	154.7	274.2	74.2	118.2	123.7	30.1	163.2	194.2	22.6
Queue Length 50th (ft)	~318	~963	~310	~683	~303	~336	125	~473	~552	66
Queue Length 95th (ft)	m#331	m#982	#458	#725	#482	#540	145	#647	#781	110
Internal Link Dist (ft)		2932		2792		599			2527	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	186	1278	193	1307	285	301	448	339	352	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.55	1.26	1.49	1.03	1.04	1.06	0.71	1.20	1.29	0.32

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

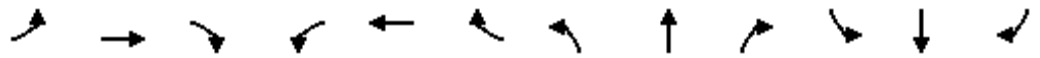
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	1195	229	244	1081	27	289	261	240	390	380	138
Future Volume (vph)	219	1195	229	244	1081	27	289	261	240	390	380	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3333		1787	3449		1665	1759	1583	1698	1763	1495
Flt Permitted	0.08	1.00		0.08	1.00		0.95	0.99	1.00	0.95	1.00	1.00
Satd. Flow (perm)	137	3333		142	3449		1665	1759	1583	1698	1763	1495
Peak-hour factor, PHF	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Adj. Flow (vph)	288	1285	327	287	1287	54	328	287	320	453	409	170
RTOR Reduction (vph)	0	16	0	0	2	0	0	0	53	0	0	48
Lane Group Flow (vph)	288	1596	0	287	1339	0	295	320	268	408	454	123
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5
Permitted Phases	2			6								
Actuated Green, G (s)	64.0	53.0		64.0	53.0		24.0	24.0	35.0	28.0	28.0	45.0
Effective Green, g (s)	64.0	53.0		64.0	53.0		24.0	24.0	35.0	28.0	28.0	45.0
Actuated g/C Ratio	0.46	0.38		0.46	0.38		0.17	0.17	0.25	0.20	0.20	0.32
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	186	1261		194	1305		285	301	395	339	352	480
v/s Ratio Prot	c0.12	0.48		0.12	0.39		0.18	c0.18	0.17	0.24	c0.26	0.08
v/s Ratio Perm	c0.59			0.56								
v/c Ratio	1.55	1.27		1.48	1.03		1.04	1.06	0.68	1.20	1.29	0.26
Uniform Delay, d1	41.3	43.5		41.4	43.5		58.0	58.0	47.4	56.0	56.0	35.1
Progression Factor	0.93	0.95		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	254.0	121.3		241.3	31.8		62.7	69.5	3.6	116.3	150.2	0.1
Delay (s)	292.4	162.5		282.7	75.3		120.7	127.5	51.0	172.3	206.2	35.2
Level of Service	F	F		F	E		F	F	D	F	F	D
Approach Delay (s)		182.2			111.9			99.2			164.6	
Approach LOS		F			F			F			F	

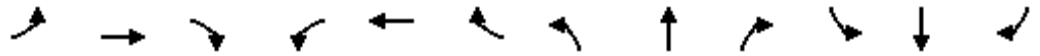
Intersection Summary		
HCM 2000 Control Delay	143.9	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	1.38	F
Actuated Cycle Length (s)	140.0	Sum of lost time (s)
Intersection Capacity Utilization	109.5%	ICU Level of Service
Analysis Period (min)	15	H
c Critical Lane Group		

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1531	8	8	1440	204	1	0	1	509	0	38
Future Volume (vph)	34	1531	8	8	1440	204	1	0	1	509	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.973			0.932			0.976	
Flt Protected	0.950			0.950				0.976		0.950	0.960	
Satd. Flow (prot)	1805	3421	0	1203	3456	0	0	1728	0	1649	1636	0
Flt Permitted	0.051			0.053				0.976		0.950	0.960	
Satd. Flow (perm)	97	3421	0	67	3456	0	0	1728	0	1649	1636	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			29			160			160	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		3195			3012			166			1615	
Travel Time (s)		48.4			45.6			3.8			36.7	
Peak Hour Factor	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	65	2014	11	21	1756	392	4	0	4	821	0	70
Shared Lane Traffic (%)										45%		
Lane Group Flow (vph)	65	2025	0	21	2148	0	0	8	0	452	439	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2				6							
Detector Phase	5	2			1	6	3		3	4	4	
Switch Phase												
Minimum Initial (s)	5.0	12.0			5.0	12.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	18.0			11.0	25.0	30.5		30.5	30.5	30.5	30.5
Total Split (s)	18.0	87.0			11.0	80.0	12.0		12.0	30.0	30.0	30.0
Total Split (%)	12.9%	62.1%			7.9%	57.1%	8.6%		8.6%	21.4%	21.4%	21.4%
Maximum Green (s)	12.0	81.0			5.0	74.0	6.5		6.5	24.5	24.5	24.5
Yellow Time (s)	4.5	4.5			4.5	4.5	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	1.5	1.5			1.5	1.5	1.5		1.5	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.0	6.0	5.5		5.5	5.5	5.5	5.5
Lead/Lag	Lead	Lag			Lead	Lag	Lead		Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0	2.0	2.0
Recall Mode	None	C-Max			None	C-Max	None		None	None	None	None
Walk Time (s)					7.0		7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)					12.0		18.0		18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)					0		0		0	0	0	0
Act Effct Green (s)	89.9	85.4			85.6	81.6	5.0		5.0	34.4	34.4	34.4
Actuated g/C Ratio	0.64	0.61			0.61	0.58	0.04		0.04	0.25	0.25	0.25
v/c Ratio	0.46	0.97			0.26	1.06	0.04		0.04	1.12	0.84	0.84
Control Delay	21.3	49.8			15.2	51.8	0.5		0.5	128.1	46.9	46.9
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	21.3	49.8			15.2	51.8	0.5		0.5	128.1	46.9	46.9
LOS	C	D			B	D	A		A	F	D	D
Approach Delay	48.9				51.4		0.5		0.5	88.1		88.1
Approach LOS	D				D		A		A	F		F

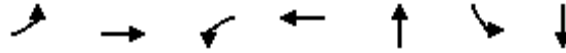
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 46 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 56.7
 Intersection LOS: E
 Intersection Capacity Utilization 77.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	65	2025	21	2148	8	452	439
v/c Ratio	0.46	0.97	0.26	1.06	0.04	1.12	0.84
Control Delay	21.3	49.8	15.2	51.8	0.5	128.1	46.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	49.8	15.2	51.8	0.5	128.1	46.9
Queue Length 50th (ft)	30	~1056	3	~1145	0	~471	262
Queue Length 95th (ft)	m25	m922	m3	m#1112	0	#471	#537
Internal Link Dist (ft)		3115		2932	86		1535
Turn Bay Length (ft)	100		100			1000	
Base Capacity (vph)	210	2087	81	2027	232	404	522
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.97	0.26	1.06	0.03	1.12	0.84

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1531	8	8	1440	204	1	0	1	509	0	38
Future Volume (vph)	34	1531	8	8	1440	204	1	0	1	509	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	
Frt	1.00	1.00		1.00	0.97			0.93		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	
Satd. Flow (prot)	1805	3421		1203	3455			1729		1649	1636	
Flt Permitted	0.05	1.00		0.05	1.00			0.98		0.95	0.96	
Satd. Flow (perm)	97	3421		67	3455			1729		1649	1636	
Peak-hour factor, PHF	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Adj. Flow (vph)	65	2014	11	21	1756	392	4	0	4	821	0	70
RTOR Reduction (vph)	0	0	0	0	13	0	0	8	0	0	121	0
Lane Group Flow (vph)	65	2025	0	21	2135	0	0	0	0	452	318	0
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA			Split	NA		Split	NA
Protected Phases	5	2		1	6			3	3		4	4
Permitted Phases	2			6								
Actuated Green, G (s)	84.2	78.6		79.0	76.0			1.0		34.4	34.4	
Effective Green, g (s)	84.2	78.6		79.0	76.0			1.0		34.4	34.4	
Actuated g/C Ratio	0.60	0.56		0.56	0.54			0.01		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	126	1920		62	1875			12		405	401	
v/s Ratio Prot	c0.02	c0.59		0.01	c0.62			c0.00		c0.27	0.19	
v/s Ratio Perm	0.29			0.18								
v/c Ratio	0.52	1.05		0.34	1.14			0.00		1.12	0.79	
Uniform Delay, d1	32.1	30.7		32.4	32.0			69.0		52.8	49.5	
Progression Factor	1.17	1.55		1.15	0.51			1.00		1.00	1.00	
Incremental Delay, d2	0.9	32.9		0.7	66.7			0.1		80.1	9.7	
Delay (s)	38.4	80.4		38.1	83.1			69.1		132.9	59.2	
Level of Service	D	F		D	F			E		F	E	
Approach Delay (s)		79.1			82.6			69.1			96.6	
Approach LOS		E			F			E			F	

Intersection Summary

HCM 2000 Control Delay	83.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	100	4	5	14	4	5	7	776	27	8	811	123
Future Volume (vph)	100	4	5	14	4	5	7	776	27	8	811	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.952			0.991			0.978	
Flt Protected		0.960			0.974		0.950			0.950		
Satd. Flow (prot)	0	1802	0	0	1762	0	1805	1848	0	1805	1837	0
Flt Permitted		0.960			0.974		0.950			0.950		
Satd. Flow (perm)	0	1802	0	0	1762	0	1805	1848	0	1805	1837	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			1000			342	
Travel Time (s)		14.1			35.6			15.2			5.2	
Peak Hour Factor	0.73	0.38	0.33	0.63	0.75	0.33	0.42	0.94	0.50	0.50	0.86	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	2%
Adj. Flow (vph)	137	11	15	22	5	15	17	826	54	16	943	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	42	0	17	880	0	16	1101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.4%
ICU Level of Service	C
Analysis Period (min)	15

HCM 6th TWSC
3: RR 12 & Old Fitzhugh/Timberline

Intersection												
Int Delay, s/veh	94.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	100	4	5	14	4	5	7	776	27	8	811	123
Future Vol, veh/h	100	4	5	14	4	5	7	776	27	8	811	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	38	33	63	75	33	42	94	50	50	86	78
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	2
Mvmt Flow	137	11	15	22	5	15	17	826	54	16	943	158











Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1951	1968	1022	1868	1862	853	943	0	0	880	0	0
Stage 1	1054	1054	-	887	887	-	-	-	-	-	-	-
Stage 2	897	914	-	981	975	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 49	63	289	56	74	362	736	-	-	777	-	-
Stage 1	276	305	-	341	365	-	-	-	-	-	-	-
Stage 2	337	355	-	303	332	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 43	60	289	44	71	362	736	-	-	777	-	-
Mov Cap-2 Maneuver	~ 43	60	-	44	71	-	-	-	-	-	-	-
Stage 1	270	299	-	333	357	-	-	-	-	-	-	-
Stage 2	311	347	-	271	325	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	1252.5	119.4	0.2	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	736	-	-	48	69	777	-	-
HCM Lane V/C Ratio	0.023	-	-	3.389	0.619	0.021	-	-
HCM Control Delay (s)	10	-	-	\$ 1252.5	119.4	9.7	-	-
HCM Lane LOS	B	-	-	F	F	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	17.8	2.7	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	8	920	24	4	982
Future Volume (vph)	11	8	920	24	4	982
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.930		0.995			
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1637	0	1814	0	1805	1827
Flt Permitted	0.976				0.950	
Satd. Flow (perm)	1637	0	1814	0	1805	1827
Link Speed (mph)	25		45			45
Link Distance (ft)	1288		342			958
Travel Time (s)	35.1		5.2			14.5
Peak Hour Factor	0.75	0.50	0.93	0.68	0.38	0.89
Heavy Vehicles (%)	11%	0%	4%	10%	0%	4%
Adj. Flow (vph)	15	16	989	35	11	1103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	0	1024	0	11	1103
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	61.7%		ICU Level of Service B			
Analysis Period (min)	15					

HCM 6th TWSC
4: RR 12 & Brookside

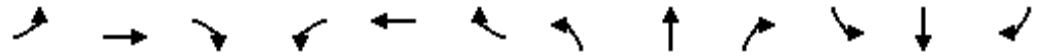
Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑		↘↗	↑
Traffic Vol, veh/h	11	8	920	24	4	982
Future Vol, veh/h	11	8	920	24	4	982
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	50	93	68	38	89
Heavy Vehicles, %	11	0	4	10	0	4
Mvmt Flow	15	16	989	35	11	1103

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2132	1007	0	0	1024
Stage 1	1007	-	-	-	-
Stage 2	1125	-	-	-	-
Critical Hdwy	6.51	6.2	-	-	4.1
Critical Hdwy Stg 1	5.51	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-
Follow-up Hdwy	3.599	3.3	-	-	2.2
Pot Cap-1 Maneuver	51	295	-	-	686
Stage 1	340	-	-	-	-
Stage 2	298	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	50	295	-	-	686
Mov Cap-2 Maneuver	166	-	-	-	-
Stage 1	340	-	-	-	-
Stage 2	293	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.5	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	686
HCM Lane V/C Ratio	-	-	0.143	0.015
HCM Control Delay (s)	-	-	24.5	10.3
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	439	11	20	248	86	6	3	23	4	1	3
Future Volume (vph)	16	439	11	20	248	86	6	3	23	4	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.953			0.907			0.946	
Flt Protected		0.998			0.998			0.990			0.984	
Satd. Flow (prot)	0	1822	0	0	1767	0	0	1706	0	0	1769	0
Flt Permitted		0.998			0.998			0.990			0.984	
Satd. Flow (perm)	0	1822	0	0	1767	0	0	1706	0	0	1769	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			1309	
Travel Time (s)		5.2			10.9			5.0			29.8	
Peak Hour Factor	0.54	0.59	0.75	0.80	0.65	0.40	0.63	0.50	0.64	0.75	0.25	0.50
Heavy Vehicles (%)	0%	4%	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	30	744	15	25	382	215	10	6	36	5	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	789	0	0	622	0	0	52	0	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 38.7% ICU Level of Service A

Analysis Period (min) 15

Intersection

Int Delay, s/veh 1.5

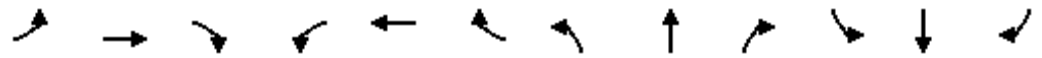
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	439	11	20	248	86	6	3	23	4	1	3
Future Vol, veh/h	16	439	11	20	248	86	6	3	23	4	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	54	59	75	80	65	40	63	50	64	75	25	50
Heavy Vehicles, %	0	4	0	0	2	3	0	0	0	0	0	0
Mvmt Flow	30	744	15	25	382	215	10	6	36	5	4	6

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	597	0	0	759
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.1	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.2	-	-	2.2
Pot Cap-1 Maneuver	989	-	-	862
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	989	-	-	862
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	24.9	28.9
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	232	989	-	-	862	-	-	166
HCM Lane V/C Ratio	0.222	0.03	-	-	0.029	-	-	0.092
HCM Control Delay (s)	24.9	8.8	0	-	9.3	0	-	28.9
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	0.3

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1289	78	48	1426	67	25	0	30	115	25	34
Future Volume (vph)	37	1289	78	48	1426	67	25	0	30	115	25	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.992				0.850		0.916	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1805	3268	0	1805	3385	0	0	1805	1553	1597	1605	0
Flt Permitted	0.070			0.057				0.950		0.950		
Satd. Flow (perm)	133	3268	0	108	3385	0	0	1805	1553	1597	1605	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				121		37	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Adj. Flow (vph)	77	1632	130	71	1567	91	40	0	40	198	35	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	1762	0	71	1658	0	0	40	40	198	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Permitted Phases	2		6				8						
Detector Phase	5	2	1		6	8		8	8	7	7		
Switch Phase													
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0	5.0	5.0		
Minimum Split (s)	11.0	31.0	11.0		18.0	33.5		33.5	33.5	11.5	11.5		
Total Split (s)	16.0	80.0	16.0		80.0	22.0		22.0	22.0	22.0	22.0		
Total Split (%)	11.4%	57.1%	11.4%		57.1%	15.7%		15.7%	15.7%	15.7%	15.7%		
Maximum Green (s)	10.0	74.0	10.0		74.0	15.5		15.5	15.5	15.5	15.5		
Yellow Time (s)	5.0	5.0	5.0		5.0	4.0		4.0	4.0	3.5	3.5		
All-Red Time (s)	1.0	1.0	1.0		1.0	2.5		2.5	2.5	3.0	3.0		
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.5		6.5	6.5	6.5	6.5		
Lead/Lag	Lead	Lag	Lead		Lag	Lag		Lag	Lag	Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0		
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None		
Walk Time (s)	7.0						7.0	7.0	7.0				
Flash Dont Walk (s)	18.0						20.0	20.0	20.0				
Pedestrian Calls (#/hr)	0						0	0	0				
Act Effct Green (s)	95.5	89.6	94.1		87.3	7.6		7.6	15.5	15.5			
Actuated g/C Ratio	0.68	0.64	0.67		0.62	0.05		0.05	0.11	0.11			
v/c Ratio	0.45	0.84	0.46		0.79	0.41		0.20	1.12	0.38			
Control Delay	17.2	26.7	25.5		6.8	75.5		2.3	159.9	38.6			
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0			
Total Delay	17.2	26.7	25.5		6.8	75.5		2.3	159.9	38.6			
LOS	B	C	C		A	E		A	F	D			
Approach Delay	26.3						7.6		38.9		125.0		
Approach LOS	C						A		D		F		

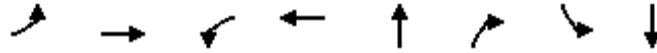
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 86 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 25.3 Intersection LOS: C
 Intersection Capacity Utilization 65.0% ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	77	1762	71	1658	40	40	198	80
v/c Ratio	0.45	0.84	0.46	0.79	0.41	0.20	1.12	0.38
Control Delay	17.2	26.7	25.5	6.8	75.5	2.3	159.9	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	26.7	25.5	6.8	75.5	2.3	159.9	38.6
Queue Length 50th (ft)	20	669	15	114	36	0	-207	36
Queue Length 95th (ft)	20	682	m13	m112	75	0	#179	63
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	212	2093	196	2112	199	279	176	210
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.84	0.36	0.79	0.20	0.14	1.13	0.38

- Intersection Summary**
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
 - # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
 - m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290



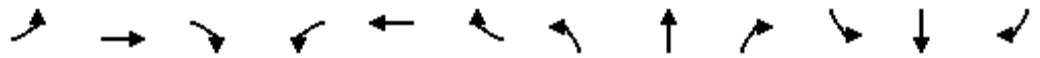
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	1289	78	48	1426	67	25	0	30	115	25	34
Future Volume (vph)	37	1289	78	48	1426	67	25	0	30	115	25	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3267		1805	3385			1805	1553	1597	1604	
Flt Permitted	0.07	1.00		0.06	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (perm)	133	3267		108	3385			1805	1553	1597	1604	
Peak-hour factor, PHF	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Adj. Flow (vph)	77	1632	130	71	1567	91	40	0	40	198	35	45
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	38	0	33	0
Lane Group Flow (vph)	77	1759	0	71	1656	0	0	40	2	198	47	0
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	94.0	87.1		91.8	86.0			6.6	6.6	15.5	15.5	
Effective Green, g (s)	94.0	87.1		91.8	86.0			6.6	6.6	15.5	15.5	
Actuated g/C Ratio	0.67	0.62		0.66	0.61			0.05	0.05	0.11	0.11	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	171	2032		141	2079			85	73	176	177	
v/s Ratio Prot	c0.02	c0.54		0.02	0.49			c0.02		c0.12	0.03	
v/s Ratio Perm	0.28			0.31					0.00			
v/c Ratio	0.45	0.87		0.50	0.80			0.47	0.03	1.12	0.27	
Uniform Delay, d1	18.3	21.7		20.6	20.4			65.0	63.6	62.2	57.0	
Progression Factor	1.00	1.00		2.07	0.30			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	5.2		0.1	0.3			1.5	0.1	105.4	0.3	
Delay (s)	19.0	26.9		42.9	6.5			66.5	63.7	167.6	57.3	
Level of Service	B	C		D	A			E	E	F	E	
Approach Delay (s)		26.6			8.0			65.1			135.9	
Approach LOS		C			A			E			F	

Intersection Summary

HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Appendix H: Synchro Reports – 2026 Build-Out Conditions

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Future Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.973			0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.986		0.950	0.995	
Satd. Flow (prot)	1671	3438	0	1671	3447	0	1633	1695	1553	1681	1776	1482
Flt Permitted	0.077			0.077			0.950	0.986		0.950	0.995	
Satd. Flow (perm)	135	3438	0	135	3447	0	1633	1695	1553	1681	1776	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			5				70			70
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			2620	
Travel Time (s)		45.6			43.5			10.3			39.7	
Peak Hour Factor	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	2%	1%	9%
Adj. Flow (vph)	195	1462	320	160	1649	100	557	312	241	438	364	262
Shared Lane Traffic (%)							23%			10%		
Lane Group Flow (vph)	195	1782	0	160	1749	0	429	440	241	394	408	262
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

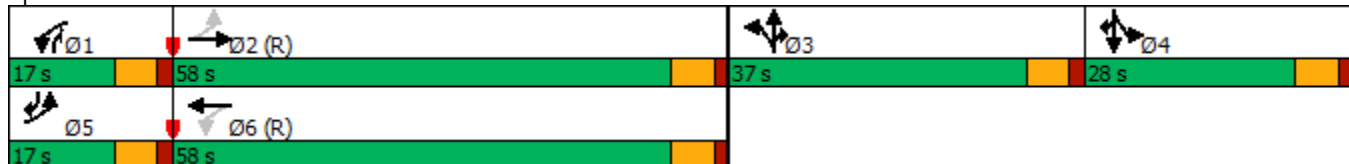


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6									
Detector Phase	5	2	1		6	3		3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0		15.0	5.0		5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	26.0	11.0		26.0	28.0		28.0	28.0		28.0	28.0
Total Split (s)	17.0	58.0	17.0		58.0	37.0		37.0	28.0		28.0	
Total Split (%)	12.1%	41.4%	12.1%		41.4%	26.4%		26.4%	20.0%		20.0%	
Maximum Green (s)	11.0	52.0	11.0		52.0	31.0		31.0	22.0		22.0	
Yellow Time (s)	4.5	4.5	4.5		4.5	4.5		4.5	4.5		4.5	
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5		1.5	1.5		1.5	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0		6.0	6.0		6.0	
Lead/Lag	Lead	Lag	Lead		Lag	Lead		Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0		2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None		None	
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	13.0		13.0		15.0		15.0		15.0		15.0	
Pedestrian Calls (#/hr)	0		0		0		0		0		0	
Act Effct Green (s)	63.1	52.1	62.9		52.0	31.0		31.0	41.9	22.0	22.0	39.0
Actuated g/C Ratio	0.45	0.37	0.45		0.37	0.22		0.22	0.30	0.16	0.16	0.28
v/c Ratio	1.08	1.38	0.89		1.36	1.19		1.17	0.47	1.49	1.46	0.57
Control Delay	110.7	209.7	77.3		203.8	155.6		149.6	18.5	280.4	267.3	36.6
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	110.7	209.7	77.3		203.8	155.6		149.6	18.5	280.4	267.3	36.6
LOS	F	F	E		F	F		F	B	F	F	D
Approach Delay	200.0		193.2		123.5		215.3					
Approach LOS	F		F		F		F					

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.49
 Intersection Signal Delay: 186.5 Intersection LOS: F
 Intersection Capacity Utilization 107.9% ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



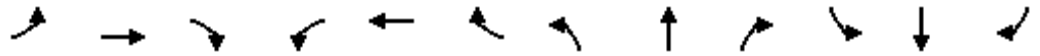
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	195	1782	160	1749	429	440	241	394	408	262
v/c Ratio	1.08	1.38	0.89	1.36	1.19	1.17	0.47	1.49	1.46	0.57
Control Delay	110.7	209.7	77.3	203.8	155.6	149.6	18.5	280.4	267.3	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.7	209.7	77.3	203.8	155.6	149.6	18.5	280.4	267.3	36.6
Queue Length 50th (ft)	~145	~1141	97	~1106	~493	~502	78	~521	~533	150
Queue Length 95th (ft)	#279	#1196	#208	#1055	#718	#654	111	#695	#593	233
Internal Link Dist (ft)		2932		2792		599			2540	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	181	1293	181	1283	361	375	514	264	279	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	1.38	0.88	1.36	1.19	1.17	0.47	1.49	1.46	0.57

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Future Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1671	3438		1671	3449		1633	1694	1553	1681	1776	1482
Flt Permitted	0.08	1.00		0.08	1.00		0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (perm)	135	3438		135	3449		1633	1694	1553	1681	1776	1482
Peak-hour factor, PHF	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Adj. Flow (vph)	195	1462	320	160	1649	100	557	312	241	438	364	262
RTOR Reduction (vph)	0	13	0	0	3	0	0	0	49	0	0	51
Lane Group Flow (vph)	195	1769	0	160	1746	0	429	440	192	394	408	212
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	2%	1%	9%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5
Permitted Phases	2			6								
Actuated Green, G (s)	63.1	52.1		62.9	52.0		31.0	31.0	41.9	22.0	22.0	39.0
Effective Green, g (s)	63.1	52.1		62.9	52.0		31.0	31.0	41.9	22.0	22.0	39.0
Actuated g/C Ratio	0.45	0.37		0.45	0.37		0.22	0.22	0.30	0.16	0.16	0.28
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	181	1279		180	1281		361	375	464	264	279	412
v/s Ratio Prot	c0.08	c0.51		0.07	0.51		c0.26	0.26	0.12	c0.23	0.23	0.14
v/s Ratio Perm	0.40			0.33								
v/c Ratio	1.08	1.38		0.89	1.36		1.19	1.17	0.41	1.49	1.46	0.51
Uniform Delay, d1	41.0	44.0		37.4	44.0		54.5	54.5	39.2	59.0	59.0	42.5
Progression Factor	0.86	1.06		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	79.7	176.0		36.3	168.4		109.2	102.7	0.2	240.6	226.8	0.5
Delay (s)	115.0	222.6		73.7	212.4		163.7	157.2	39.4	299.6	285.8	43.0
Level of Service	F	F		E	F		F	F	D	F	F	D
Approach Delay (s)		212.0			200.8			134.1			231.1	
Approach LOS		F			F			F			F	

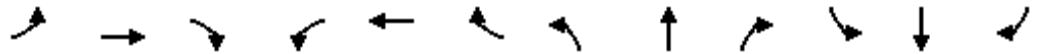
Intersection Summary		
HCM 2000 Control Delay	197.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	1.32	F
Actuated Cycle Length (s)	140.0	Sum of lost time (s)
Intersection Capacity Utilization	107.9%	ICU Level of Service
Analysis Period (min)	15	G
c Critical Lane Group		

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Future Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt					0.950							0.901
Flt Protected	0.950									0.950	0.983	
Satd. Flow (prot)	1805	3505	0	1900	3276	0	0	1900	0	1715	1548	0
Flt Permitted	0.040									0.950	0.983	
Satd. Flow (perm)	76	3505	0	1900	3276	0	0	1900	0	1715	1548	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					73							160
Link Speed (mph)		45			45			30				30
Link Distance (ft)		3195			3012			166				1615
Travel Time (s)		48.4			45.6			3.8				36.7
Peak Hour Factor	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	50	1800	0	0	1556	775	0	0	0	303	0	141
Shared Lane Traffic (%)										24%		
Lane Group Flow (vph)	50	1800	0	0	2331	0	0	0	0	230	214	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2				6							
Detector Phase	5	2			1	6	3		3	4		4
Switch Phase												
Minimum Initial (s)	5.0	12.0			5.0	12.0	5.0		5.0	5.0		5.0
Minimum Split (s)	11.0	18.0			11.0	25.0	30.5		30.5	30.5		30.5
Total Split (s)	28.0	79.0			11.0	62.0	12.0		12.0	38.0		38.0
Total Split (%)	20.0%	56.4%			7.9%	44.3%	8.6%		8.6%	27.1%		27.1%
Maximum Green (s)	22.0	73.0			5.0	56.0	6.5		6.5	32.5		32.5
Yellow Time (s)	4.5	4.5			4.5	4.5	4.0		4.0	4.0		4.0
All-Red Time (s)	1.5	1.5			1.5	1.5	1.5		1.5	1.5		1.5
Lost Time Adjust (s)	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0			6.0	6.0			5.5	5.5		5.5
Lead/Lag	Lead	Lag			Lead	Lag	Lead		Lead	Lag		Lag
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes		Yes	Yes		Yes
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0		2.0	2.0		2.0
Recall Mode	None	C-Max			None	C-Max	None		None	None		None
Walk Time (s)					7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)					12.0		18.0		18.0	18.0		18.0
Pedestrian Calls (#/hr)					0		0		0	0		0
Act Effct Green (s)	105.2	105.2			95.8					23.3		23.3
Actuated g/C Ratio	0.75	0.75			0.68					0.17		0.17
v/c Ratio	0.40	0.68			1.03					0.81		0.55
Control Delay	30.8	5.8			30.8					76.7		19.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	30.8	5.8			30.8					76.7		19.5
LOS	C	A			C					E		B
Approach Delay	6.4				30.8							49.1
Approach LOS	A				C							D

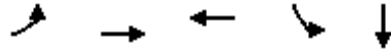
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 65 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 22.8
 Intersection Capacity Utilization 81.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBT	SBL	SBT
Lane Group Flow (vph)	50	1800	2331	230	214
v/c Ratio	0.40	0.68	1.03	0.81	0.55
Control Delay	30.8	5.8	30.8	76.7	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.8	5.8	30.8	76.7	19.5
Queue Length 50th (ft)	7	139	~1203	214	45
Queue Length 95th (ft)	m36	204	m808	291	123
Internal Link Dist (ft)		3115	2932		1535
Turn Bay Length (ft)	100			1000	
Base Capacity (vph)	328	2634	2263	398	482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.68	1.03	0.58	0.44

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Future Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0					5.5	5.5	
Lane Util. Factor	1.00	0.95			0.95					0.95	0.95	
Frt	1.00	1.00			0.95					1.00	0.90	
Flt Protected	0.95	1.00			1.00					0.95	0.98	
Satd. Flow (prot)	1805	3505			3277					1715	1548	
Flt Permitted	0.04	1.00			1.00					0.95	0.98	
Satd. Flow (perm)	76	3505			3277					1715	1548	
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Adj. Flow (vph)	50	1800	0	0	1556	775	0	0	0	303	0	141
RTOR Reduction (vph)	0	0	0	0	24	0	0	0	0	0	133	0
Lane Group Flow (vph)	50	1800	0	0	2307	0	0	0	0	230	81	0
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Turn Type	pm+pt	NA		pm+pt	NA					Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	105.2	105.2			94.5					23.3	23.3	
Effective Green, g (s)	105.2	105.2			94.5					23.3	23.3	
Actuated g/C Ratio	0.75	0.75			0.68					0.17	0.17	
Clearance Time (s)	6.0	6.0			6.0					5.5	5.5	
Vehicle Extension (s)	2.0	2.0			2.0					2.0	2.0	
Lane Grp Cap (vph)	115	2633			2211					285	257	
v/s Ratio Prot	0.01	c0.51			c0.70					c0.13	0.05	
v/s Ratio Perm	0.31											
v/c Ratio	0.43	0.68			1.04					0.81	0.31	
Uniform Delay, d1	38.6	8.9			22.8					56.2	51.3	
Progression Factor	2.32	0.46			0.56					1.00	1.00	
Incremental Delay, d2	0.8	1.1			21.2					14.5	0.3	
Delay (s)	90.4	5.3			34.0					70.7	51.6	
Level of Service	F	A			C					E	D	
Approach Delay (s)		7.6			34.0			0.0			61.5	
Approach LOS		A			C			A			E	
Intersection Summary												
HCM 2000 Control Delay			26.1		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			140.0		Sum of lost time (s)				23.0			
Intersection Capacity Utilization			81.2%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	53	1	1	22	5	4	3	836	16	7	878	145
Future Volume (vph)	53	1	1	22	5	4	3	836	16	7	878	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.963			0.996			0.979	
Flt Protected		0.958			0.973		0.950			0.950		
Satd. Flow (prot)	0	1806	0	0	1780	0	1805	1801	0	1805	1793	0
Flt Permitted		0.958			0.973		0.950			0.950		
Satd. Flow (perm)	0	1806	0	0	1780	0	1805	1801	0	1805	1793	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			994			342	
Travel Time (s)		14.1			35.6			15.1			5.2	
Peak Hour Factor	0.89	0.25	0.25	0.67	0.50	0.25	0.50	0.80	0.60	0.63	0.77	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	8%	0%	4%	2%
Adj. Flow (vph)	60	4	4	33	10	16	6	1045	27	11	1140	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	59	0	6	1072	0	11	1321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.6%
ICU Level of Service	C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	46											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	53	1	1	22	5	4	3	836	16	7	878	145
Future Vol, veh/h	53	1	1	22	5	4	3	836	16	7	878	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	25	25	67	50	25	50	80	60	63	77	80
Heavy Vehicles, %	0	0	0	0	0	0	0	5	8	0	4	2
Mvmt Flow	60	4	4	33	10	16	6	1045	27	11	1140	181

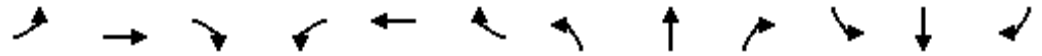
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2337	2337	1231	2235	2233	1059	1140	0	0	1072	0	0
Stage 1	1253	1253	-	1071	1071	-	-	-	-	-	-	-
Stage 2	1084	1084	-	1164	1162	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 26	37	218	~ 31	43	275	620	-	-	658	-	-
Stage 1	213	246	-	270	300	-	-	-	-	-	-	-
Stage 2	265	296	-	239	272	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 20	36	218	~ 27	42	275	620	-	-	658	-	-
Mov Cap-2 Maneuver	~ 20	36	-	~ 27	42	-	-	-	-	-	-	-
Stage 1	211	242	-	267	297	-	-	-	-	-	-	-
Stage 2	239	293	-	227	267	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$1300.2			\$ 487		0.1		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	620	-	-	22	39	658	-
HCM Lane V/C Ratio	0.01	-	-	3.07	1.509	0.017	-
HCM Control Delay (s)	10.9	-	-	\$ 1300.2	\$ 487	10.6	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0	-	-	8.6	6.1	0.1	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	52	0	139	24	0	6	47	832	6	6	886	18
Future Volume (vph)	52	0	139	24	0	6	47	832	6	6	886	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.968			0.999			0.997	
Flt Protected		0.986			0.963		0.950			0.950		
Satd. Flow (prot)	0	1690	0	0	1579	0	1805	1775	0	1805	1773	0
Flt Permitted		0.986			0.963		0.950			0.950		
Satd. Flow (perm)	0	1690	0	0	1579	0	1805	1775	0	1805	1773	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		1986			1288			342			958	
Travel Time (s)		45.1			35.1			5.2			14.5	
Peak Hour Factor	0.92	0.92	0.92	0.53	0.92	0.42	0.92	0.77	0.63	0.42	0.91	0.92
Heavy Vehicles (%)	0%	0%	0%	16%	0%	0%	0%	7%	0%	0%	7%	0%
Adj. Flow (vph)	57	0	151	45	0	14	51	1081	10	14	974	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	0	59	0	51	1091	0	14	994	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 65.3% ICU Level of Service C
 Analysis Period (min) 15

HCM 6th TWSC
4: RR 12 & Brookside

Intersection

Int Delay, s/veh 110.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	52	0	139	24	0	6	47	832	6	6	886	18
Future Vol, veh/h	52	0	139	24	0	6	47	832	6	6	886	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	53	92	42	92	77	63	42	91	92
Heavy Vehicles, %	0	0	0	16	0	0	0	7	0	0	7	0
Mvmt Flow	57	0	151	45	0	14	51	1081	10	14	974	20

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2207	2205	984	2276	2210	1086	994	0	0	1091	0	0
Stage 1	1012	1012	-	1188	1188	-	-	-	-	-	-	-
Stage 2	1195	1193	-	1088	1022	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.26	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.26	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.26	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.644	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 32	45	304	~ 26	45	265	704	-	-	647	-	-
Stage 1	291	319	-	215	264	-	-	-	-	-	-	-
Stage 2	230	263	-	246	316	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 28	41	304	~ 12	41	265	704	-	-	647	-	-
Mov Cap-2 Maneuver	~ 28	41	-	~ 12	41	-	-	-	-	-	-	-
Stage 1	270	312	-	200	245	-	-	-	-	-	-	-
Stage 2	202	244	-	121	309	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	789.8	1710.1	0.5	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	704	-	-	83	16	647	-
HCM Lane V/C Ratio	0.073	-	-	2.501	3.723	0.022	-
HCM Control Delay (s)	10.5	-	-	789.8	1710.1	10.7	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.2	-	-	19.6	8.2	0.1	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	156	1	8	650	51	1	0	1	127	0	4
Future Volume (vph)	11	156	1	8	650	51	1	0	1	127	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.985			0.932			0.994	
Flt Protected		0.995			0.999			0.976			0.954	
Satd. Flow (prot)	0	1812	0	0	1710	0	0	1728	0	0	1453	0
Flt Permitted		0.995			0.999			0.976			0.954	
Satd. Flow (perm)	0	1812	0	0	1710	0	0	1728	0	0	1453	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			2634	
Travel Time (s)		5.2			10.9			5.0			59.9	
Peak Hour Factor	0.45	0.72	0.25	0.50	0.83	0.50	0.25	0.92	0.25	0.50	0.92	0.38
Heavy Vehicles (%)	33%	1%	0%	0%	1%	75%	0%	0%	0%	25%	0%	0%
Adj. Flow (vph)	24	217	4	16	783	102	4	0	4	254	0	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	245	0	0	901	0	0	8	0	0	265	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 58.8% ICU Level of Service B

Analysis Period (min) 15

Intersection

Int Delay, s/veh 72.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	156	1	8	650	51	1	0	1	127	0	4
Future Vol, veh/h	11	156	1	8	650	51	1	0	1	127	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	45	72	25	50	83	50	25	92	25	50	92	38
Heavy Vehicles, %	33	1	0	0	1	75	0	0	0	25	0	0
Mvmt Flow	24	217	4	16	783	102	4	0	4	254	0	11

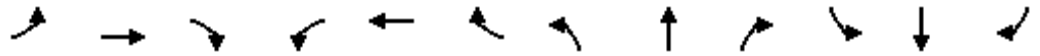
Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	885	0	0	221
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.43	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.497	-	-	2.2
Pot Cap-1 Maneuver	649	-	-	1360
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	649	-	-	1360
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.1	18.4	\$ 384.8
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	276	649	-	-	1360	-	-	157
HCM Lane V/C Ratio	0.029	0.038	-	-	0.012	-	-	1.685
HCM Control Delay (s)	18.4	10.8	0	-	7.7	0	-	\$ 384.8
HCM Lane LOS	C	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	18.7

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

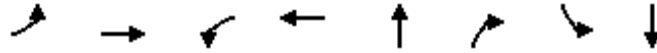
Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Future Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.991				0.850		0.855	
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	1752	3302	0	1719	3267	0	0	1684	1429	1703	976	0
Flt Permitted	0.091			0.098				0.964		0.950		
Satd. Flow (perm)	168	3302	0	177	3267	0	0	1684	1429	1703	976	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			5				168		160	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Adj. Flow (vph)	79	1503	35	35	1425	96	45	15	70	111	6	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	1538	0	35	1521	0	0	60	70	111	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split		NA
Protected Phases	5	2		1	6		8	8		7		7

Baseline

Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	1538	35	1521	60	70	111	166
v/c Ratio	0.42	0.74	0.20	0.77	0.53	0.28	0.66	0.69
Control Delay	14.9	22.8	13.2	37.4	79.0	2.7	79.0	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	22.8	13.2	37.4	79.0	2.7	79.0	24.7
Queue Length 50th (ft)	21	498	13	712	54	0	99	5
Queue Length 95th (ft)	33	738	m17	m754	83	0	156	0
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	332	2085	217	1986	123	259	468	384
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.74	0.16	0.77	0.49	0.27	0.24	0.43

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290

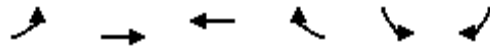


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Future Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3301		1719	3266			1684	1429	1703	976	
Flt Permitted	0.09	1.00		0.10	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (perm)	169	3301		178	3266			1684	1429	1703	976	
Peak-hour factor, PHF	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Adj. Flow (vph)	79	1503	35	35	1425	96	45	15	70	111	6	160
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	65	0	144	0
Lane Group Flow (vph)	79	1537	0	35	1519	0	0	60	5	111	22	0
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	94.0	87.2		89.6	85.0			9.5	9.5	13.7	13.7	
Effective Green, g (s)	94.0	87.2		89.6	85.0			9.5	9.5	13.7	13.7	
Actuated g/C Ratio	0.67	0.62		0.64	0.61			0.07	0.07	0.10	0.10	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	190	2056		164	1982			114	96	166	95	
v/s Ratio Prot	c0.02	c0.47		0.01	0.47			c0.04		c0.07	0.02	
v/s Ratio Perm	0.26			0.13					0.00			
v/c Ratio	0.42	0.75		0.21	0.77			0.53	0.05	0.67	0.23	
Uniform Delay, d1	15.7	18.6		14.2	20.2			63.1	61.0	61.0	58.3	
Progression Factor	1.00	1.00		1.46	1.67			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	2.5		0.1	0.8			2.0	0.1	7.7	0.4	
Delay (s)	16.2	21.2		20.8	34.6			65.1	61.1	68.6	58.7	
Level of Service	B	C		C	C			E	E	E	E	
Approach Delay (s)		20.9			34.2			62.9			62.7	
Approach LOS		C			C			E			E	

Intersection Summary

HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
7: Brookside



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	35	12	12	35	0
Future Volume (vph)	0	35	12	12	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932					
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1736	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1736	0	1770	0
Link Speed (mph)	30		30	30		
Link Distance (ft)	2535		225	1819		
Travel Time (s)	57.6		5.1	41.3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	38	13	13	38	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	38	26	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		0	12		
Link Offset(ft)	0		0	0		
Crosswalk Width(ft)	16		16	16		
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control	Free		Free	Stop		

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.4

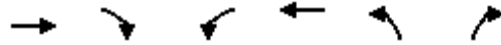
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	35	12	12	35	0
Future Vol, veh/h	0	35	12	12	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	13	13	38	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	26	0	-	0	58 20
Stage 1	-	-	-	-	20 -
Stage 2	-	-	-	-	38 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1588	-	-	-	949 1058
Stage 1	-	-	-	-	1003 -
Stage 2	-	-	-	-	984 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1588	-	-	-	949 1058
Mov Cap-2 Maneuver		-	-	-	949 -
Stage 1		-	-	-	1003 -
Stage 2		-	-	-	984 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	949
HCM Lane V/C Ratio	-	-	-	-	0.04
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
8: Brookside



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	35	35	41	12	12	47
Future Volume (vph)	35	35	41	12	12	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932			0.892		
Flt Protected				0.963	0.990	
Satd. Flow (prot)	1736	0	0	1794	1645	0
Flt Permitted				0.963	0.990	
Satd. Flow (perm)	1736	0	0	1794	1645	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	225			1986	2634	
Travel Time (s)	5.1			45.1	59.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	38	45	13	13	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	58	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Yield			Yield	Yield	

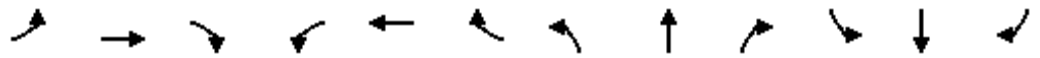
Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	19.8%
Analysis Period (min)	15
	ICU Level of Service A

HCM 6th Roundabout
8: Brookside

Intersection			
Intersection Delay, s/veh	3.2		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	76	58	64
Demand Flow Rate, veh/h	78	59	65
Vehicles Circulating, veh/h	46	13	39
Vehicles Exiting, veh/h	26	91	85
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.0	3.1
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	78	59	65
Cap Entry Lane, veh/h	1317	1362	1326
Entry HV Adj Factor	0.977	0.979	0.985
Flow Entry, veh/h	76	58	64
Cap Entry, veh/h	1287	1333	1306
V/C Ratio	0.059	0.043	0.049
Control Delay, s/veh	3.3	3.0	3.1
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Future Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		0	250		0	130		130	70		130
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Frt		0.970			0.975				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.995		0.950	0.994	
Satd. Flow (prot)	1719	3335	0	1787	3379	0	1665	1759	1583	1698	1761	1495
Flt Permitted	0.075			0.075			0.950	0.995		0.950	0.994	
Satd. Flow (perm)	136	3335	0	141	3379	0	1665	1759	1583	1698	1761	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			19				70			70
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			2642	
Travel Time (s)		45.6			43.5			10.3			40.0	
Peak Hour Factor	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Adj. Flow (vph)	288	1345	343	287	1401	284	350	330	320	533	433	170
Shared Lane Traffic (%)							10%			11%		
Lane Group Flow (vph)	288	1688	0	287	1685	0	315	365	320	474	492	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3 1	4	4	4 5

Lanes, Volumes, Timings
1: RR 12 & US 290

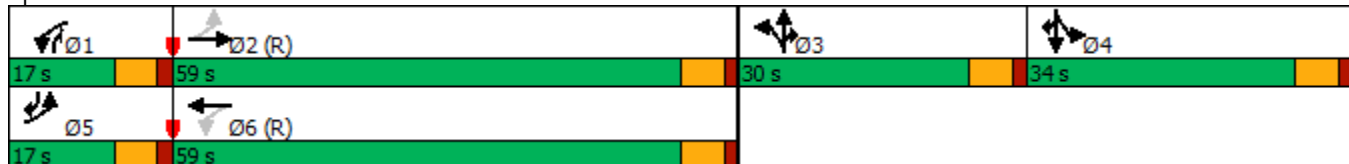


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6		3		3		3 1		4 4	
Detector Phase	5	2		1	6		3	3	3 1	4	4	4 5
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	26.0		11.0	26.0		28.0	28.0		28.0	28.0	
Total Split (s)	17.0	59.0		17.0	59.0		30.0	30.0		34.0	34.0	
Total Split (%)	12.1%	42.1%		12.1%	42.1%		21.4%	21.4%		24.3%	24.3%	
Maximum Green (s)	11.0	53.0		11.0	53.0		24.0	24.0		28.0	28.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		13.0			13.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	64.0	53.0		64.0	53.0		24.0	24.0	35.0	28.0	28.0	45.0
Actuated g/C Ratio	0.46	0.38		0.46	0.38		0.17	0.17	0.25	0.20	0.20	0.32
v/c Ratio	1.55	1.32		1.49	1.31		1.11	1.21	0.71	1.40	1.40	0.32
Control Delay	277.1	179.5		274.2	179.0		136.8	170.3	30.1	237.1	236.3	22.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	277.1	179.5		274.2	179.0		136.8	170.3	30.1	237.1	236.3	22.6
LOS	F	F		F	F		F	F	C	F	F	C
Approach Delay		193.8			192.8			114.8				204.6
Approach LOS		F			F			F				F

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.55
 Intersection Signal Delay: 182.5 Intersection LOS: F
 Intersection Capacity Utilization 115.4% ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	288	1688	287	1685	315	365	320	474	492	170
v/c Ratio	1.55	1.32	1.49	1.31	1.11	1.21	0.71	1.40	1.40	0.32
Control Delay	277.1	179.5	274.2	179.0	136.8	170.3	30.1	237.1	236.3	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	277.1	179.5	274.2	179.0	136.8	170.3	30.1	237.1	236.3	22.6
Queue Length 50th (ft)	~319	~1038	~310	~1033	~343	~426	125	~605	~628	66
Queue Length 95th (ft)	m#313	m#1007	#458	#1051	#525	#638	145	#784	#861	110
Internal Link Dist (ft)		2932		2792		599			2562	
Turn Bay Length (ft)	300		250		130		130	70		130
Base Capacity (vph)	186	1278	193	1291	285	301	448	339	352	528
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.55	1.32	1.49	1.31	1.11	1.21	0.71	1.40	1.40	0.32

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

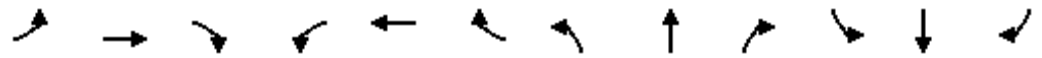
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Future Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.95	0.95	1.00	0.95	0.95	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	1719	3333		1787	3378		1665	1760	1583	1698	1761	1495
Flt Permitted	0.08	1.00		0.08	1.00		0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	137	3333		142	3378		1665	1760	1583	1698	1761	1495
Peak-hour factor, PHF	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Adj. Flow (vph)	288	1345	343	287	1401	284	350	330	320	533	433	170
RTOR Reduction (vph)	0	16	0	0	12	0	0	0	53	0	0	48
Lane Group Flow (vph)	288	1672	0	287	1673	0	315	365	268	474	492	123
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	5	2		1	6		3	3	3	4	4	4
Permitted Phases	2			6								
Actuated Green, G (s)	64.0	53.0		64.0	53.0		24.0	24.0	35.0	28.0	28.0	45.0
Effective Green, g (s)	64.0	53.0		64.0	53.0		24.0	24.0	35.0	28.0	28.0	45.0
Actuated g/C Ratio	0.46	0.38		0.46	0.38		0.17	0.17	0.25	0.20	0.20	0.32
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	186	1261		194	1278		285	301	395	339	352	480
v/s Ratio Prot	c0.12	0.50		0.12	0.50		0.19	c0.21	0.17	0.28	c0.28	0.08
v/s Ratio Perm	c0.59			0.56								
v/c Ratio	1.55	1.33		1.48	1.31		1.11	1.21	0.68	1.40	1.40	0.26
Uniform Delay, d1	41.3	43.5		41.4	43.5		58.0	58.0	47.4	56.0	56.0	35.1
Progression Factor	0.94	0.97		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	249.2	147.1		241.3	144.9		84.5	122.4	3.6	196.2	195.4	0.1
Delay (s)	287.9	189.2		282.7	188.4		142.5	180.4	51.0	252.2	251.4	35.2
Level of Service	F	F		F	F		F	F	D	F	F	D
Approach Delay (s)		203.6			202.1			127.0			219.4	
Approach LOS		F			F			F			F	

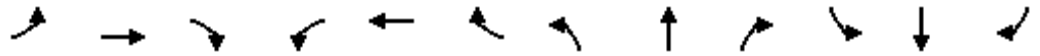
Intersection Summary		
HCM 2000 Control Delay	193.5	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	1.44	F
Actuated Cycle Length (s)	140.0	Sum of lost time (s)
Intersection Capacity Utilization	115.4%	ICU Level of Service
Analysis Period (min)	15	H
c Critical Lane Group		

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Future Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		0	1000		0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999			0.961			0.932			0.972	
Flt Protected	0.950			0.950				0.976		0.950	0.961	
Satd. Flow (prot)	1805	3421	0	1203	3419	0	0	1728	0	1649	1633	0
Flt Permitted	0.051			0.055				0.976		0.950	0.961	
Satd. Flow (perm)	97	3421	0	70	3419	0	0	1728	0	1649	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			53			160			160	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		3195			3012			166			1615	
Travel Time (s)		48.4			45.6			3.8			36.7	
Peak Hour Factor	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	102	2014	11	21	1756	613	4	0	4	931	0	93
Shared Lane Traffic (%)										44%		
Lane Group Flow (vph)	102	2025	0	21	2369	0	0	8	0	521	503	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2				6							
Detector Phase	5	2		1	6		3	3		4	4	
Switch Phase												
Minimum Initial (s)	5.0	12.0		5.0	12.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	18.0		11.0	25.0		30.5	30.5		30.5	30.5	
Total Split (s)	18.0	87.0		11.0	80.0		12.0	12.0		30.0	30.0	
Total Split (%)	12.9%	62.1%		7.9%	57.1%		8.6%	8.6%		21.4%	21.4%	
Maximum Green (s)	12.0	81.0		5.0	74.0		6.5	6.5		24.5	24.5	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		5.5	5.5		5.5	5.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)					7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)					12.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)					0		0	0		0	0	
Act Effct Green (s)	91.2	85.4		82.6	77.6		5.0	5.0		34.4	34.4	
Actuated g/C Ratio	0.65	0.61		0.59	0.55		0.04	0.04		0.25	0.25	
v/c Ratio	0.62	0.97		0.26	1.24		0.04	0.04		1.29	0.96	
Control Delay	29.7	49.6		13.1	126.8		0.5	0.5		189.2	66.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.7	49.6		13.1	126.8		0.5	0.5		189.2	66.7	
LOS	C	D		B	F		A	A		F	E	
Approach Delay		48.6			125.8		0.5	0.5			129.0	
Approach LOS		D			F		A	A			F	

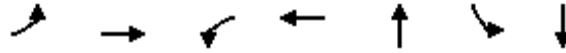
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 46 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 96.6 Intersection LOS: F
 Intersection Capacity Utilization 83.7% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	102	2025	21	2369	8	521	503
v/c Ratio	0.62	0.97	0.26	1.24	0.04	1.29	0.96
Control Delay	29.7	49.6	13.1	126.8	0.5	189.2	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	49.6	13.1	126.8	0.5	189.2	66.7
Queue Length 50th (ft)	48	~1057	3	~1388	0	~608	343
Queue Length 95th (ft)	m37	m921	m3	m#1049	0	#572	#675
Internal Link Dist (ft)		3115		2932	86		1535
Turn Bay Length (ft)	100		100			1000	
Base Capacity (vph)	210	2087	81	1918	232	404	522
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.97	0.26	1.24	0.03	1.29	0.96

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Future Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		0.95	0.95	
Frt	1.00	1.00		1.00	0.96			0.93		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98		0.95	0.96	
Satd. Flow (prot)	1805	3421		1203	3419			1729		1649	1633	
Flt Permitted	0.05	1.00		0.05	1.00			0.98		0.95	0.96	
Satd. Flow (perm)	97	3421		69	3419			1729		1649	1633	
Peak-hour factor, PHF	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Adj. Flow (vph)	102	2014	11	21	1756	613	4	0	4	931	0	93
RTOR Reduction (vph)	0	0	0	0	25	0	0	8	0	0	121	0
Lane Group Flow (vph)	102	2025	0	21	2344	0	0	0	0	521	382	0
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA		Split	NA	
Protected Phases	5	2		1	6		3	3		4	4	
Permitted Phases	2			6								
Actuated Green, G (s)	87.0	78.6		76.2	73.2			1.0		34.4	34.4	
Effective Green, g (s)	87.0	78.6		76.2	73.2			1.0		34.4	34.4	
Actuated g/C Ratio	0.62	0.56		0.54	0.52			0.01		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0			5.5		5.5	5.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lane Grp Cap (vph)	162	1920		61	1787			12		405	401	
v/s Ratio Prot	c0.04	c0.59		0.01	c0.69			c0.00		c0.32	0.23	
v/s Ratio Perm	0.35			0.18								
v/c Ratio	0.63	1.05		0.34	1.31			0.00		1.29	0.95	
Uniform Delay, d1	33.3	30.7		32.2	33.4			69.0		52.8	52.0	
Progression Factor	0.93	1.54		1.09	0.52			1.00		1.00	1.00	
Incremental Delay, d2	3.4	32.8		0.4	141.5			0.1		146.5	32.7	
Delay (s)	34.3	80.1		35.4	158.8			69.1		199.3	84.7	
Level of Service	C	F		D	F			E		F	F	
Approach Delay (s)		77.9			157.7			69.1			143.0	
Approach LOS		E			F			E			F	

Intersection Summary

HCM 2000 Control Delay	124.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	100	4	5	14	4	5	7	929	27	8	901	123
Future Volume (vph)	100	4	5	14	4	5	7	929	27	8	901	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.952			0.992			0.980	
Flt Protected		0.960			0.974		0.950			0.950		
Satd. Flow (prot)	0	1802	0	0	1762	0	1805	1850	0	1805	1841	0
Flt Permitted		0.960			0.974		0.950			0.950		
Satd. Flow (perm)	0	1802	0	0	1762	0	1805	1850	0	1805	1841	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			967			342	
Travel Time (s)		14.1			35.6			14.7			5.2	
Peak Hour Factor	0.73	0.38	0.33	0.63	0.75	0.33	0.42	0.94	0.50	0.50	0.86	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	2%
Adj. Flow (vph)	137	11	15	22	5	15	17	988	54	16	1048	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	42	0	17	1042	0	16	1206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.2%
Analysis Period (min)	15
	ICU Level of Service C

HCM 6th TWSC
3: RR 12 & Old Fitzhugh/Timberline

Intersection

Int Delay, s/veh 152.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	100	4	5	14	4	5	7	929	27	8	901	123
Future Vol, veh/h	100	4	5	14	4	5	7	929	27	8	901	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	38	33	63	75	33	42	94	50	50	86	78
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	2
Mvmt Flow	137	11	15	22	5	15	17	988	54	16	1048	158

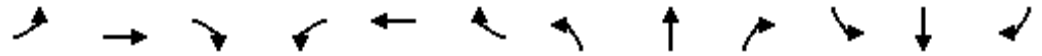
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2218	2235	1127	2135	2129	1015	1048	0	0	1042	0	0
Stage 1	1159	1159	-	1049	1049	-	-	-	-	-	-	-
Stage 2	1059	1076	-	1086	1080	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 32	43	251	36	50	292	672	-	-	675	-	-
Stage 1	241	272	-	277	307	-	-	-	-	-	-	-
Stage 2	274	298	-	264	297	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 27	41	251	26	48	292	672	-	-	675	-	-
Mov Cap-2 Maneuver	~ 27	41	-	26	48	-	-	-	-	-	-	-
Stage 1	235	265	-	270	299	-	-	-	-	-	-	-
Stage 2	249	291	-	233	290	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	2252.6		292.6		0.2		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	672	-	-	30	42	675	-	-
HCM Lane V/C Ratio	0.025	-	-	5.422	1.017	0.024	-	-
HCM Control Delay (s)	10.5	-	-	\$ 2252.6	292.6	10.5	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	19.7	4	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	34	0	90	11	0	8	153	920	24	4	982	57
Future Volume (vph)	34	0	90	11	0	8	153	920	24	4	982	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.930			0.995			0.992	
Flt Protected		0.986			0.976		0.950			0.950		
Satd. Flow (prot)	0	1690	0	0	1637	0	1805	1814	0	1805	1816	0
Flt Permitted		0.986			0.976		0.950			0.950		
Satd. Flow (perm)	0	1690	0	0	1637	0	1805	1814	0	1805	1816	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		1986			1288			342			958	
Travel Time (s)		45.1			35.1			5.2			14.5	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.50	0.92	0.93	0.68	0.38	0.89	0.92
Heavy Vehicles (%)	0%	0%	0%	11%	0%	0%	0%	4%	10%	0%	4%	0%
Adj. Flow (vph)	37	0	98	15	0	16	166	989	35	11	1103	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	31	0	166	1024	0	11	1165	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	81.3%
Analysis Period (min)	15
	ICU Level of Service D

HCM 6th TWSC
4: RR 12 & Brookside

Intersection												
Int Delay, s/veh	66.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	34	0	90	11	0	8	153	920	24	4	982	57
Future Vol, veh/h	34	0	90	11	0	8	153	920	24	4	982	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	75	92	50	92	93	68	38	89	92
Heavy Vehicles, %	0	0	0	11	0	0	0	4	10	0	4	0
Mvmt Flow	37	0	98	15	0	16	166	989	35	11	1103	62

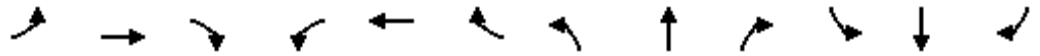
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2503	2512	1134	2544	2526	1007	1165	0	0	1024	0	0
Stage 1	1156	1156	-	1339	1339	-	-	-	-	-	-	-
Stage 2	1347	1356	-	1205	1187	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.21	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.21	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.21	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.599	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 20	29	249	17	28	295	607	-	-	686	-	-
Stage 1	242	273	-	180	224	-	-	-	-	-	-	-
Stage 2	188	219	-	215	264	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	21	249	~ 8	20	295	607	-	-	686	-	-
Mov Cap-2 Maneuver	~ 15	21	-	~ 8	20	-	-	-	-	-	-	-
Stage 1	176	269	-	131	163	-	-	-	-	-	-	-
Stage 2	129	159	-	128	260	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	1026.7	922.7	1.8	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	607	-	-	47	16	686	-	-
HCM Lane V/C Ratio	0.274	-	-	2.868	1.917	0.015	-	-
HCM Control Delay (s)	13.2	-	-	\$ 1026.7	\$ 922.7	10.3	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	1.1	-	-	14.5	4.4	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	16	439	11	20	248	220	6	3	23	83	1	3
Future Volume (vph)	16	439	11	20	248	220	6	3	23	83	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.922			0.907			0.993	
Flt Protected		0.998			0.999			0.990			0.956	
Satd. Flow (prot)	0	1822	0	0	1707	0	0	1706	0	0	1804	0
Flt Permitted		0.998			0.999			0.990			0.956	
Satd. Flow (perm)	0	1822	0	0	1707	0	0	1706	0	0	1804	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			2634	
Travel Time (s)		5.2			10.9			5.0			59.9	
Peak Hour Factor	0.54	0.59	0.75	0.80	0.65	0.40	0.63	0.50	0.64	0.75	0.25	0.50
Heavy Vehicles (%)	0%	4%	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	30	744	15	25	382	550	10	6	36	111	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	789	0	0	957	0	0	52	0	0	121	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.4% ICU Level of Service A

Analysis Period (min) 15

Intersection												
Int Delay, s/veh	26.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	439	11	20	248	220	6	3	23	83	1	3
Future Vol, veh/h	16	439	11	20	248	220	6	3	23	83	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	54	59	75	80	65	40	63	50	64	75	25	50
Heavy Vehicles, %	0	4	0	0	2	3	0	0	0	0	0	0
Mvmt Flow	30	744	15	25	382	550	10	6	36	111	4	6

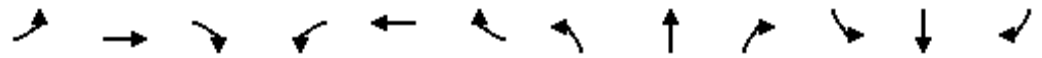
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	932	0	0	759	0	0	1524	1794	752	1540	1526	657
Stage 1	-	-	-	-	-	-	812	812	-	707	707	-
Stage 2	-	-	-	-	-	-	712	982	-	833	819	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	743	-	-	862	-	-	98	81	413	~ 95	119	468
Stage 1	-	-	-	-	-	-	376	395	-	429	441	-
Stage 2	-	-	-	-	-	-	427	330	-	366	392	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	743	-	-	862	-	-	84	70	413	~ 73	103	468
Mov Cap-2 Maneuver	-	-	-	-	-	-	84	70	-	~ 73	103	-
Stage 1	-	-	-	-	-	-	350	367	-	399	411	-
Stage 2	-	-	-	-	-	-	389	307	-	306	365	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			32.8			\$ 401.3		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	180	743	-	-	862	-	-	77
HCM Lane V/C Ratio	0.286	0.04	-	-	0.029	-	-	1.567
HCM Control Delay (s)	32.8	10	0	-	9.3	0	-	\$ 401.3
HCM Lane LOS	D	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0.1	-	-	10

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Future Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.992				0.850		0.897	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1805	3267	0	1805	3385	0	0	1805	1553	1597	1546	0
Flt Permitted	0.051			0.057				0.950		0.950		
Satd. Flow (perm)	97	3267	0	108	3385	0	0	1805	1553	1597	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				121		63	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Adj. Flow (vph)	156	1656	130	71	1580	91	40	0	40	198	35	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	1786	0	71	1671	0	0	40	40	198	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	

Lanes, Volumes, Timings
6: Roger Hanks & US 290

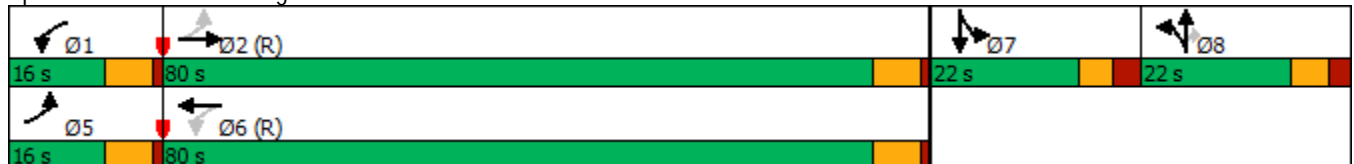


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	31.0	11.0		18.0	33.5		33.5	33.5	11.5	11.5	
Total Split (s)	16.0	80.0	16.0		80.0	22.0		22.0	22.0	22.0	22.0	
Total Split (%)	11.4%	57.1%	11.4%		57.1%	15.7%		15.7%	15.7%	15.7%	15.7%	
Maximum Green (s)	10.0	74.0	10.0		74.0	15.5		15.5	15.5	15.5	15.5	
Yellow Time (s)	5.0	5.0	5.0		5.0	4.0		4.0	4.0	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0		1.0	2.5		2.5	2.5	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.5		6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead		Lag	Lag		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	None
Walk Time (s)	7.0		7.0				7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		20.0				20.0		20.0		20.0	
Pedestrian Calls (#/hr)	0		0				0		0		0	
Act Effct Green (s)	99.7	89.6	88.9		82.1	7.6		7.6	15.5	15.5		
Actuated g/C Ratio	0.71	0.64	0.64		0.59	0.05		0.05	0.11	0.11		
v/c Ratio	0.72	0.85	0.47		0.84	0.41		0.20	1.12	0.49		
Control Delay	48.3	27.4	25.6		9.6	75.5		2.3	159.9	34.9		
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Total Delay	48.3	27.4	25.6		9.6	75.5		2.3	159.9	34.9		
LOS	D	C	C		A	E		A	F	C		
Approach Delay	29.0		10.2				38.9		115.0			
Approach LOS	C		B				D		F			

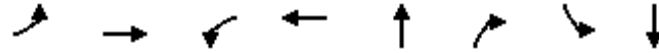
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 86 (61%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 27.7
 Intersection LOS: C
 Intersection Capacity Utilization 74.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	156	1786	71	1671	40	40	198	111
v/c Ratio	0.72	0.85	0.47	0.84	0.41	0.20	1.12	0.49
Control Delay	48.3	27.4	25.6	9.6	75.5	2.3	159.9	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	27.4	25.6	9.6	75.5	2.3	159.9	34.9
Queue Length 50th (ft)	81	690	15	130	36	0	-207	41
Queue Length 95th (ft)	54	701	m8	m111	75	0	#179	68
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	223	2093	192	1987	199	279	176	227
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.85	0.37	0.84	0.20	0.14	1.13	0.49

- Intersection Summary**
- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
 - # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
 - m Volume for 95th percentile queue is metered by upstream signal.

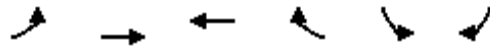
HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Future Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (prot)	1805	3268		1805	3385			1805	1553	1597	1546	
Flt Permitted	0.05	1.00		0.06	1.00			0.95	1.00	0.95	1.00	
Satd. Flow (perm)	96	3268		107	3385			1805	1553	1597	1546	
Peak-hour factor, PHF	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Adj. Flow (vph)	156	1656	130	71	1580	91	40	0	40	198	35	76
RTOR Reduction (vph)	0	3	0	0	3	0	0	0	38	0	56	0
Lane Group Flow (vph)	156	1783	0	71	1668	0	0	40	2	198	55	0
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	98.9	87.1		86.6	80.8			6.6	6.6	15.5	15.5	
Effective Green, g (s)	98.9	87.1		86.6	80.8			6.6	6.6	15.5	15.5	
Actuated g/C Ratio	0.71	0.62		0.62	0.58			0.05	0.05	0.11	0.11	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	215	2033		136	1953			85	73	176	171	
v/s Ratio Prot	c0.06	c0.55		0.02	0.49			c0.02		c0.12	0.04	
v/s Ratio Perm	0.45			0.30					0.00			
v/c Ratio	0.73	0.88		0.52	0.85			0.47	0.03	1.12	0.32	
Uniform Delay, d1	38.7	22.0		21.0	24.7			65.0	63.6	62.2	57.4	
Progression Factor	1.00	1.00		1.68	0.33			1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.8	5.7		0.2	0.5			1.5	0.1	105.4	0.4	
Delay (s)	48.6	27.7		35.5	8.6			66.5	63.7	167.6	57.8	
Level of Service	D	C		D	A			E	E	F	E	
Approach Delay (s)		29.4			9.7			65.1			128.2	
Approach LOS		C			A			E			F	
Intersection Summary												
HCM 2000 Control Delay			29.2			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			25.0			
Intersection Capacity Utilization			74.5%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
7: Brookside



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↷	
Traffic Volume (vph)	0	23	38	38	23	0
Future Volume (vph)	0	23	38	38	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932				
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1736	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1736	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2535	225		1819	
Travel Time (s)		57.6	5.1		41.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	25	41	41	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	25	82	0	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 1.7

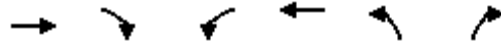
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	23	38	38	23	0
Future Vol, veh/h	0	23	38	38	23	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	41	41	25	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	82	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1515	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1515	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1515	-	-	-	914
HCM Lane V/C Ratio	-	-	-	-	0.027
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
8: Brookside



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	23	23	88	38	38	61
Future Volume (vph)	23	23	88	38	38	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932			0.917		
Flt Protected				0.966	0.981	
Satd. Flow (prot)	1736	0	0	1799	1676	0
Flt Permitted				0.966	0.981	
Satd. Flow (perm)	1736	0	0	1799	1676	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	225			1986	2634	
Travel Time (s)	5.1			45.1	59.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	25	96	41	41	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	137	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Intersection Capacity Utilization 26.1% ICU Level of Service A

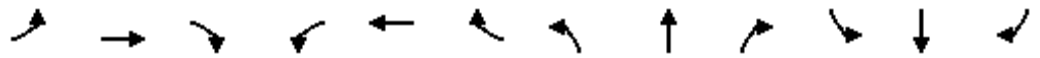
Analysis Period (min) 15

HCM 6th Roundabout
8: Brookside

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	50	137	107
Demand Flow Rate, veh/h	52	140	109
Vehicles Circulating, veh/h	98	42	25
Vehicles Exiting, veh/h	84	92	123
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.6	3.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	52	140	109
Cap Entry Lane, veh/h	1249	1322	1345
Entry HV Adj Factor	0.971	0.980	0.982
Flow Entry, veh/h	50	137	107
Cap Entry, veh/h	1212	1295	1320
V/C Ratio	0.042	0.106	0.081
Control Delay, s/veh	3.3	3.6	3.4
LOS	A	A	A
95th %tile Queue, veh	0	0	0

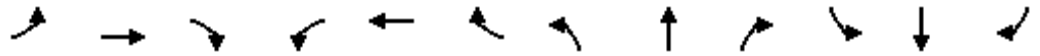
Appendix I: Synchro Reports – 2026 Build-Out Conditions With Mitigation

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Future Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		275	150		275	150		150	130		130
Storage Lanes	2		0	2		0	2		1	2		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	0.91	0.91	1.00	0.91	0.91	1.00
Frt		0.973			0.991				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.992		0.950	0.995	
Satd. Flow (prot)	3242	3438	0	3242	3447	0	3129	1633	1553	3221	1702	1482
Flt Permitted	0.950			0.950			0.950	0.890		0.950	0.933	
Satd. Flow (perm)	3242	3438	0	3242	3447	0	3129	1466	1553	3221	1595	1482
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			6				82			82
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		3012			2872			679			376	
Travel Time (s)		45.6			43.5			10.3			5.7	
Peak Hour Factor	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	2%	1%	9%
Adj. Flow (vph)	195	1462	320	160	1649	100	557	312	241	438	364	262
Shared Lane Traffic (%)							10%			10%		
Lane Group Flow (vph)	195	1782	0	160	1749	0	501	368	241	394	408	262
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									8			4
Detector Phase	5	2		1	6		3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	26.0		11.0	26.0		28.0	28.0	11.0	9.5	28.0	11.0
Total Split (s)	11.0	56.0		11.0	56.0		28.0	25.0	11.0	28.0	25.0	11.0
Total Split (%)	9.2%	46.7%		9.2%	46.7%		23.3%	20.8%	9.2%	23.3%	20.8%	9.2%
Maximum Green (s)	5.0	50.0		5.0	50.0		22.0	19.0	5.0	23.5	19.0	5.0
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	4.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	3.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		7.0			7.0		7.0	7.0			7.0	
Flash Dont Walk (s)		13.0			13.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)		0			0		0	0			0	
Act Effct Green (s)	5.0	50.0		5.0	50.0		21.3	21.3	33.9	19.6	18.1	30.7
Actuated g/C Ratio	0.04	0.42		0.04	0.42		0.18	0.18	0.28	0.16	0.15	0.26
v/c Ratio	1.44	1.23		1.19	1.22		0.90	1.27	0.48	0.75	1.59	0.60
Control Delay	277.0	141.9		184.6	135.9		69.1	187.4	27.7	57.1	319.4	33.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	277.0	141.9		184.6	135.9		69.1	187.4	27.7	57.1	319.4	33.1
LOS	F	F		F	F		E	F	C	E	F	C
Approach Delay		155.2			140.0			99.4			151.8	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.59
 Intersection Signal Delay: 139.6 Intersection LOS: F
 Intersection Capacity Utilization 94.5% ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290



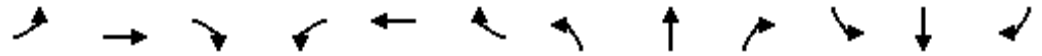
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	195	1782	160	1749	501	368	241	394	408	262
v/c Ratio	1.44	1.23	1.19	1.22	0.90	1.27	0.48	0.75	1.59	0.60
Control Delay	277.0	141.9	184.6	135.9	69.1	187.4	27.7	57.1	319.4	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	277.0	141.9	184.6	135.9	69.1	187.4	27.7	57.1	319.4	33.1
Queue Length 50th (ft)	~105	~895	~76	~875	209	~386	101	161	~492	123
Queue Length 95th (ft)	#170	#961	#137	#852	#306	#539	161	201	#517	205
Internal Link Dist (ft)		2932		2792		599			296	
Turn Bay Length (ft)	150		150		150		150	130		130
Base Capacity (vph)	135	1448	135	1439	573	289	498	630	256	440
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.44	1.23	1.19	1.22	0.87	1.27	0.48	0.63	1.59	0.60

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

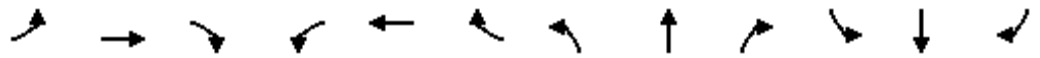
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕		↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Future Volume (vph)	166	1257	224	136	1336	57	501	262	195	377	277	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	4.5	6.0	6.0
Lane Util. Factor	0.97	0.95		0.97	0.95		0.91	0.91	1.00	0.91	0.91	1.00
Frt	1.00	0.97		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.99	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3242	3438		3242	3449		3129	1634	1553	3221	1701	1482
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.89	1.00	0.95	0.93	1.00
Satd. Flow (perm)	3242	3438		3242	3449		3129	1465	1553	3221	1595	1482
Peak-hour factor, PHF	0.85	0.86	0.70	0.85	0.81	0.57	0.90	0.84	0.81	0.86	0.76	0.87
Adj. Flow (vph)	195	1462	320	160	1649	100	557	312	241	438	364	262
RTOR Reduction (vph)	0	16	0	0	4	0	0	0	63	0	0	65
Lane Group Flow (vph)	195	1766	0	160	1746	0	501	368	178	394	408	197
Heavy Vehicles (%)	8%	2%	3%	8%	4%	0%	5%	5%	4%	2%	1%	9%
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	5.0	50.0		5.0	50.0		21.3	44.2	27.9	19.6	39.3	24.7
Effective Green, g (s)	5.0	50.0		5.0	50.0		21.3	44.2	27.9	19.6	39.3	24.7
Actuated g/C Ratio	0.04	0.42		0.04	0.42		0.18	0.37	0.23	0.16	0.33	0.21
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	4.5	6.0	6.0
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	3.0	2.0	2.0
Lane Grp Cap (vph)	135	1432		135	1437		555	569	438	526	539	379
v/s Ratio Prot	c0.06	c0.51		0.05	0.51		c0.16	0.11	0.02	0.12	0.12	0.02
v/s Ratio Perm								c0.12	0.10		c0.12	0.11
v/c Ratio	1.44	1.23		1.19	1.21		0.90	0.65	0.41	0.75	0.76	0.52
Uniform Delay, d1	57.5	35.0		57.5	35.0		48.3	31.4	39.0	47.9	36.1	42.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	236.6	111.3		135.7	103.2		17.6	1.9	0.2	5.8	5.4	0.5
Delay (s)	294.1	146.3		193.2	138.2		65.9	33.3	39.3	53.6	41.4	42.9
Level of Service	F	F		F	F		E	C	D	D	D	D
Approach Delay (s)		160.9			142.8			49.3			46.3	
Approach LOS		F			F			D			D	

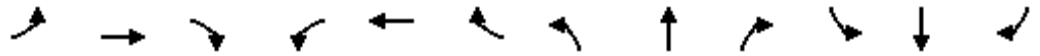
Intersection Summary			
HCM 2000 Control Delay	114.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Future Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		275	0		0	250		0
Storage Lanes	1		0	1		1	0		0	2		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	3505	0	1900	3374	1615	0	1900	0	3502	1538	0
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	3505	0	1900	3374	1615	0	1900	0	3502	1538	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						576						412
Link Speed (mph)		45			45			30				30
Link Distance (ft)		3195			3012			166				1615
Travel Time (s)		48.4			45.6			3.8				36.7
Peak Hour Factor	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Adj. Flow (vph)	50	1800	0	0	1556	775	0	0	0	303	0	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	50	1800	0	0	1556	775	0	0	0	303	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Perm	NA	Perm				Split	NA	
Protected Phases	1	6			2			4		8	8	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases				2		2	4					
Detector Phase	1	6		2	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0		12.0	12.0	12.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	25.0		25.0	25.0	25.0	30.5	30.5		30.5	30.5	
Total Split (s)	25.0	70.0		45.0	45.0	45.0	10.0	10.0		30.0	30.0	
Total Split (%)	22.7%	63.6%		40.9%	40.9%	40.9%	9.1%	9.1%		27.3%	27.3%	
Maximum Green (s)	19.0	64.0		39.0	39.0	39.0	4.5	4.5		24.5	24.5	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0		12.0	12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	7.6	84.4			73.0	73.0				14.1	14.1	
Actuated g/C Ratio	0.07	0.77			0.66	0.66				0.13	0.13	
v/c Ratio	0.40	0.67			0.69	0.61				0.68	0.25	
Control Delay	57.8	8.1			15.4	5.3				53.3	1.1	
Queue Delay	0.0	0.0			0.0	0.0				0.0	0.0	
Total Delay	57.8	8.1			15.4	5.3				53.3	1.1	
LOS	E	A			B	A				D	A	
Approach Delay		9.4			12.0							36.8
Approach LOS		A			B							D

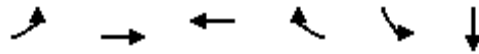
Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 13.4
 Intersection LOS: B
 Intersection Capacity Utilization 61.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 2: Sportsplex & US 290



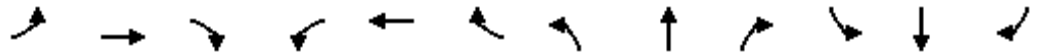
Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBT	WBR	SBL	SBT
Lane Group Flow (vph)	50	1800	1556	775	303	141
v/c Ratio	0.40	0.67	0.69	0.61	0.68	0.25
Control Delay	57.8	8.1	15.4	5.3	53.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	8.1	15.4	5.3	53.3	1.1
Queue Length 50th (ft)	35	262	347	52	107	0
Queue Length 95th (ft)	71	382	532	122	144	0
Internal Link Dist (ft)		3115	2932			1535
Turn Bay Length (ft)	100			275	250	
Base Capacity (vph)	311	2690	2240	1265	779	662
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.67	0.69	0.61	0.39	0.21
Intersection Summary						

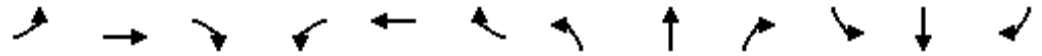
HCM Signalized Intersection Capacity Analysis

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Future Volume (vph)	44	1584	0	0	1494	643	0	0	0	270	0	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				5.5	5.5	
Lane Util. Factor	1.00	0.95			0.95	1.00				0.97	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1805	3505			3374	1615				3502	1538	
Flt Permitted	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (perm)	1805	3505			3374	1615				3502	1538	
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.96	0.83	0.92	0.92	0.92	0.89	0.92	0.54
Adj. Flow (vph)	50	1800	0	0	1556	775	0	0	0	303	0	141
RTOR Reduction (vph)	0	0	0	0	0	200	0	0	0	0	123	0
Lane Group Flow (vph)	50	1800	0	0	1556	575	0	0	0	303	18	0
Heavy Vehicles (%)	0%	3%	100%	0%	7%	0%	0%	0%	0%	0%	0%	5%
Turn Type	Prot	NA		Perm	NA	Perm				Split	NA	
Protected Phases	1	6			2			4		8	8	
Permitted Phases				2		2	4					
Actuated Green, G (s)	6.6	84.4			71.8	71.8				14.1	14.1	
Effective Green, g (s)	6.6	84.4			71.8	71.8				14.1	14.1	
Actuated g/C Ratio	0.06	0.77			0.65	0.65				0.13	0.13	
Clearance Time (s)	6.0	6.0			6.0	6.0				5.5	5.5	
Vehicle Extension (s)	2.0	2.0			2.0	2.0				2.0	2.0	
Lane Grp Cap (vph)	108	2689			2202	1054				448	197	
v/s Ratio Prot	0.03	c0.51			c0.46					c0.09	0.01	
v/s Ratio Perm						0.36						
v/c Ratio	0.46	0.67			0.71	0.55				0.68	0.09	
Uniform Delay, d1	50.0	6.1			12.3	10.3				45.8	42.3	
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	
Incremental Delay, d2	1.1	1.3			1.9	2.0				3.2	0.1	
Delay (s)	51.1	7.5			14.3	12.3				48.9	42.4	
Level of Service	D	A			B	B				D	D	
Approach Delay (s)		8.6			13.6			0.0			46.9	
Approach LOS		A			B			A			D	
Intersection Summary												
HCM 2000 Control Delay			14.8		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			110.0		Sum of lost time (s)				23.0			
Intersection Capacity Utilization			61.1%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	53	1	1	22	5	4	3	836	16	7	878	145
Future Volume (vph)	53	1	1	22	5	4	3	836	16	7	878	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.963			0.996			0.979	
Flt Protected		0.958			0.973		0.950			0.950		
Satd. Flow (prot)	0	1806	0	0	1780	0	1805	1801	0	1805	1793	0
Flt Permitted		0.958			0.973		0.950			0.950		
Satd. Flow (perm)	0	1806	0	0	1780	0	1805	1801	0	1805	1793	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			982			342	
Travel Time (s)		14.1			35.6			14.9			5.2	
Peak Hour Factor	0.89	0.25	0.25	0.67	0.50	0.25	0.50	0.80	0.60	0.63	0.77	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	5%	8%	0%	4%	2%
Adj. Flow (vph)	60	4	4	33	10	16	6	1045	27	11	1140	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	59	0	6	1072	0	11	1321	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 65.6% ICU Level of Service C
 Analysis Period (min) 15

Intersection												
Int Delay, s/veh	46											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	53	1	1	22	5	4	3	836	16	7	878	145
Future Vol, veh/h	53	1	1	22	5	4	3	836	16	7	878	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	25	25	67	50	25	50	80	60	63	77	80
Heavy Vehicles, %	0	0	0	0	0	0	0	5	8	0	4	2
Mvmt Flow	60	4	4	33	10	16	6	1045	27	11	1140	181

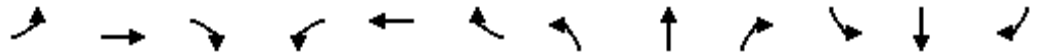
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2337	2337	1231	2235	2233	1059	1140	0	0	1072	0	0
Stage 1	1253	1253	-	1071	1071	-	-	-	-	-	-	-
Stage 2	1084	1084	-	1164	1162	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 26	37	218	~ 31	43	275	620	-	-	658	-	-
Stage 1	213	246	-	270	300	-	-	-	-	-	-	-
Stage 2	265	296	-	239	272	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 20	36	218	~ 27	42	275	620	-	-	658	-	-
Mov Cap-2 Maneuver	~ 20	36	-	~ 27	42	-	-	-	-	-	-	-
Stage 1	211	242	-	267	297	-	-	-	-	-	-	-
Stage 2	239	293	-	227	267	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$1300.2			\$ 487		0.1		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	620	-	-	22	39	658	-	-
HCM Lane V/C Ratio	0.01	-	-	3.07	1.509	0.017	-	-
HCM Control Delay (s)	10.9	-	-	\$ 1300.2	\$ 487	10.6	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	8.6	6.1	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (vph)	52	0	139	24	0	6	47	832	6	6	886	18
Future Volume (vph)	52	0	139	24	0	6	47	832	6	6	886	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	50		0	50		400
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.968			0.999				0.850
Flt Protected		0.986			0.963		0.950			0.950		
Satd. Flow (prot)	0	1690	0	0	1579	0	1805	1775	0	1805	1776	1615
Flt Permitted		0.887			0.458		0.139			0.109		
Satd. Flow (perm)	0	1520	0	0	751	0	264	1775	0	207	1776	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		132			97			1				97
Link Speed (mph)		30			25			45				45
Link Distance (ft)		1986			1288			342				958
Travel Time (s)		45.1			35.1			5.2				14.5
Peak Hour Factor	0.92	0.92	0.92	0.53	0.92	0.42	0.92	0.77	0.63	0.42	0.91	0.92
Heavy Vehicles (%)	0%	0%	0%	16%	0%	0%	0%	7%	0%	0%	7%	0%
Adj. Flow (vph)	57	0	151	45	0	14	51	1081	10	14	974	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	0	59	0	51	1091	0	14	974	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1		6

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		4.0	15.0		5.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	23.0		9.5	23.5	23.5
Total Split (s)	23.0	23.0		23.0	23.0		10.0	57.0		10.0	57.0	57.0
Total Split (%)	25.6%	25.6%		25.6%	25.6%		11.1%	63.3%		11.1%	63.3%	63.3%
Maximum Green (s)	17.5	17.5		17.5	17.5		4.5	52.0		5.5	51.5	51.5
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.0		3.5	4.5	4.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.5			5.5		5.5	5.0		4.5	5.5	5.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		10.2			10.2		57.6	57.3		57.1	53.0	53.0
Actuated g/C Ratio		0.13			0.13		0.72	0.72		0.71	0.66	0.66
v/c Ratio		0.67			0.33		0.18	0.86		0.05	0.83	0.02
Control Delay		24.9			7.3		5.3	19.7		4.2	21.0	0.1
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.9			7.3		5.3	19.7		4.2	21.0	0.1
LOS		C			A		A	B		A	C	A
Approach Delay		24.9			7.3			19.0			20.4	
Approach LOS		C			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 79.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 19.8
 Intersection LOS: B
 Intersection Capacity Utilization 66.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 4: RR 12 & Brookside



Queues
4: RR 12 & Brookside



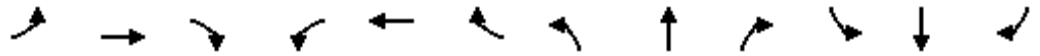
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	208	59	51	1091	14	974	20
v/c Ratio	0.67	0.33	0.18	0.86	0.05	0.83	0.02
Control Delay	24.9	7.3	5.3	19.7	4.2	21.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	7.3	5.3	19.7	4.2	21.0	0.1
Queue Length 50th (ft)	37	0	5	281	1	372	0
Queue Length 95th (ft)	104	13	19	#709	3	#790	0
Internal Link Dist (ft)	1906	1208		262		878	
Turn Bay Length (ft)			50		50		400
Base Capacity (vph)	439	242	278	1273	259	1178	1104
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.24	0.18	0.86	0.05	0.83	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

4: RR 12 & Brookside



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	52	0	139	24	0	6	47	832	6	6	886	18
Future Volume (veh/h)	52	0	139	24	0	6	47	832	6	6	886	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1796	1796	1900	1796	1900
Adj Flow Rate, veh/h	57	0	151	45	0	14	51	1081	10	14	974	20
Peak Hour Factor	0.92	0.92	0.92	0.53	0.92	0.42	0.92	0.77	0.63	0.42	0.91	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	7	7	0	7	0
Cap, veh/h	111	15	182	205	11	42	228	1124	10	153	1083	971
Arrive On Green	0.16	0.00	0.16	0.16	0.00	0.16	0.03	0.63	0.63	0.02	0.60	0.60
Sat Flow, veh/h	343	96	1164	805	70	272	1810	1777	16	1810	1796	1610
Grp Volume(v), veh/h	208	0	0	59	0	0	51	0	1091	14	974	20
Grp Sat Flow(s),veh/h/ln	1604	0	0	1146	0	0	1810	0	1793	1810	1796	1610
Q Serve(g_s), s	6.4	0.0	0.0	0.0	0.0	0.0	0.8	0.0	45.5	0.2	37.5	0.4
Cycle Q Clear(g_c), s	9.9	0.0	0.0	3.5	0.0	0.0	0.8	0.0	45.5	0.2	37.5	0.4
Prop In Lane	0.27		0.73	0.76		0.24	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	308	0	0	258	0	0	228	0	1135	153	1083	971
V/C Ratio(X)	0.68	0.00	0.00	0.23	0.00	0.00	0.22	0.00	0.96	0.09	0.90	0.02
Avail Cap(c_a), veh/h	407	0	0	343	0	0	269	0	1171	248	1161	1041
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	0.0	29.7	0.0	0.0	15.1	0.0	13.7	17.8	13.7	6.4
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.4	0.0	0.0	0.5	0.0	17.6	0.3	9.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	1.0	0.0	0.0	0.4	0.0	18.3	0.1	13.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	0.0	30.2	0.0	0.0	15.6	0.0	31.3	18.0	22.9	6.4
LnGrp LOS	D	A	A	C	A	A	B	A	C	B	C	A
Approach Vol, veh/h		208			59			1142			1008	
Approach Delay, s/veh		35.3			30.2			30.6			22.5	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	55.9		17.9	8.2	53.5		17.9				
Change Period (Y+Rc), s	4.5	* 5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.5	* 52		17.5	4.5	51.5		17.5				
Max Q Clear Time (g_c+I1), s	2.2	47.5		11.9	2.8	39.5		5.5				
Green Ext Time (p_c), s	0.0	3.0		0.5	0.0	5.5		0.2				

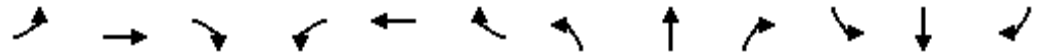
Intersection Summary

HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	156	1	8	650	51	1	0	1	127	0	4
Future Volume (vph)	11	156	1	8	650	51	1	0	1	127	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	0		0	175		100
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	50			25			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999				0.850		0.932				0.850
Flt Protected	0.950				0.999			0.976		0.950		
Satd. Flow (prot)	1357	1879	0	0	1880	923	0	1728	0	1444	1900	1615
Flt Permitted	0.950				0.999			0.976		0.950		
Satd. Flow (perm)	1357	1879	0	0	1880	923	0	1728	0	1444	1900	1615
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		229			479			221			2634	
Travel Time (s)		5.2			10.9			5.0			59.9	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	33%	1%	0%	0%	1%	75%	0%	0%	0%	25%	0%	0%
Adj. Flow (vph)	14	195	1	10	813	64	1	0	1	159	0	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	196	0	0	823	64	0	2	0	159	0	5
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 59.7% ICU Level of Service B
 Analysis Period (min) 15

Intersection

Int Delay, s/veh 11.9

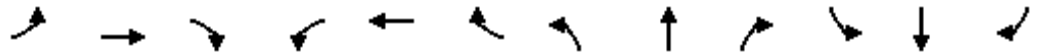
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔		↖	↗	↖
Traffic Vol, veh/h	11	156	1	8	650	51	1	0	1	127	0	4
Future Vol, veh/h	11	156	1	8	650	51	1	0	1	127	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	175	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	33	1	0	0	1	75	0	0	0	25	0	0
Mvmt Flow	14	195	1	10	813	64	1	0	1	159	0	5

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	877	0	0	196
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.43	-	-	4.1
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.497	-	-	2.2
Pot Cap-1 Maneuver	654	-	-	1389
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	654	-	-	1389
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	16.9	90.4
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	305	654	-	-	1389	-	-	179	-	382
HCM Lane V/C Ratio	0.008	0.021	-	-	0.007	-	-	0.887	-	0.013
HCM Control Delay (s)	16.9	10.6	-	-	7.6	0	-	92.8	0	14.5
HCM Lane LOS		C	B	-	-	A	A	F	A	B
HCM 95th %tile Q(veh)		0	0.1	-	-	0	-	6.6	-	0

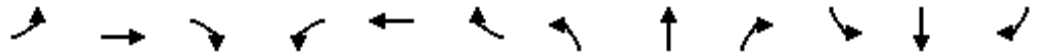
Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Future Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.991				0.850		0.855	
Flt Protected	0.950			0.950				0.964		0.950		
Satd. Flow (prot)	1752	3302	0	1719	3267	0	0	1684	1429	1703	976	0
Flt Permitted	0.091			0.098				0.964		0.950		
Satd. Flow (perm)	168	3302	0	177	3267	0	0	1684	1429	1703	976	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			5				168		160	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Adj. Flow (vph)	79	1503	35	35	1425	96	45	15	70	111	6	160
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	1538	0	35	1521	0	0	60	70	111	166	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split		NA
Protected Phases	5	2		1	6		8	8		7		7

Baseline

Lanes, Volumes, Timings
6: Roger Hanks & US 290

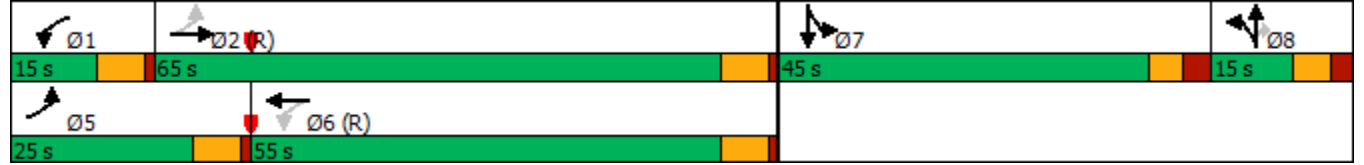


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2		6				8					
Detector Phase	5	2	1		6	8		8	8	7	7	
Switch Phase												
Minimum Initial (s)	5.0	12.0	5.0		12.0	5.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	31.0	11.0		24.0	33.5		33.5	33.5	24.5	24.5	
Total Split (s)	25.0	65.0	15.0		55.0	15.0		15.0	15.0	45.0	45.0	
Total Split (%)	17.9%	46.4%	10.7%		39.3%	10.7%		10.7%	10.7%	32.1%	32.1%	
Maximum Green (s)	19.0	59.0	9.0		49.0	8.5		8.5	8.5	38.5	38.5	
Yellow Time (s)	5.0	5.0	5.0		5.0	4.0		4.0	4.0	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0		1.0	2.5		2.5	2.5	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.5		6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lead		Lag	Lag		Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0
Recall Mode	None	C-Max	None		C-Max	None		None	None	None	None	None
Walk Time (s)	7.0						7.0	7.0	7.0			
Flash Dont Walk (s)	18.0						20.0	20.0	20.0			
Pedestrian Calls (#/hr)	0						0	0	0			
Act Effct Green (s)	94.2	88.4	90.6		85.0	9.5		9.5	13.7	13.7		
Actuated g/C Ratio	0.67	0.63	0.65		0.61	0.07		0.07	0.10	0.10		
v/c Ratio	0.42	0.74	0.20		0.77	0.53		0.28	0.66	0.69		
Control Delay	14.9	22.8	11.1		25.1	79.0		2.7	79.0	24.7		
Queue Delay	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		
Total Delay	14.9	22.8	11.1		25.1	79.0		2.7	79.0	24.7		
LOS	B	C	B		C	E		A	E	C		
Approach Delay	22.4		24.7				37.9		46.5			
Approach LOS	C		C				D		D			

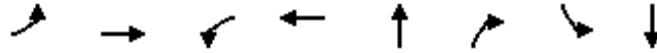
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 33 (24%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 25.9
 Intersection LOS: C
 Intersection Capacity Utilization 64.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 6: Roger Hanks & US 290



Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	1538	35	1521	60	70	111	166
v/c Ratio	0.42	0.74	0.20	0.77	0.53	0.28	0.66	0.69
Control Delay	14.9	22.8	11.1	25.1	79.0	2.7	79.0	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	22.8	11.1	25.1	79.0	2.7	79.0	24.7
Queue Length 50th (ft)	21	498	9	503	54	0	99	5
Queue Length 95th (ft)	33	738	19	727	83	0	156	0
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	332	2085	217	1986	123	259	468	384
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.74	0.16	0.77	0.49	0.27	0.24	0.43
Intersection Summary								

HCM Signalized Intersection Capacity Analysis

6: Roger Hanks & US 290

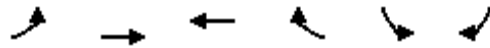


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Future Volume (vph)	50	1383	28	24	1254	71	30	11	40	99	3	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85	1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3301		1719	3266			1684	1429	1703	976	
Flt Permitted	0.09	1.00		0.10	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (perm)	169	3301		178	3266			1684	1429	1703	976	
Peak-hour factor, PHF	0.63	0.92	0.79	0.68	0.88	0.74	0.67	0.75	0.57	0.89	0.50	0.50
Adj. Flow (vph)	79	1503	35	35	1425	96	45	15	70	111	6	160
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	65	0	144	0
Lane Group Flow (vph)	79	1537	0	35	1519	0	0	60	5	111	22	0
Heavy Vehicles (%)	3%	9%	9%	5%	10%	2%	8%	11%	13%	6%	0%	69%
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	
Protected Phases	5	2		1	6		8	8		7	7	
Permitted Phases	2			6					8			
Actuated Green, G (s)	94.0	87.2		89.6	85.0			9.5	9.5	13.7	13.7	
Effective Green, g (s)	94.0	87.2		89.6	85.0			9.5	9.5	13.7	13.7	
Actuated g/C Ratio	0.67	0.62		0.64	0.61			0.07	0.07	0.10	0.10	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	6.5	6.5	
Vehicle Extension (s)	2.0	2.0		2.0	2.0			2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	190	2056		164	1982			114	96	166	95	
v/s Ratio Prot	c0.02	c0.47		0.01	0.47			c0.04		c0.07	0.02	
v/s Ratio Perm	0.26			0.13					0.00			
v/c Ratio	0.42	0.75		0.21	0.77			0.53	0.05	0.67	0.23	
Uniform Delay, d1	15.7	18.6		14.2	20.2			63.1	61.0	61.0	58.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	2.5		0.2	2.9			2.0	0.1	7.7	0.4	
Delay (s)	16.2	21.2		14.4	23.1			65.1	61.1	68.6	58.7	
Level of Service	B	C		B	C			E	E	E	E	
Approach Delay (s)		20.9			22.9			62.9			62.7	
Approach LOS		C			C			E			E	

Intersection Summary

HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
7: Brookside



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	35	12	12	35	0
Future Volume (vph)	0	35	12	12	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.932					
Fl _t Protected					0.950	
Satd. Flow (prot)	0	1863	1736	0	1770	0
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	1863	1736	0	1770	0
Link Speed (mph)	30		30		30	
Link Distance (ft)	2535		225		1819	
Travel Time (s)	57.6		5.1		41.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	38	13	13	38	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	38	26	0	38	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)	0		0		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9		15
Sign Control	Free		Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.4

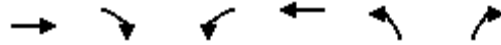
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	35	12	12	35	0
Future Vol, veh/h	0	35	12	12	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	13	13	38	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	26	0	-	0	58
Stage 1	-	-	-	-	20
Stage 2	-	-	-	-	38
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1588	-	-	-	949
Stage 1	-	-	-	-	1003
Stage 2	-	-	-	-	984
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1588	-	-	-	949
Mov Cap-2 Maneuver		-	-	-	949
Stage 1		-	-	-	1003
Stage 2		-	-	-	984

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1588	-	-	-	949
HCM Lane V/C Ratio	-	-	-	-	0.04
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
8: Brookside



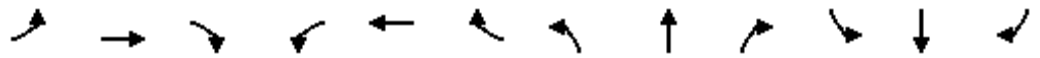
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	35	35	41	12	12	47
Future Volume (vph)	35	35	41	12	12	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932			0.892		
Flt Protected				0.963	0.990	
Satd. Flow (prot)	1736	0	0	1794	1645	0
Flt Permitted				0.963	0.990	
Satd. Flow (perm)	1736	0	0	1794	1645	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	225			1986	2634	
Travel Time (s)	5.1			45.1	59.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	38	45	13	13	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	0	58	64	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Yield			Yield	Yield	

Intersection Summary

Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	19.8% ICU Level of Service A
Analysis Period (min)	15

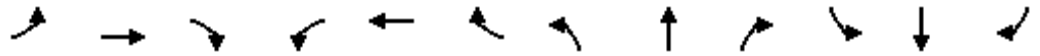
Intersection			
Intersection Delay, s/veh	3.2		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	76	58	64
Demand Flow Rate, veh/h	78	59	65
Vehicles Circulating, veh/h	46	13	39
Vehicles Exiting, veh/h	26	91	85
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.0	3.1
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	78	59	65
Cap Entry Lane, veh/h	1317	1362	1326
Entry HV Adj Factor	0.977	0.979	0.985
Flow Entry, veh/h	76	58	64
Cap Entry, veh/h	1287	1333	1306
V/C Ratio	0.059	0.043	0.049
Control Delay, s/veh	3.3	3.0	3.1
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Lanes, Volumes, Timings
1: RR 12 & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔↔↔		↔↔	↔↔↔		↔↔	↔	↔	↔↔	↔	↔
Traffic Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Future Volume (vph)	219	1251	240	244	1177	142	308	300	240	458	403	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		275	150		275	150		150	130		130
Storage Lanes	2		0	2		0	2		1	2		1
Taper Length (ft)	25			25			100			100		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	0.95	0.91	0.91	1.00	0.91	0.91	1.00
Frt		0.970			0.975				0.850			0.850
Flt Protected	0.950			0.950			0.950	0.995		0.950	0.995	
Satd. Flow (prot)	3335	3335	0	3467	3379	0	3189	1685	1583	3253	1688	1495
Flt Permitted	0.950			0.950			0.950	0.926		0.950	0.921	
Satd. Flow (perm)	3335	3335	0	3467	3379	0	3189	1568	1583	3253	1563	1495
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			22				70			70
Link Speed (mph)		45			45			45				45
Link Distance (ft)		3012			2872			679				386
Travel Time (s)		45.6			43.5			10.3				5.8
Peak Hour Factor	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Heavy Vehicles (%)	5%	5%	5%	1%	4%	5%	3%	2%	2%	1%	2%	8%
Adj. Flow (vph)	288	1345	343	287	1401	284	350	330	320	533	433	170
Shared Lane Traffic (%)							10%			10%		
Lane Group Flow (vph)	288	1688	0	287	1685	0	315	365	320	480	486	170
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5

Lanes, Volumes, Timings
1: RR 12 & US 290

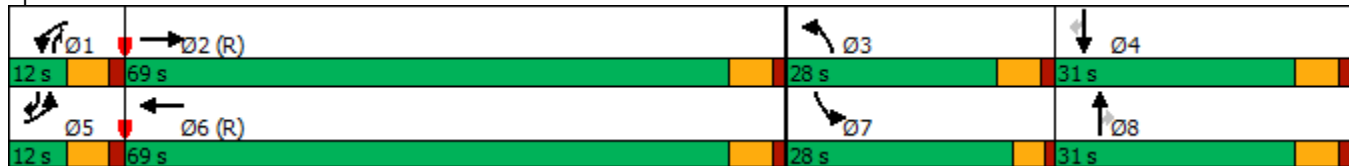


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									8			4
Detector Phase	5	2		1	6		3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	26.0		11.0	26.0		28.0	28.0	11.0	9.5	28.0	11.0
Total Split (s)	12.0	69.0		12.0	69.0		28.0	31.0	12.0	28.0	31.0	12.0
Total Split (%)	8.6%	49.3%		8.6%	49.3%		20.0%	22.1%	8.6%	20.0%	22.1%	8.6%
Maximum Green (s)	6.0	63.0		6.0	63.0		22.0	25.0	6.0	23.5	25.0	6.0
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	3.5	4.5	4.5
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	4.5	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	3.0	2.0	2.0
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	None
Walk Time (s)		7.0			7.0		7.0	7.0			7.0	
Flash Dont Walk (s)		13.0			13.0		15.0	15.0			15.0	
Pedestrian Calls (#/hr)		0			0		0	0			0	
Act Effct Green (s)	6.0	63.0		6.0	63.0		17.9	17.9	37.6	22.9	21.4	41.1
Actuated g/C Ratio	0.04	0.45		0.04	0.45		0.13	0.13	0.27	0.16	0.15	0.29
v/c Ratio	2.03	1.11		1.94	1.10		0.77	1.71	0.67	0.90	1.88	0.35
Control Delay	517.7	96.7		479.2	91.7		72.1	370.8	43.5	78.2	443.0	25.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	517.7	96.7		479.2	91.7		72.1	370.8	43.5	78.2	443.0	25.5
LOS	F	F		F	F		E	F	D	E	F	C
Approach Delay		158.1			148.1			172.0			226.4	
Approach LOS		F			F			F			F	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.03
 Intersection Signal Delay: 169.9 Intersection LOS: F
 Intersection Capacity Utilization 106.2% ICU Level of Service G
 Analysis Period (min) 15

Splits and Phases: 1: RR 12 & US 290



Queues
1: RR 12 & US 290

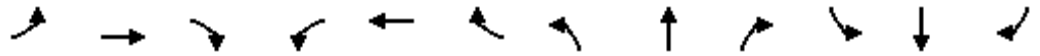


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	288	1688	287	1685	315	365	320	480	486	170
v/c Ratio	2.03	1.11	1.94	1.10	0.77	1.71	0.67	0.90	1.88	0.35
Control Delay	517.7	96.7	479.2	91.7	72.1	370.8	43.5	78.2	443.0	25.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	517.7	96.7	479.2	91.7	72.1	370.8	43.5	78.2	443.0	25.5
Queue Length 50th (ft)	~210	~918	~207	~909	154	~531	207	237	~734	70
Queue Length 95th (ft)	#248	#1060	#281	#927	199	#705	240	#308	#976	120
Internal Link Dist (ft)		2932		2792		599			306	
Turn Bay Length (ft)	150		150		150		150	130		130
Base Capacity (vph)	142	1516	148	1532	501	214	475	546	258	488
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.03	1.11	1.94	1.10	0.63	1.71	0.67	0.88	1.88	0.35

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
1: RR 12 & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↕		↗↘	↕		↗↘	↕	↗	↗↘	↕	↗
Traffic Volume (veh/h)	219	1251	240	244	1177	142	308	300	240	458	403	138
Future Volume (veh/h)	219	1251	240	244	1177	142	308	300	240	458	403	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1885	1841	1841	1856	1870	1870	1885	1870	1781
Adj Flow Rate, veh/h	288	1345	343	287	1401	284	350	330	320	533	433	170
Peak Hour Factor	0.76	0.93	0.70	0.85	0.84	0.50	0.88	0.91	0.75	0.86	0.93	0.81
Percent Heavy Veh, %	5	5	5	1	4	4	3	2	2	1	2	8
Cap, veh/h	145	1254	312	149	1325	264	404	334	351	582	403	390
Arrive On Green	0.04	0.46	0.46	0.04	0.46	0.46	0.11	0.18	0.18	0.16	0.22	0.22
Sat Flow, veh/h	3374	2752	686	3483	2907	579	3534	1870	1585	3591	1870	1510
Grp Volume(v), veh/h	288	836	852	287	832	853	350	330	320	533	433	170
Grp Sat Flow(s),veh/h/ln	1687	1735	1703	1742	1749	1737	1767	1870	1585	1795	1870	1510
Q Serve(g_s), s	6.0	63.8	63.8	6.0	63.8	63.8	13.6	24.6	25.0	20.4	30.2	13.2
Cycle Q Clear(g_c), s	6.0	63.8	63.8	6.0	63.8	63.8	13.6	24.6	25.0	20.4	30.2	13.2
Prop In Lane	1.00		0.40	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	791	776	149	797	791	404	334	351	582	403	390
V/C Ratio(X)	1.99	1.06	1.10	1.92	1.04	1.08	0.87	0.99	0.91	0.92	1.07	0.44
Avail Cap(c_a), veh/h	145	791	776	149	797	791	555	334	351	603	403	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.19	0.19	0.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	38.1	38.1	67.0	38.1	38.1	60.9	57.4	53.2	57.7	54.9	43.4
Incr Delay (d2), s/veh	451.1	32.4	48.5	438.9	44.1	54.9	8.1	45.8	26.6	18.5	65.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	32.7	35.5	11.7	35.5	37.6	6.4	15.6	13.3	10.6	21.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	518.1	70.5	86.6	505.9	82.2	93.0	69.1	103.1	79.8	76.2	120.7	43.7
LnGrp LOS	F	F	F	F	F	F	E	F	E	E	F	D
Approach Vol, veh/h		1976			1972			1000			1136	
Approach Delay, s/veh		142.7			148.5			83.7			88.3	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	69.8	22.0	36.2	12.0	69.8	27.2	31.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	4.5	6.0				
Max Green Setting (Gmax), s	6.0	63.0	22.0	25.0	6.0	63.0	23.5	25.0				
Max Q Clear Time (g_c+I1), s	8.0	65.8	15.6	32.2	8.0	65.8	22.4	27.0				
Green Ext Time (p_c), s	0.0	0.0	0.4	0.0	0.0	0.0	0.3	0.0				

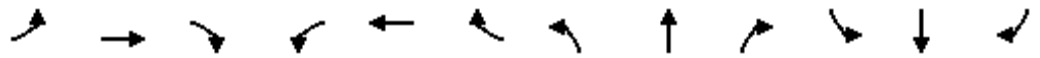
Intersection Summary

HCM 6th Ctrl Delay	124.7
HCM 6th LOS	F

Notes

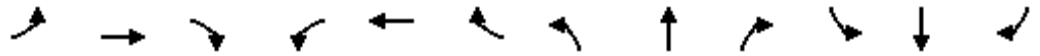
User approved volume balancing among the lanes for turning movement.

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Future Volume (vph)	53	1531	8	8	1440	319	1	0	1	577	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		275	0		0	250		0
Storage Lanes	1		0	1		1	0		0	2		0
Taper Length (ft)	25			25			25			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.999				0.850		0.932			0.850	
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1805	3421	0	1203	3539	1615	0	1728	0	3367	1615	0
Flt Permitted	0.950			0.060						0.950		
Satd. Flow (perm)	1805	3421	0	76	3539	1615	0	1771	0	3367	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				354		105			315	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		3195			3012			166			1615	
Travel Time (s)		48.4			45.6			3.8			36.7	
Peak Hour Factor	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Heavy Vehicles (%)	0%	5%	83%	50%	2%	0%	0%	0%	0%	4%	0%	0%
Adj. Flow (vph)	102	2014	11	21	1756	613	4	0	4	931	0	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	2025	0	21	1756	613	0	8	0	931	93	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Split	NA	
Protected Phases	1	6			2			4		8	8	

Lanes, Volumes, Timings
2: Sportsplex & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases				2		2	4					
Detector Phase	1	6		2	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0		12.0	12.0	12.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	25.0		25.0	25.0	25.0	30.5	30.5		30.5	30.5	
Total Split (s)	20.0	95.0		75.0	75.0	75.0	20.0	20.0		35.0	35.0	
Total Split (%)	13.3%	63.3%		50.0%	50.0%	50.0%	13.3%	13.3%		23.3%	23.3%	
Maximum Green (s)	14.0	89.0		69.0	69.0	69.0	14.5	14.5		29.5	29.5	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.5	1.5		1.5	1.5	1.5	1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		5.5		5.5	5.5	
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		12.0		12.0	12.0	12.0	18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)	11.8	89.0		71.2	71.2	71.2		5.0		47.4	47.4	
Actuated g/C Ratio	0.08	0.59		0.47	0.47	0.47		0.03		0.32	0.32	
v/c Ratio	0.72	1.00		0.60	1.05	0.64		0.05		0.88	0.13	
Control Delay	93.9	49.6		95.6	73.5	15.3		0.5		58.5	0.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	93.9	49.6		95.6	73.5	15.3		0.5		58.5	0.4	
LOS	F	D		F	E	B		A		E	A	
Approach Delay		51.7			58.7			0.5			53.2	
Approach LOS		D			E			A			D	

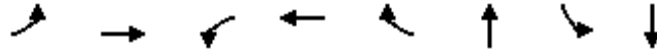
Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 55.0
 Intersection Capacity Utilization 76.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 2: Sportsplex & US 290



Queues
2: Sportsplex & US 290



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	102	2025	21	1756	613	8	931	93
v/c Ratio	0.72	1.00	0.60	1.05	0.64	0.05	0.88	0.13
Control Delay	93.9	49.6	95.6	73.5	15.3	0.5	58.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.9	49.6	95.6	73.5	15.3	0.5	58.5	0.4
Queue Length 50th (ft)	99	997	15	~990	190	0	435	0
Queue Length 95th (ft)	91	777	16	#964	38	0	350	0
Internal Link Dist (ft)		3115		2932		86		1535
Turn Bay Length (ft)	100		100		275		250	
Base Capacity (vph)	168	2030	35	1678	952	266	1064	726
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.00	0.60	1.05	0.64	0.03	0.88	0.13

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

2: Sportsplex & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	1531	8	8	1440	319	1	0	1	577	0	50
Future Volume (veh/h)	53	1531	8	8	1440	319	1	0	1	577	0	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1826	1826	1159	1870	1900	1900	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	102	2014	11	21	1756	613	4	0	4	931	0	93
Peak Hour Factor	0.52	0.76	0.75	0.38	0.82	0.52	0.25	0.92	0.25	0.62	0.92	0.54
Percent Heavy Veh, %	0	5	5	50	2	0	0	0	0	4	0	0
Cap, veh/h	123	2408	13	82	2034	922	8	0	8	669	0	317
Arrive On Green	0.07	0.68	0.68	0.57	0.57	0.57	0.01	0.00	0.01	0.20	0.00	0.20
Sat Flow, veh/h	1810	3538	19	130	3554	1610	852	0	852	3401	0	1610
Grp Volume(v), veh/h	102	987	1038	21	1756	613	8	0	0	931	0	93
Grp Sat Flow(s),veh/h/ln	1810	1735	1822	130	1777	1610	1704	0	0	1700	0	1610
Q Serve(g_s), s	8.3	63.2	63.5	21.4	62.7	39.4	0.7	0.0	0.0	29.5	0.0	7.4
Cycle Q Clear(g_c), s	8.3	63.2	63.5	68.7	62.7	39.4	0.7	0.0	0.0	29.5	0.0	7.4
Prop In Lane	1.00		0.01	1.00		1.00	0.50		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	123	1180	1240	82	2034	922	16	0	0	669	0	317
V/C Ratio(X)	0.83	0.84	0.84	0.26	0.86	0.67	0.50	0.00	0.00	1.39	0.00	0.29
Avail Cap(c_a), veh/h	169	1180	1240	82	2034	922	165	0	0	669	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.48	0.48	0.48	0.11	0.11	0.11	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.0	17.7	17.8	49.3	27.1	22.2	73.9	0.0	0.0	60.3	0.0	51.4
Incr Delay (d2), s/veh	8.2	3.6	3.4	0.8	0.6	0.4	8.5	0.0	0.0	185.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	23.5	24.8	0.7	25.0	14.2	0.3	0.0	0.0	30.0	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.2	21.3	21.2	50.2	27.7	22.6	82.5	0.0	0.0	245.7	0.0	51.6
LnGrp LOS	E	C	C	D	C	C	F	A	A	F	A	D
Approach Vol, veh/h		2127			2390			8			1024	
Approach Delay, s/veh		23.9			26.6			82.5			228.1	
Approach LOS		C			C			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.2	91.8		6.9		108.1		35.0				
Change Period (Y+Rc), s	6.0	6.0		5.5		6.0		5.5				
Max Green Setting (Gmax), s	14.0	69.0		14.5		89.0		29.5				
Max Q Clear Time (g_c+l1), s	10.3	70.7		2.7		65.5		31.5				
Green Ext Time (p_c), s	0.0	0.0		0.0		11.1		0.0				

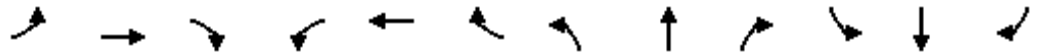
Intersection Summary

HCM 6th Ctrl Delay	62.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
3: RR 12 & Old Fitzhugh/Timberline



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	100	4	5	14	4	5	7	929	27	8	901	123
Future Volume (vph)	100	4	5	14	4	5	7	929	27	8	901	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.952			0.992			0.980	
Flt Protected		0.960			0.974		0.950			0.950		
Satd. Flow (prot)	0	1802	0	0	1762	0	1805	1850	0	1805	1841	0
Flt Permitted		0.960			0.974		0.950			0.950		
Satd. Flow (perm)	0	1802	0	0	1762	0	1805	1850	0	1805	1841	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		621			1305			982			342	
Travel Time (s)		14.1			35.6			14.9			5.2	
Peak Hour Factor	0.73	0.38	0.33	0.63	0.75	0.33	0.42	0.94	0.50	0.50	0.86	0.78
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	1%	2%
Adj. Flow (vph)	137	11	15	22	5	15	17	988	54	16	1048	158
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	42	0	17	1042	0	16	1206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 70.2% ICU Level of Service C
 Analysis Period (min) 15

HCM 6th TWSC
3: RR 12 & Old Fitzhugh/Timberline

Intersection

Int Delay, s/veh 152.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	100	4	5	14	4	5	7	929	27	8	901	123
Future Vol, veh/h	100	4	5	14	4	5	7	929	27	8	901	123
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Yield
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	38	33	63	75	33	42	94	50	50	86	78
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	2
Mvmt Flow	137	11	15	22	5	15	17	988	54	16	1048	158

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2218	2235	1127	2135	2129	1015	1048	0	0	1042	0	0
Stage 1	1159	1159	-	1049	1049	-	-	-	-	-	-	-
Stage 2	1059	1076	-	1086	1080	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 32	43	251	36	50	292	672	-	-	675	-	-
Stage 1	241	272	-	277	307	-	-	-	-	-	-	-
Stage 2	274	298	-	264	297	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 27	41	251	26	48	292	672	-	-	675	-	-
Mov Cap-2 Maneuver	~ 27	41	-	26	48	-	-	-	-	-	-	-
Stage 1	235	265	-	270	299	-	-	-	-	-	-	-
Stage 2	249	291	-	233	290	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$2252.6		292.6	0.2	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	672	-	-	30	42	675	-
HCM Lane V/C Ratio	0.025	-	-	5.422	1.017	0.024	-
HCM Control Delay (s)	10.5	-	-	\$ 2252.6	292.6	10.5	-
HCM Lane LOS	B	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.1	-	-	19.7	4	0.1	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (vph)	34	0	90	11	0	8	153	920	24	4	982	57
Future Volume (vph)	34	0	90	11	0	8	153	920	24	4	982	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	50		0	50		400
Storage Lanes	0		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902			0.930			0.995				0.850
Flt Protected		0.986			0.976		0.950			0.950		
Satd. Flow (prot)	0	1690	0	0	1637	0	1805	1814	0	1805	1827	1615
Flt Permitted		0.896			0.674		0.091			0.185		
Satd. Flow (perm)	0	1536	0	0	1131	0	173	1814	0	352	1827	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98			87			3				87
Link Speed (mph)		30			25			45				45
Link Distance (ft)		1986			1288			342				958
Travel Time (s)		45.1			35.1			5.2				14.5
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.50	0.92	0.93	0.68	0.38	0.89	0.92
Heavy Vehicles (%)	0%	0%	0%	11%	0%	0%	0%	4%	10%	0%	4%	0%
Adj. Flow (vph)	37	0	98	15	0	16	166	989	35	11	1103	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	31	0	166	1024	0	11	1103	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1		6

Lanes, Volumes, Timings
4: RR 12 & Brookside



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		4.0	15.0		5.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	23.0		9.5	68.0	68.0
Total Split (s)	22.5	22.5		22.5	22.5		9.5	68.0		9.5	68.0	68.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%		9.5%	68.0%		9.5%	68.0%	68.0%
Maximum Green (s)	17.0	17.0		17.0	17.0		4.0	63.0		5.0	62.5	62.5
Yellow Time (s)	4.5	4.5		4.5	4.5		4.5	4.0		3.5	4.5	4.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.5			5.5		5.5	5.0		4.5	5.5	5.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0			0			0	0
Act Effct Green (s)		8.3			8.3		66.5	66.3		63.9	57.9	57.9
Actuated g/C Ratio		0.10			0.10		0.77	0.76		0.74	0.67	0.67
v/c Ratio		0.57			0.17		0.80	0.74		0.03	0.91	0.06
Control Delay		24.1			1.9		38.6	11.7		2.8	25.4	0.9
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.1			1.9		38.6	11.7		2.8	25.4	0.9
LOS		C			A		D	B		A	C	A
Approach Delay		24.1			1.9			15.5			23.9	
Approach LOS		C			A			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 86.9
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 19.7
 Intersection Capacity Utilization 81.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 4: RR 12 & Brookside



Queues
4: RR 12 & Brookside



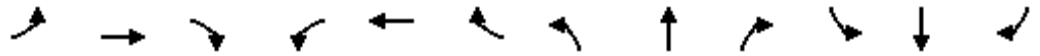
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	135	31	166	1024	11	1103	62
v/c Ratio	0.57	0.17	0.80	0.74	0.03	0.91	0.06
Control Delay	24.1	1.9	38.6	11.7	2.8	25.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	1.9	38.6	11.7	2.8	25.4	0.9
Queue Length 50th (ft)	20	0	16	199	1	430	0
Queue Length 95th (ft)	76	0	#104	#797	2	#885	8
Internal Link Dist (ft)	1906	1208		262		878	
Turn Bay Length (ft)			50		50		400
Base Capacity (vph)	382	293	208	1426	343	1329	1199
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.11	0.80	0.72	0.03	0.83	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

4: RR 12 & Brookside



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	34	0	90	11	0	8	153	920	24	4	982	57
Future Volume (veh/h)	34	0	90	11	0	8	153	920	24	4	982	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1841	1841	1900	1841	1900
Adj Flow Rate, veh/h	37	0	98	15	0	16	166	989	35	11	1103	62
Peak Hour Factor	0.92	0.92	0.92	0.75	0.92	0.50	0.92	0.93	0.68	0.38	0.89	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	4	4	0	4	0
Cap, veh/h	90	12	125	129	20	92	230	1225	43	280	1191	1042
Arrive On Green	0.11	0.00	0.11	0.11	0.00	0.11	0.05	0.69	0.69	0.01	0.65	0.65
Sat Flow, veh/h	325	109	1149	602	187	842	1810	1767	63	1810	1841	1610
Grp Volume(v), veh/h	135	0	0	31	0	0	166	0	1024	11	1103	62
Grp Sat Flow(s),veh/h/ln	1583	0	0	1632	0	0	1810	0	1829	1810	1841	1610
Q Serve(g_s), s	4.8	0.0	0.0	0.0	0.0	0.0	2.6	0.0	32.7	0.2	44.3	1.2
Cycle Q Clear(g_c), s	6.9	0.0	0.0	1.4	0.0	0.0	2.6	0.0	32.7	0.2	44.3	1.2
Prop In Lane	0.27		0.73	0.48		0.52	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	227	0	0	241	0	0	230	0	1268	280	1191	1042
V/C Ratio(X)	0.60	0.00	0.00	0.13	0.00	0.00	0.72	0.00	0.81	0.04	0.93	0.06
Avail Cap(c_a), veh/h	373	0	0	378	0	0	230	0	1374	363	1372	1200
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	0.0	33.9	0.0	0.0	20.2	0.0	9.0	9.9	13.0	5.4
Incr Delay (d2), s/veh	2.5	0.0	0.0	0.2	0.0	0.0	10.4	0.0	3.4	0.1	10.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	0.6	0.0	0.0	2.6	0.0	9.6	0.1	16.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	0.0	34.2	0.0	0.0	30.7	0.0	12.4	10.0	23.1	5.5
LnGrp LOS	D	A	A	C	A	A	C	A	B	A	C	A
Approach Vol, veh/h		135			31			1190				1176
Approach Delay, s/veh		38.8			34.2			15.0				22.1
Approach LOS		D			C			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	63.6		14.6	9.5	59.8		14.6				
Change Period (Y+Rc), s	4.5	* 5.5		5.5	5.5	5.5		5.5				
Max Green Setting (Gmax), s	5.0	* 63		17.0	4.0	62.5		17.0				
Max Q Clear Time (g_c+I1), s	2.2	34.7		8.9	4.6	46.3		3.4				
Green Ext Time (p_c), s	0.0	9.0		0.4	0.0	8.0		0.1				

Intersection Summary

HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
5: Baird & Sportsplex



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	439	11	20	248	220	6	3	23	83	1	3
Future Volume (vph)	16	439	11	20	248	220	6	3	23	83	1	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		100	0		0	175		100
Storage Lanes	1		0	0		1	0		0	1		1
Taper Length (ft)	50			25			25			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996				0.850		0.902				0.850
Flt Protected	0.950				0.996			0.991		0.950		
Satd. Flow (prot)	1805	1821	0	0	1858	1568	0	1698	0	1805	1900	1615
Flt Permitted	0.950				0.996			0.991		0.950		
Satd. Flow (perm)	1805	1821	0	0	1858	1568	0	1698	0	1805	1900	1615
Link Speed (mph)		30			30			30				30
Link Distance (ft)		229			479			221				2634
Travel Time (s)		5.2			10.9			5.0				59.9
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	0%	4%	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	22	610	15	28	344	306	8	4	32	115	1	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	625	0	0	372	306	0	44	0	115	1	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.7%
Analysis Period (min)	15
	ICU Level of Service A

HCM 6th TWSC
5: Baird & Sportsplex

Intersection

Int Delay, s/veh 5.7

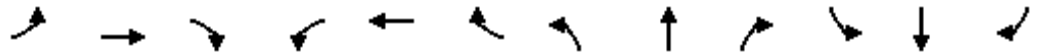
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↔		↖	↗	↖
Traffic Vol, veh/h	16	439	11	20	248	220	6	3	23	83	1	3
Future Vol, veh/h	16	439	11	20	248	220	6	3	23	83	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	175	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	72	72	72	72	72	72	72	72	72	72	72
Heavy Vehicles, %	0	4	0	0	2	3	0	0	0	0	0	0
Mvmt Flow	22	610	15	28	344	306	8	4	32	115	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	650	0	0	625	0	0	1218	1368	618	1080	1069	344
Stage 1	-	-	-	-	-	-	662	662	-	400	400	-
Stage 2	-	-	-	-	-	-	556	706	-	680	669	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	946	-	-	966	-	-	159	148	493	197	223	703
Stage 1	-	-	-	-	-	-	454	462	-	630	605	-
Stage 2	-	-	-	-	-	-	519	442	-	444	459	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	946	-	-	966	-	-	149	138	493	170	207	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	138	-	170	207	-
Stage 1	-	-	-	-	-	-	444	451	-	616	576	-
Stage 2	-	-	-	-	-	-	490	421	-	402	448	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.4			19.4			59.8		
HCM LOS							C			F		

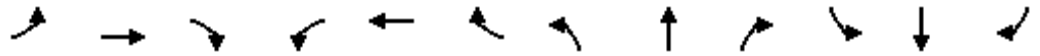
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3	
Capacity (veh/h)	294	946	-	-	966	-	-	170	207	703	
HCM Lane V/C Ratio	0.151	0.023	-	-	0.029	-	-	0.678	0.007	0.006	
HCM Control Delay (s)	19.4	8.9	-	-	8.8	0	-	62	22.5	10.2	
HCM Lane LOS		C	A	-	-	A	A	-	F	C	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	4	0	0	

Lanes, Volumes, Timings
6: Roger Hanks & US 290



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Future Volume (vph)	75	1308	78	48	1438	67	25	0	30	115	25	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	90		0	150		0	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.992				0.850		0.897	
Flt Protected	0.950			0.950				0.950		0.950		
Satd. Flow (prot)	1805	3267	0	1805	3385	0	0	1805	1553	1597	1546	0
Flt Permitted	0.095			0.051				0.685		0.464		
Satd. Flow (perm)	180	3267	0	97	3385	0	0	1302	1553	780	1546	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			6				152		76	
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		866			3195			957			1336	
Travel Time (s)		13.1			48.4			18.6			30.4	
Peak Hour Factor	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Heavy Vehicles (%)	0%	10%	0%	0%	6%	2%	0%	0%	4%	13%	0%	15%
Adj. Flow (vph)	156	1656	130	71	1580	91	40	0	40	198	35	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	1786	0	71	1671	0	0	40	40	198	111	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes						Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20		100
Trailing Detector (ft)	0	0		0	0		0	0	0	0		0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0		0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	pm+pt		NA
Protected Phases	5	2		1	6			8		7		4

Lanes, Volumes, Timings
6: Roger Hanks & US 290

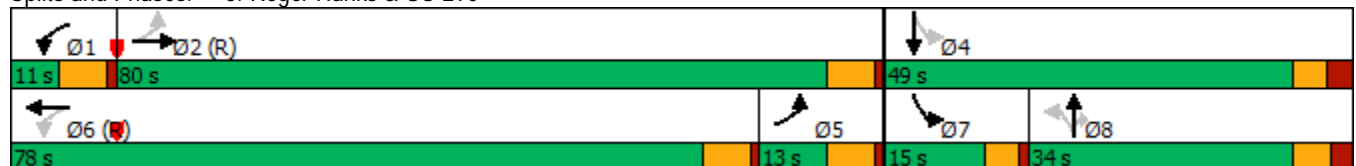


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	2			6			8		8	4		
Detector Phase	5	2		1	6		8	8	8	7	4	
Switch Phase												
Minimum Initial (s)	5.0	12.0		5.0	12.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	31.0		11.0	24.0		33.5	33.5	33.5	9.5	24.5	
Total Split (s)	13.0	80.0		11.0	78.0		34.0	34.0	34.0	15.0	49.0	
Total Split (%)	9.3%	57.1%		7.9%	55.7%		24.3%	24.3%	24.3%	10.7%	35.0%	
Maximum Green (s)	7.0	74.0		5.0	72.0		27.5	27.5	27.5	10.5	42.5	
Yellow Time (s)	5.0	5.0		5.0	5.0		4.0	4.0	4.0	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.5	2.5	2.5	1.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.5	6.5	4.5	6.5	
Lead/Lag	Lag	Lag		Lead	Lead		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	3.0	2.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		18.0					20.0	20.0	20.0			
Pedestrian Calls (#/hr)		0					0	0	0			
Act Effct Green (s)	95.3	95.3		93.0	93.0			8.8	8.8	23.5	21.5	
Actuated g/C Ratio	0.68	0.68		0.66	0.66			0.06	0.06	0.17	0.15	
v/c Ratio	0.77	0.80		0.48	0.74			0.49	0.17	1.03	0.37	
Control Delay	59.3	21.9		24.7	19.3			82.0	1.5	127.2	21.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay	59.3	21.9		24.7	19.3			82.0	1.5	127.2	21.7	
LOS	E	C		C	B			F	A	F	C	
Approach Delay		24.9			19.5			41.8			89.3	
Approach LOS		C			B			D			F	

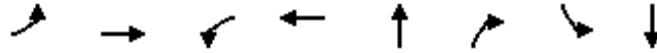
Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 27.8
 Intersection Capacity Utilization 74.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 6: Roger Hanks & US 290

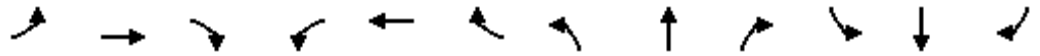


Queues
6: Roger Hanks & US 290



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	156	1786	71	1671	40	40	198	111
v/c Ratio	0.77	0.80	0.48	0.74	0.49	0.17	1.03	0.37
Control Delay	59.3	21.9	24.7	19.3	82.0	1.5	127.2	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	21.9	24.7	19.3	82.0	1.5	127.2	21.7
Queue Length 50th (ft)	51	613	22	518	36	0	170	27
Queue Length 95th (ft)	47	637	34	674	75	0	149	50
Internal Link Dist (ft)		786		3115	877			1256
Turn Bay Length (ft)	150		90				150	
Base Capacity (vph)	203	2226	148	2249	255	427	192	522
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.80	0.48	0.74	0.16	0.09	1.03	0.21
Intersection Summary								

HCM 6th Signalized Intersection Summary
6: Roger Hanks & US 290



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘			↖	↖↗	↖	↖↗	
Traffic Volume (veh/h)	75	1308	78	48	1438	67	25	0	30	115	25	57
Future Volume (veh/h)	75	1308	78	48	1438	67	25	0	30	115	25	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1752	1752	1900	1811	1811	1900	1900	1841	1707	1900	1900
Adj Flow Rate, veh/h	156	1656	130	71	1580	91	40	0	40	198	35	76
Peak Hour Factor	0.48	0.79	0.60	0.68	0.91	0.74	0.63	0.92	0.75	0.58	0.71	0.75
Percent Heavy Veh, %	0	10	10	0	6	6	0	0	4	13	0	0
Cap, veh/h	430	2133	166	132	1701	97	111	0	71	193	81	177
Arrive On Green	0.20	0.68	0.68	0.03	0.51	0.51	0.05	0.00	0.05	0.08	0.15	0.15
Sat Flow, veh/h	1810	3129	243	1810	3308	190	1302	0	1560	1626	533	1158
Grp Volume(v), veh/h	156	874	912	71	818	853	40	0	40	198	0	111
Grp Sat Flow(s),veh/h/ln	1810	1664	1708	1810	1721	1777	1302	0	1560	1626	0	1692
Q Serve(g_s), s	4.9	49.2	51.1	2.9	61.6	62.8	4.2	0.0	3.5	10.5	0.0	8.3
Cycle Q Clear(g_c), s	4.9	49.2	51.1	2.9	61.6	62.8	4.2	0.0	3.5	10.5	0.0	8.3
Prop In Lane	1.00		0.14	1.00		0.11	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	430	1134	1164	132	885	914	111	0	71	193	0	258
V/C Ratio(X)	0.36	0.77	0.78	0.54	0.92	0.93	0.36	0.00	0.56	1.03	0.00	0.43
Avail Cap(c_a), veh/h	430	1134	1164	136	885	914	307	0	306	193	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	14.9	15.2	32.2	31.5	31.8	65.8	0.0	65.4	61.3	0.0	53.8
Incr Delay (d2), s/veh	0.2	5.1	5.3	0.2	2.1	2.3	0.7	0.0	2.6	72.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	17.8	19.0	1.2	24.4	25.7	1.4	0.0	1.4	6.1	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	20.0	20.5	32.4	33.6	34.1	66.5	0.0	68.0	133.7	0.0	54.2
LnGrp LOS	D	B	C	C	C	C	E	A	E	F	A	D
Approach Vol, veh/h		1942			1742			80				309
Approach Delay, s/veh		22.3			33.8			67.3				105.1
Approach LOS		C			C			E				F
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	101.4		27.9	34.1	78.0	15.0	12.9				
Change Period (Y+Rc), s	6.0	6.0		6.5	6.0	6.0	4.5	6.5				
Max Green Setting (Gmax), s	5.0	74.0		42.5	7.0	72.0	10.5	27.5				
Max Q Clear Time (g_c+I1), s	4.9	53.1		10.3	6.9	64.8	12.5	6.2				
Green Ext Time (p_c), s	0.0	8.6		0.4	0.0	4.2	0.0	0.2				

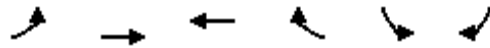
Intersection Summary

HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
7: Brookside



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Volume (vph)	0	23	38	38	23	0
Future Volume (vph)	0	23	38	38	23	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.932				
Fl _t Protected					0.950	
Satd. Flow (prot)	0	1863	1736	0	1770	0
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	1863	1736	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2535	225		1819	
Travel Time (s)		57.6	5.1		41.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	25	41	41	25	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	25	82	0	25	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 1.7

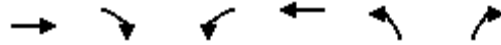
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	23	38	38	23	0
Future Vol, veh/h	0	23	38	38	23	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	25	41	41	25	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	82	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1515	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1515	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1515	-	-	-	914
HCM Lane V/C Ratio	-	-	-	-	0.027
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lanes, Volumes, Timings
8: Brookside



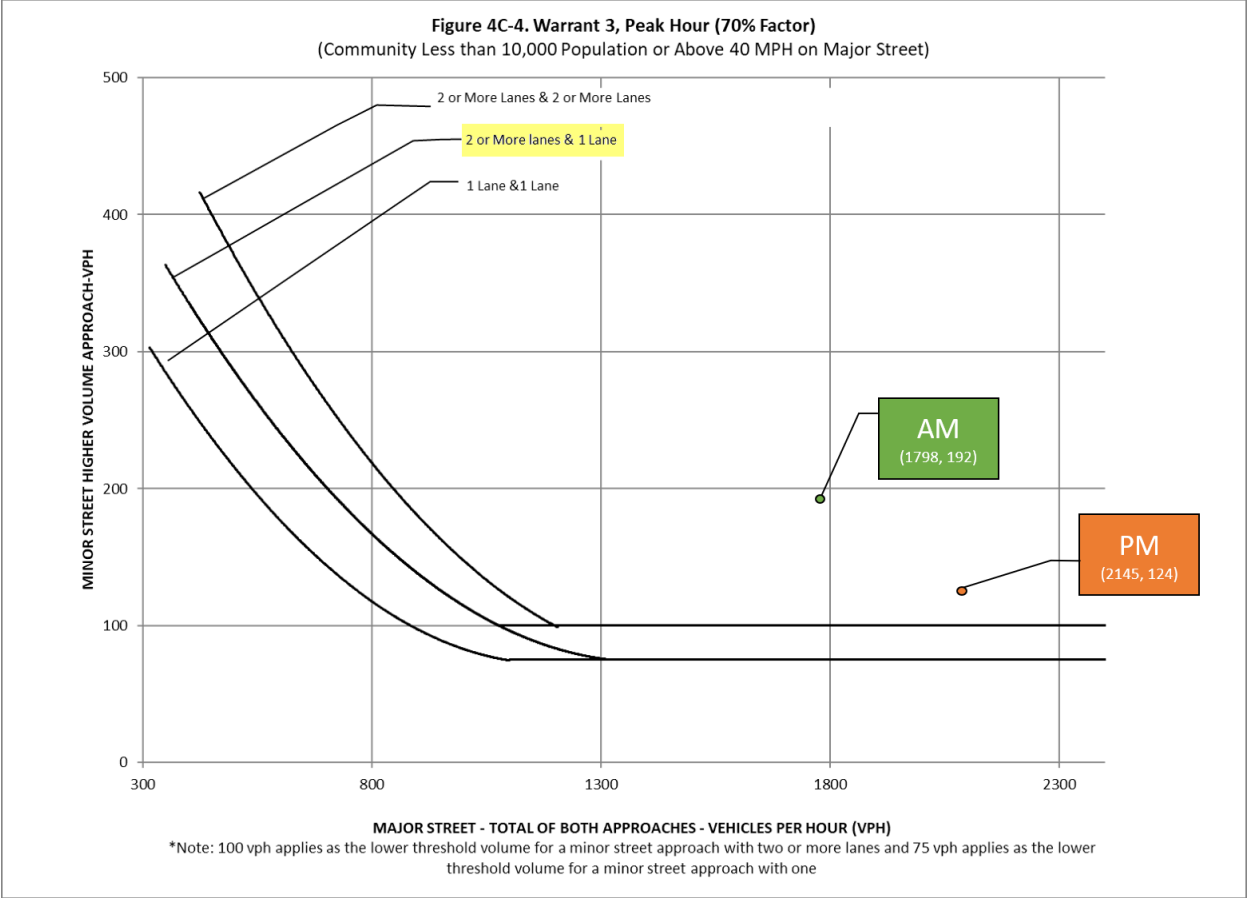
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	23	23	88	38	38	61
Future Volume (vph)	23	23	88	38	38	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932			0.917		
Flt Protected				0.966	0.981	
Satd. Flow (prot)	1736	0	0	1799	1676	0
Flt Permitted				0.966	0.981	
Satd. Flow (perm)	1736	0	0	1799	1676	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	225			1986	2634	
Travel Time (s)	5.1			45.1	59.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	25	96	41	41	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	137	107	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Yield			Yield	Yield	

Intersection Summary

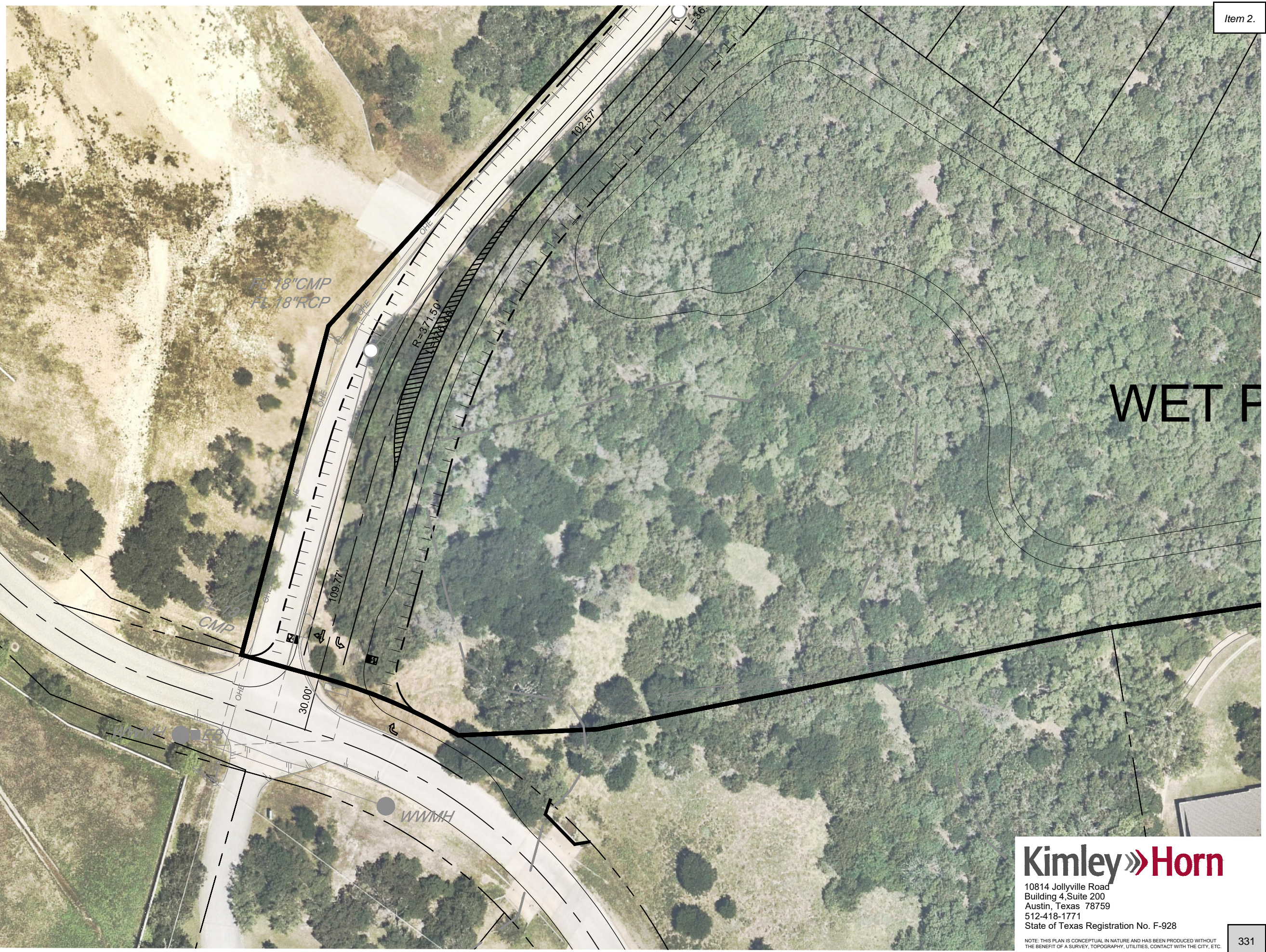
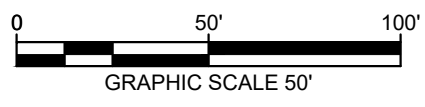
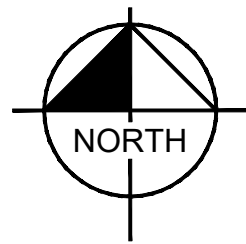
Area Type:	Other
Control Type:	Roundabout
Intersection Capacity Utilization	26.1% ICU Level of Service A
Analysis Period (min)	15

Intersection			
Intersection Delay, s/veh	3.5		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	50	137	107
Demand Flow Rate, veh/h	52	140	109
Vehicles Circulating, veh/h	98	42	25
Vehicles Exiting, veh/h	84	92	123
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.6	3.4
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	52	140	109
Cap Entry Lane, veh/h	1249	1322	1345
Entry HV Adj Factor	0.971	0.980	0.982
Flow Entry, veh/h	50	137	107
Cap Entry, veh/h	1212	1295	1320
V/C Ratio	0.042	0.106	0.081
Control Delay, s/veh	3.3	3.6	3.4
LOS	A	A	A
95th %tile Queue, veh	0	0	0

Appendix J: Peak Hour Signal Warrant Analysis



Appendix K: Sportsplex Drive and Baird Lane Concept Figure



Turn Lane Request-TIA
Heritage
OCTOBER, 2020

Kimley»Horn
10814 Jollyville Road
Building 4, Suite 200
Austin, Texas 78759
512-418-1771
State of Texas Registration No. F-928



Planning and Zoning Commission

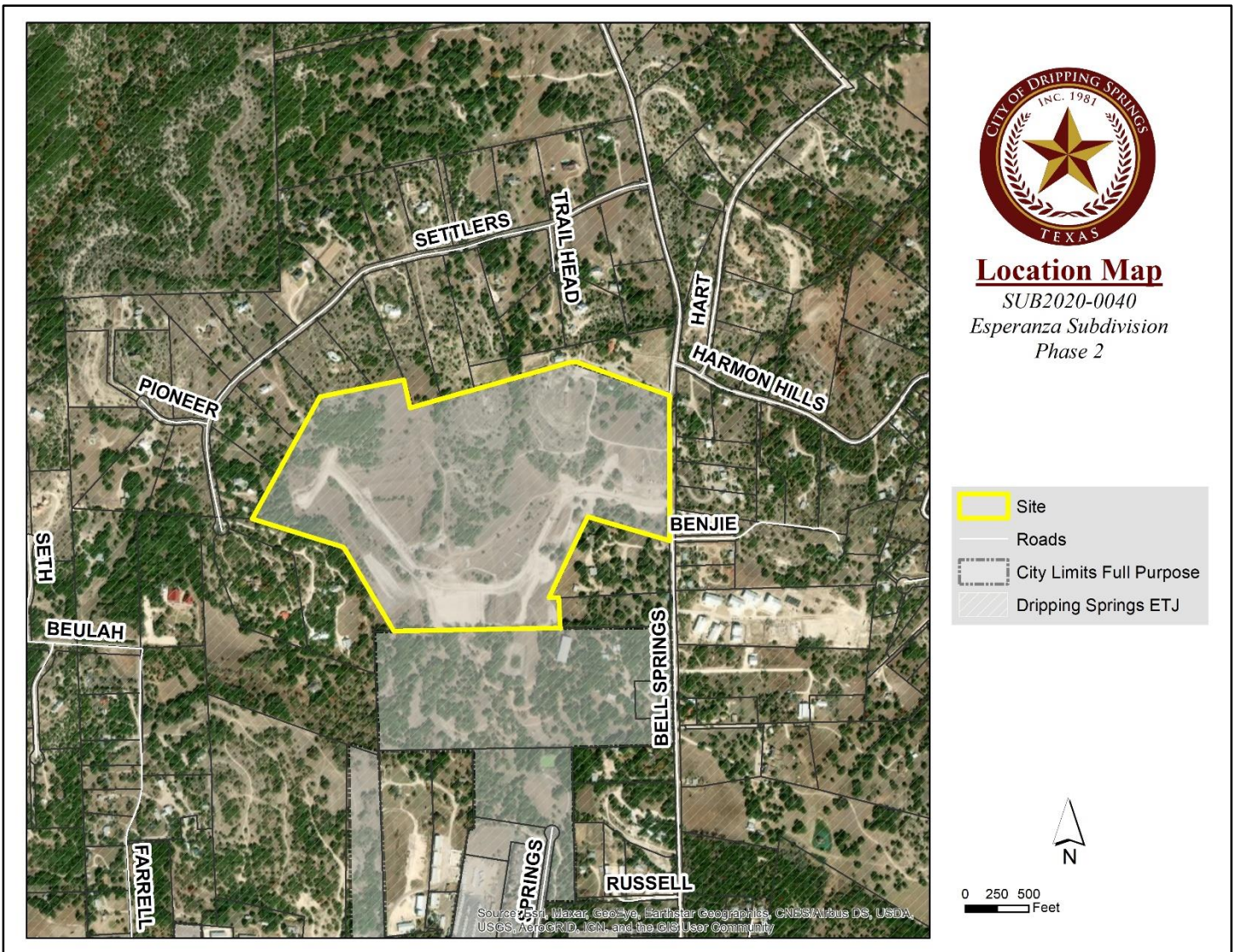
Planning Department Staff Report

Item 3.

Planning and Zoning Commission Meeting: April 27, 2021
Project No: SUB2020-0040
Project Planner: Amanda Padilla, Senior Planner

Item Details

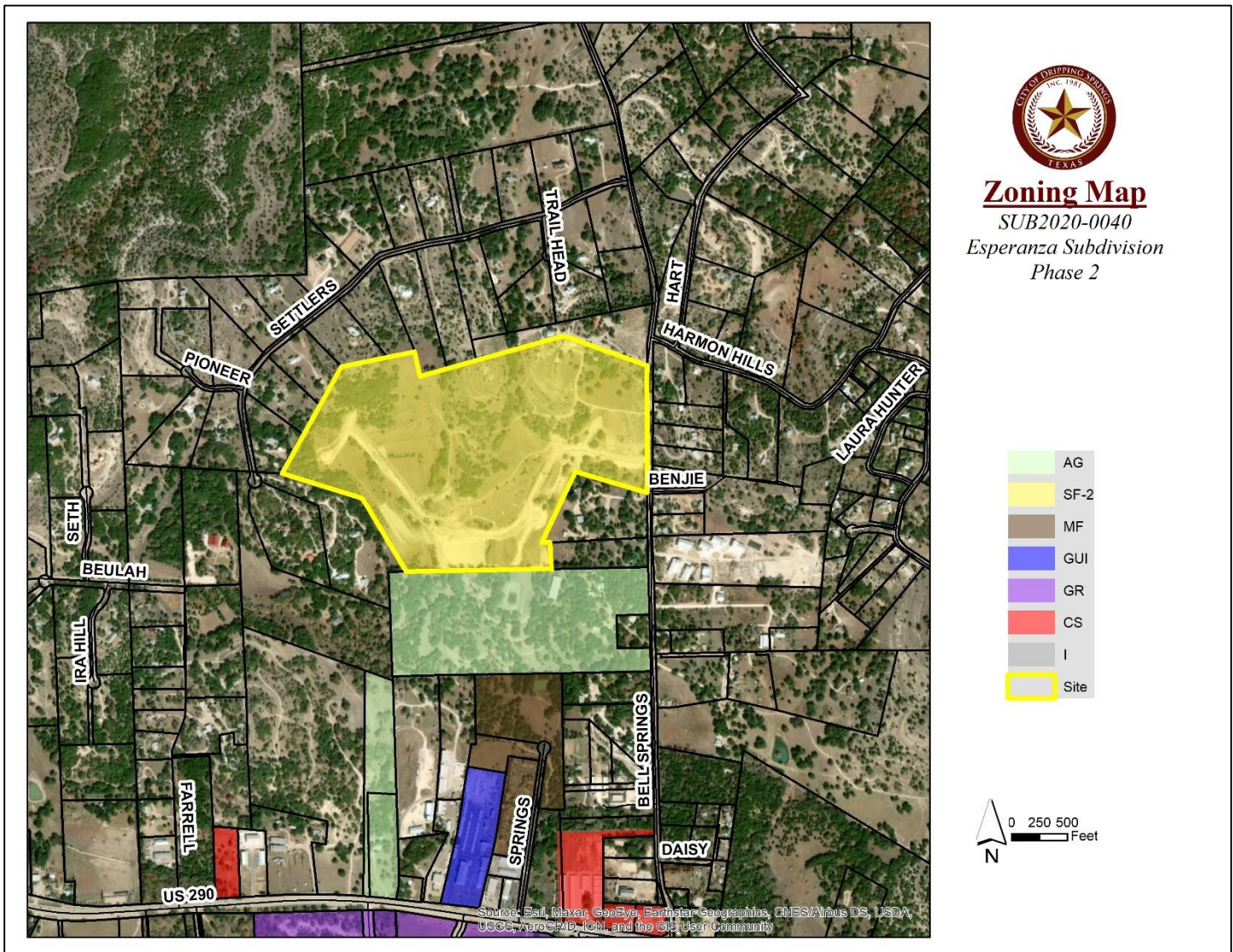
Project Name: Esperanza Phase 2 Final Plat
Property Location: 4900 Bell Springs Road, Dripping Springs, TX 78620
Legal Description: INDIAN POINT, LOT 2A, MH SERIAL 3SHAL05644A, TITLE #00994613, LABEL # TRA0412055, ACRES 52.44
Applicant: Adrian Rosas, TRE & Associates
Property Owner: Esperanza 104, LLC
Request: Applicant is requesting to Final Plat Esperanza Phase 2
Staff recommendation: Staff is recommending denial of Esperanza Phase 2 Final Plat based on outstanding comments



Overview

The applicant is requesting to Final Plat Esperanza Phase 2. The Esperanza Subdivision is planned as a low-density single-family residential development Zoned SF-2 within the Full Purpose City Limits of Dripping Springs. The tract is located at 4900 Bell Springs Road and is directly north and adjacent to Esperanza Phase 1. The 52.4-acre Final Plat consists of a total of 56 residential and 2 landscaping lots.

The Tract is located within the Onion Creek Watershed and is within the Contributing Zone of the Edwards Aquifer. Phase 2 is bordered on the east side by the right of way of Bell Springs Road, approximately 1 mile north of Highway 290. The proposed development within Phase 2 consist of three (3) streets, 2 of which are looped connectors from Bell Springs Road and Esperanza Phase 1.



Esperanza Phase 2 Final Plat utility providers are listed below:

- Water: Dripping Springs Water Supply Corporation.
- Wastewater: Wastewater service will be onsite septic facilities,
- Electric: Pedernales Electric Cooperative

Planning Department Staff Report

Parkland and open space were included in Esperanza Phase 1 for the entire Esperanza development. The Parkland had previously been approved through the Parks and Recreation Commission and City Council. As such, no additional parkland or open space is included in this Final Plat.

Recommendation:

Staff is recommending *disapproval of the plat with the outstanding comments* attached (see below Section).

Once all comments have been met the proposed plat will be consistent and comply with the development standards set forth in the City Ordinances.

Outstanding Comments:

Please see Exhibit 3- Outstanding Comments Letter

Public Notification

Signs were posted on the site; notice was placed on the City Website.

Meetings Schedule

January 26, 2021 Planning and Zoning Commission – Denied due to Outstanding Comments

April 27, 2021 Planning and Zoning Commission

Attachments

Exhibit 1 – Subdivision Application

Exhibit 2 – Esperanza Phase 2 Final Plat

Exhibit 3 – Outstanding Comments Letter

Exhibit 4 – Parkland Dedication

Recommended Action	Deny Plat with the outstanding comments.
Alternatives/Options	Approve the Plat; Approve the Plat with Conditions
Budget/Financial impact	N/A
Public comments	None received at this time
Enforcement Issues	N/A
Comprehensive Plan Element	N/A



**APPLICATION FOR A
SUBDIVISION**

Proposed Name of Subdivision: Esperanza Subdivision, Phase Two

Name of Applicant: Adrian Rosas, PE

Name of Property Owner: Esperanza 104, LLC

Contact Address: 6101 W. Courtyard Drive, Bldg. 1, Ste. 100

Telephone #: 512-358-4049

Contact Email Address: arosas@tr-eng.com

Person to Appear at P&Z / City Council (if required): Adrian Rosas

Property Address/Location: 4900 Bell Springs Road

Current Legal Description: Lot 2A, Resub of Lot 1 & 2 Indian Point Estates

Current Land Area: 107.76 Acres (Total); 52.4 Acres- Phase 2

Name of Surveyor / Engineer / Architect: Travis Tabor, RPLS

Name of Company: Land Design Services, Inc.

Address: 10090 W. Highway 29, Liberty Hill, TX 78642

Telephone: 512-238-7901

Email: ttabor@lisisurvey.com

Type of Plat:

Minor Plat

Amended Plat

Replat

Major Plat

Plat Vacation

IS THE PROPOSED SUBDIVISION IN THE CITY LIMITS OR EXTRA TERRITORIAL JURISDICTION?

City Limits ETJ

If proposed subdivision is in the City Limits, compliance with Lighting Ordinance is **mandatory**.
If proposed subdivision is in the ETJ, compliance is **mandatory** when required by a Development Agreement or as a condition of an Alternative Standard/Special Exception/Variance/Waiver.

Voluntary compliance is strongly encouraged by those not required by above criteria (*see Outdoor Lighting tab on the CODS webpage and online Lighting Ordinance under Code of Ordinances tab for more information*).

COMPLIANCE WITH LIGHTING ORDINANCE:

Yes (Required) Yes (Voluntary) No

Total Acreage of Development: 52.4 Total Acreage of Lots: 52.4

Intended Use of Lots: Single Family

of Residential: 56 # of Commercial/Industrial: 0

Total Number of Lots: 58 Average Size of Lots: 3/4 acre

PARKLAND DEDICATION:

Acreage: 9.82 (Phase 1) Proposed Cash in Lieu: _____

Ag Fee: _____

Frontage on Existing Road:

City/County (Public) Road: Bell Springs Road

State Road: _____

Private Road: _____

New Roads in Development (linear feet per individual street; number of streets, category)
(A list of proposed names for streets must be submitted at time of Preliminary)

Public Roads: See Plan Set

Private Roads: _____

IS PROPERTY WITHIN A FEMA FLOODPLAIN AS DEFINED BY THE MOST CURRENT FIRM?

Yes No

IS PROPERTY OVER THE EDWARDS AQUIFER RECHARGE ZONE?

Yes No

IS PROPERTY OVER THE BARTON SPRINGS CONTRIBUTING ZONE TO THE EDWARDS AQUIFER?

Yes No

SCHOOL DISTRICT: Dripping Springs ISD

SOURCE OF WATER

Surface Water

Public Water Supply
 Rainwater

Ground Water

Private Well
 Shared Well
 Public Water Supply

ANTICIPATED WASTEWATER SYSTEM:

Conventional Septic System
 Class I (Aerobic) Permitted System
 Public Sewer

PUBLIC UTILITY CHECKLIST

(Fill out below or attach letters from the listed utility providers verifying their easements from the below utility providers)

ELECTRIC UTILITY:

Company Name: PEC
Approved As-Is: _____ Easement Required: _____
Define Required Easement: _____
Signature: _____ Title: _____

TELEPHONE UTILITY

Company Name: Frontier Communities
Approved As-Is: : _____ Easement Required: _____
Define Required Easement: _____
Signature: _____ Title: _____

WATER UTILITY (If Applicable)

Company Name: Dripping Springs Water Supply Corporation
Approved As-Is: : _____ Easement Required: _____
Define Required Easement: _____
Signature: _____ Title: _____

If doing water provision for the development using groundwater resources, the Hays-Trinity Groundwater Conservation District must be notified:

HAYS-TRINITY GCD:

Notified: Yes No

Comments: _____
Signature: _____ Title: _____

SEWER UTILITY (If Applicable)

Company Name: _____

Approved As-Is: _____ Easement Required: _____
Define Required Easement: _____
Signature: _____ Title: _____

HAYS COUNTY ROAD & BRIDGE DEPARTMENT

Approved Proposed Location for Driveway: Yes No
Required ROW Dedication: Yes No
Define Required ROW (if required):
Utilities to be placed in ROW: Yes No
Signature: _____ Title: _____

TEXAS DEPARTMENT OF TRANSPORTATION

Approved Proposed Location for Driveway: Yes No
Required ROW Dedication: Yes No
Define Required ROW (if required):
Utilities to be placed in ROW: Yes No
Signature: _____ Title: _____

WAIVERS TO BE REQUESTED:

(To be accompanied by letter from Owner making request)
Define briefly the waiver to be requested: *(Subdivision Ordinance, Vol. 2, Art. 15, Ch. 20, Subchapter A, Sec. 1.6)*

DEVELOPMENT AGREEMENT:

Yes No
Define Development Agreement briefly: _____

ZONING OF PROPERTY

Current Zoning: SF-2
Zoning Change to be requested:
Yes No
Define proposed zoning change briefly: _____
(To be accompanied by Application for Zoning Amendment)

Fiscal Security Requirements (if required): _____

APPLICANT'S SIGNATURE

(Note: An additional signature required on page 7 of the application verifying completeness. Applications should be submitted only when all required information is included in the submittal.)

The above information is true to the best of my knowledge. I attest that the real property described is owned by me and all others as signed below. If the below signed applicant is not the owner of said property, the signature of the property owner must be included below or consent must be attached (If a corporation, please list title, and name of corporation.)

Adrian Rosas, PE

Applicant Name

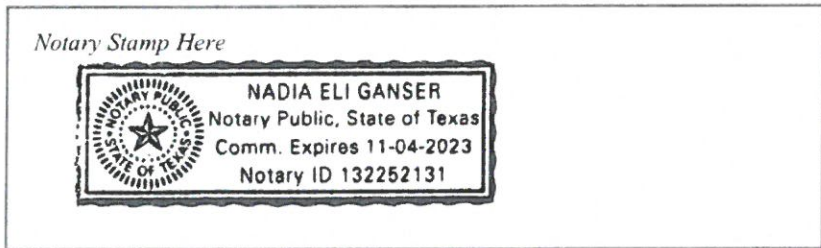
[Handwritten Signature]

10/15/20
Date

[Handwritten Signature]

10/15/20
Date

Notary



James Dorney

Property Owner Name

James D Dorney

10-15-20
Date

WAIVER REQUEST (Optional)

"I hereby agree to waive the 30-day requirement for action to be taken on this plat per the Code of Ordinances, Volume 2, Article 15: "Development", Chapter 20: "Subdivisions, Section 3.4.2." (Further ref.: Local Gov't Code Ch. 212.009)

Applicant Signature

Date

SUBDIVISION SUBMITTAL CHECKLIST:

PRELIMINARY

Section 3.7, Subdivision Ordinance

Application Submittal for Review

- Completed Application Form (including all required signatures)
- Application Fee (refer to Fee Schedule) \$ _____

- PDF/Digital Copies of:
 - Preliminary Plats
 - Engineer's Summary Report

When submitting digital files, a coversheet must be included outlining what digital contents are included
- Billing Contact Form
- ESD#6 Application
- Preliminary Plats (3 copies required)
- Development Agreement *(if applicable)*
- Facility Planning Report *(if applicable and if not being served by a public wastewater system)*
- Tax certificates/receipts *(verifying that property taxes are current)*
- Preliminary Drainage Study
- List of Property Owners within 300'
- Engineer's Summary Report (3 copies)
- Water Supply Letter (WTCPUA/City of DS/DS WSC/MUD/WCID)
- Water Availability Study *(reviewed and approved by the County or its agent, possibly the Hays-Trinity Groundwater District)*
- Utility Service Provider letters *(PEC, AT&T or Verizon, Time Warner – cable/telephone; gas service, if applicable; wastewater – if in a MUD or WCID, or in the City's service area; if new MUD, WCID, or private wastewater service planned, than a letter of intent from developer stating this will be satisfactory.)*
- TXDOT Permit or Permit Application (showing either approval, or as submitted)
- Copy of a Notice Letter to the School District (notifying of preliminary submittal)
- Lighting Ordinance Compliance Agreement – signed with attached photos/drawings *(required if marked "Yes (Required)" on above Lighting Ordinance Section of application)*

FINAL

Section 5.2, Subdivision Ordinance

Application Submittal for Review

- Completed Application Form *(including all required signatures)*
- Engineer's Summary (2 copies)
- Application Fee (refer to Fee Schedule) \$ 25,450.00
- Billing Contact Form
- Final Plats (3 copies – 24"x36")
- Coversheet listing the contents of digital submittal (with attached CD or USB *see below*)
- PDF and/or digital copies of:
 - Subdivision Plat
 - Construction Plans
 - Engineer's Summary Report
 - Final Plat
 - Construction Drawings
 - Projected Digital (GIS) data of Subdivision
 - When submitting digital files, a coversheet must be included outlining what digital contents are included***
- Construction Drawings (1 reduced – half-size; 3 full-size) *(as applicable)*
- "Letter of Satisfactory Completion" (of public improvements) – *only if the improvements are built without fiscal surety for the construction before the approval of the final plat.*

- Letters from utility companies verifying their easements (*only applicable if not completed within the Application*)
- Cost estimate of public improvements (*If in City limits, all public improvements to include water, wastewater (as applicable for sewer), roads, drainage, curbs, sidewalks, etc.*)
- List of Property Owners within 300' and corresponding property map, shaded to show 300' boundary
- Drainage Study (if not included in Engineer's Summary Report) (*if applicable*) (2 copies)
- Geotech Report (*if applicable*) (2 copies)
- Tax Certificates / Tax receipts (*verifying that property taxes are current*)
- Lot Closure Reports
- Subdivision Closure Reports
- Copy of a Notice Letter to the School District (revised for final submittal)
- Ag Facility Fees (\$35 per LUE)
- ESD#6 Application
- ESD #6 Application Fee of \$240
- Lighting Ordinance Compliance Agreement – signed with attached photos/drawings (*required if marked "Yes (Required)" on above Lighting Ordinance Section of application*)

For Projects within the ETJ, please include the following items in a **separate, sealed and labeled envelope** per the City of Dripping Spring's 1445 Agreement with Hays County:

- Final Plat
- Construction Plans (as applicable)
- County Application (and required exhibits)
- County Application Fee

Submittal for P&Z and Council


- Fiscal sureties for construction or maintenance of public improvements (*a maintenance fiscal needs submitting if the improvements are already built, in which case there would also be the Letter of Satisfactory Completion; the construction fiscal would be needed if the developer is going to build the improvements after the approval of the Final Plat. If project is in the ETJ, the City waives the fiscal surety as this is governed by the County's regulations*)

Public Notice

Regardless of schedule for Review Submittal or P&Z and Council Agendas, signs are required to be posted within 48 hours of the submittal of the complete application. The Public Notice sign must be picked up at the City Offices when the application is turned in for a deposit fee of \$100. Once a permit has been issued, signs in good condition can be returned for a \$75 refund.

- Public Notice Sign (\$100 deposit)

*All required items and information (including all applicable above listed exhibits and fees) must be received by the City in order for an application and request to be considered complete. **Incomplete submissions will not be reviewed or scheduled for any further action until all deficient items or information has been received.** By signing below, I acknowledge that I have read through and met the above requirements for a complete submittal:*



 Signature of Applicant

 10-15-20
 Date



ESPERANZA SUBDIVISION
PHASE TWO
FINAL PLAT

STATE OF TEXAS {
COUNTY OF HAYS {

KNOW ALL MEN BY THESE PRESENTS:

THAT, ESPERANZA 104, LLC, A TEXAS LIMITED LIABILITY COMPANY OWNER OF THAT CERTAIN 107.76 ACRES, SITUATED IN THE B.F. HANNA SURVEY NO. 28, ABSTRACT NO. 222, IN HAYS COUNTY, TEXAS, AS CONVEYED TO IT BY SPECIAL WARRANTY DEED WITH VENDOR'S LIEN RECORDED IN DOCUMENT NO. 19014537 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, DO HEREBY SUBDIVIDE ALL OF SAID 52.40 ACRES IN ACCORDANCE WITH THE ATTACHED MAP OR PLAT TO BE KNOWN AS "ESPERANZA SUBDIVISION PHASE TWO FINAL PLAT", SUBJECT TO ANY AND ALL EASEMENTS AND/OR RESTRICTIONS HERETOFORE GRANTED, AND DO HEREBY DEDICATE TO THE OWNERS OF THE PROPERTY THE USE OF THE STREETS AND EASEMENTS SHOWN HEREON.

WITNESS MY HAND THIS THE _____ DAY OF _____, A.D., 20__

BY: _____
JAMES DORNEY, MANAGER
ESPERANZA 104, LLC
7935 ESCALA DRIVE
AUSTIN, TEXAS 78735

STATE OF TEXAS
COUNTY OF HAYS

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED JAMES DORNEY, MANAGER, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____, 20__ A.D.

NOTARY PUBLIC IN AND FOR HAYS COUNTY, TEXAS

STATE OF TEXAS {
COUNTY OF HAYS {

I, ADRIAN H. ROSAS, A LICENSED PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT NO PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED 100-YEAR FLOOD ZONE AREA, AS DELINEATED ON THE FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL No. 48209C0085F, 48209C0105F AND 48209C0101F, EFFECTIVE DATE OF SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. ADDITIONALLY, STORM WATER RUNOFF FROM THE 100-YEAR STORM EVENT SHALL BE CONTAINED WITHIN THE DRAINAGE FACILITIES TO BE LOCATED WITHIN THE RIGHTS-OF-WAY AND/OR DRAINAGE EASEMENTS SHOWN ON THE ATTACHED PLAT.

ADRIAN H. ROSAS, P.E. DATE
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS NO. 89450

STATE OF TEXAS {
COUNTY OF HAYS {

I, TRAVIS S. TABOR, A REGISTERED PROFESSIONAL LAND SURVEYOR, AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF LAND SURVEYING, DO HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE SURVEY RELATED PORTIONS OF THE UNIFIED DEVELOPMENT CODE PUBLISHED BY THE CITY OF DRIPPING SPRINGS, TEXAS, IS TRUE AND CORRECT TO THE BEST OF MY BELIEF, AND WAS PREPARED FROM AN ON-THE-GROUND SURVEY PERFORMED UNDER MY SUPERVISION. THE FIELD WORK WAS COMPLETED ON MAY, 2017.

TRAVIS S. TABOR, R.P.L.S. DATE
STATE OF TEXAS NO. 6428

LANDESIGN SERVICES, INC
10090 W HIGHWAY 29
LIBERTY HILL, TEXAS 78642
(512) 238-7901
FIRM REGISTRATION NO. 10001800

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

FINAL PLAT NOTES:

- 1. THIS PLAT IS LOCATED ENTIRELY WITHIN THE FULL PURPOSE JURISDICTION OF THE CITY OF DRIPPING SPRINGS.
- 2. NO PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER RECHARGE ZONE.
- 3. THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.
- 4. THIS PROJECT IS LOCATED WITHIN THE BOUNDARY OF THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT.
- 5. WATER SERVICE WILL BE PROVIDED BY DRIPPING SPRINGS WATER SUPPLY CORPORATION (D.S.W.S.C.) , NO INDIVIDUAL WATER WELLS WILL BE PROVIDED.
- 6. EACH RESIDENTIAL LOT WILL BE SERVED BY AN INDIVIDUAL ON-SITE SEWAGE FACILITY.
- 7. ELECTRIC SERVICE WILL BE PROVIDED BY THE PEDERNALES ELECTRIC COOPERATIVE.
- 8. TELEPHONE SERVICE WILL BE PROVIDED BY VERIZON OR AT&T.
- 9. ORGANIZED GAS UTILITY SERVICE WILL BE PROVIDED BY TXGAS.
- 10. MINIMUM FRONT SETBACK SHALL BE 25 FEET.
- 11. MINIMUM REAR SETBACK SHALL BE 25 FEET.
- 12. MINIMUM SIDE AND INTERIOR SETBACKS SHALL BE 15 FEET.
- 13. MINIMUM SIDE STREET SETBACK SHALL BE 15 FEET.
- 14. PUBLIC UTILITY EASEMENTS OF 10 FEET SHALL BE LOCATED ON BOTH SIDES OF DEDICATED RIGHTS-OF-WAYS.
- 15. ALL STREETS SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE CITY OF DRIPPING SPRINGS REQUIREMENT AND UPON ACCEPTANCE SHALL BE DEDICATED TO THE CITY OF DRIPPING SPRINGS.
- 16. LINEAR FOOTAGE OF CHERRY SAGE COURT (LOCAL STREET): 613'
LINEAR FOOTAGE OF CAST IRON COVE (LOCAL STREET): 755'
LINEAR FOOTAGE OF YELLOW BELL RUN (LOCAL STREET): 2,749'
- 17. THIS PLAT HAS BEEN PREPARED IN ACCORDANCE WITH THE CITY OF DRIPPING SPRINGS REQUIREMENTS AS APPLICABLE TO THIS DEVELOPMENT.
- 18. AREA WITHIN THE RIGHT-OF-WAY = 6.008 ACRES
- 19. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF DRIPPING SPRINGS REQUIREMENTS OR AS APPROVED BY THE CITY OF DRIPPING SPRINGS.
- 20. ALL LOT AND ROADWAY CORNERS HAVE BEEN MARKED WITH 1/2" REBAR WITH CAP STAMPED "LSI SURVEY" SET.
- 21. IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEWAYS CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE PERMITTED ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS (A) A DRIVEWAY PERMIT HAS BEEN ISSUED BY THE CITY OF DRIPPING SPRINGS.
- 22. THE CITY OF DRIPPING SPRINGS ASSUMES NO OBLIGATION TO BUILD THE STREET, ROAD OR OTHER PUBLIC THOROUGHFARES DELINEATED AND SHOWN ON THIS PLAT, AND ALL BRIDGES AND CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IN SUCH STREETS, ROADS AND OR OTHER PUBLIC THOROUGHFARES OR IN CONNECTION THEREWITH SHALL BE THE RESPONSIBILITY OF THE OWNER AND/OR THE DEVELOPER OF THE TRACT OF LAND CONVEYED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY CITY OF DRIPPING SPRINGS AND ASSUMES NO OBLIGATION TO BUILD THE STREET, ROAD OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY BRIDGES OR CULVERTS IN CONNECTION THEREWITH.
- 23. THE H.O.A. SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE DETENTION, WATER QUALITY STRUCTURES AND TRAILS WITHIN THIS SUBDIVISION. D.S.W.S.C. AGENCY SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE WATER SYSTEM LOCATED WITHIN THE SUBDIVISION.
- 24. THIS PLAT SUBSEQUENT SITE DEVELOPMENT PLANS SHALL COMPLY WITH THE MOST CURRENT INTERNATIONAL FIRE CODE AS ADOPTED AND AMENDED BY THE EMERGENCY SERVICE DISTRICT #6, OR ITS SUCCESSORS.
- 25. PARKLAND DEDICATION REQUIREMENTS FOR PHASE I AND II HAVE BEEN SATISFIED AS PART OF THE PHASE I FINAL PLAT.
- 26. MINIMUM REAR SETBACKS FOR LOTS 17-21, BLOCK 2 SHALL BE 35 FEET.
- 27. WATER QUALITY EASEMENTS SHOWN ARE FOR THE PURPOSE OF COMPLIANCE WITH CITY OF DRIPPING SPRINGS WATER QUALITY ORDINANCE AND THE APPROVED TCEQ CONTRIBUTING ZONE PLAN FOR THIS TRACT.
- 28. WATER QUALITY EASEMENTS SHALL BE MAINTAINED TO THE STANDARDS SET BY TCEQ RG-348 FOR VEGETATIVE FILTER STRIPS AND GRASSY SWALES. THE HOA WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR OF WATER QUALITY EASEMENTS.
- 29. SEPTIC FIELDS, TANKS OR FACILITIES ARE PROHIBITED WITHIN THE WATER QUALITY EASEMENTS.
- 30. PARKING OF ANY VEHICLES, TRAILERS OR BOATS IS PROHIBITED WITHIN WATER QUALITY EASEMENTS.
- 31. ALL WATER QUALITY EASEMENTS ARE TO REMAIN UNDISTURBED WITH NO IMPERVIOUS COVER OR ABOVE GROUND STRUCTURES EXCEPT FOR THE FOLLOWING:
 - a. ONE 25' WIDE DRIVEWAY CROSSING PER LOT.
 - b. FENCES THAT DO NOT OBSTRUCT FLOW.
 - c. LOW IMPACT PARKS AND OPEN SPACE LIMITED TO SIDEWALKS, TRAILS, PICNIC FACILITIES AND SIMILAR CONSTRUCTION THAT DOES NOT SIGNIFICANTLY ALTER THE EXISTING VEGETATION WHEN APPROVED BY THE CITY ENGINEER.
 - d. WATER METERS, ELECTRIC BOXES AND ANY OTHER UTILITY DESIGNED TO SERVICE RESIDENTIAL LOTS.
 - e. TERRACING TO REDUCE SLOPE WHEN APPROVED BY THE CITY ENGINEER.
 - f. LANDSCAPING IMPROVEMENTS SHALL BE LIMITED TO PERVIOUS, VEGETATIVE IMPROVEMENTS WITH NO HARDSCAPE AND NO INCREASE IN SLOPES.
 - g. WATER QUALITY AND STORMWATER SYSTEM IMPROVEMENTS WHEN APPROVED BY THE CITY ENGINEER.
- 32. ALL TRAILS WILL BE MAINTAINED BY THE HOA.

ENGINEERING AND PUBLIC WORKS DEPARTMENT

NO STRUCTURE WITHIN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY OR A STATE APPROVED COMMUNITY WATER SYSTEM. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SANITARY SEWER SYSTEM OR TO AN INDIVIDUAL ON-SITE SEWAGE FACILITY SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED BY THE CITY OF DRIPPING SPRINGS ENGINEERING AND PUBLIC WORKS DEPARTMENT.

NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL CITY OF DRIPPING SPRING DEVELOPMENT PERMIT REQUIREMENTS HAVE BEEN MET.

CHAD GILPIN, P.E. DATE
CITY ENGINEER

STATE OF TEXAS
COUNTY OF HAYS
CITY OF DRIPPING SPRINGS

THIS PLAT, ESPERANZA SUBDIVISION PHASE TWO, HAS BEEN SUBMITTED TO BE CONSIDERED BY THE CITY COUNCIL OF DRIPPING SPRINGS AND IS HERE BY APPROVED APPROVED, THIS THE _____ DAY OF _____, 20__ A.D.,

PLANNING AND ZONING CHAIR OR VICE CHAIR

ATTEST: _____
ANDREA CUNNINGHAM
CITY SECRETARY

STATE OF TEXAS
COUNTY OF HAYS

I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20__ A.D. AT _____ O'CLOCK ___M. IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS IN DOCUMENT NUMBER _____ WITNESS MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____, 20__ A.D.

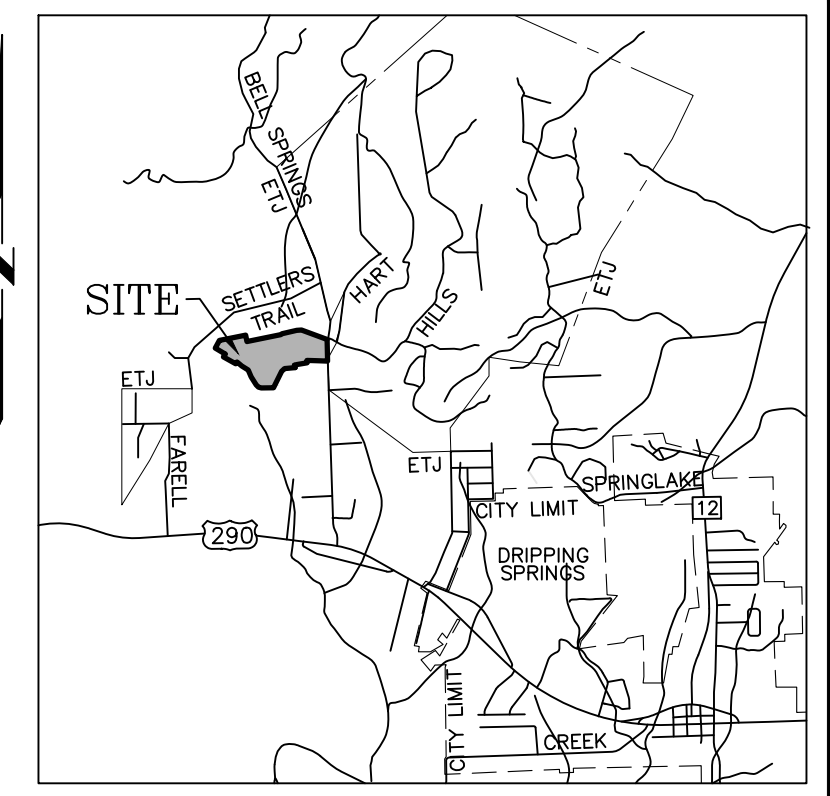
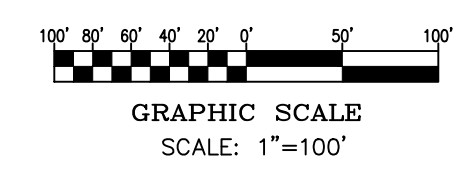
ELAINE H. CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

PROJECT NAME: BELL SPRINGS	SCALE: 1" = 100'
JOB NUMBER: 376-15-1	DRAWING FILE PATH: L:\BELL SPRINGS\DWG\ESPERANZA SUBD PH 2.DWG
DATE: 04/29/2020	FIELDNOTE FILE PATH: L:\BELL SPRINGS\Metes and Bounds
RPLS: TST	TECH: HAS
CHECKED BY: TST	PARTY-CHIEF: N/A
	FIELDBOOK: N/A

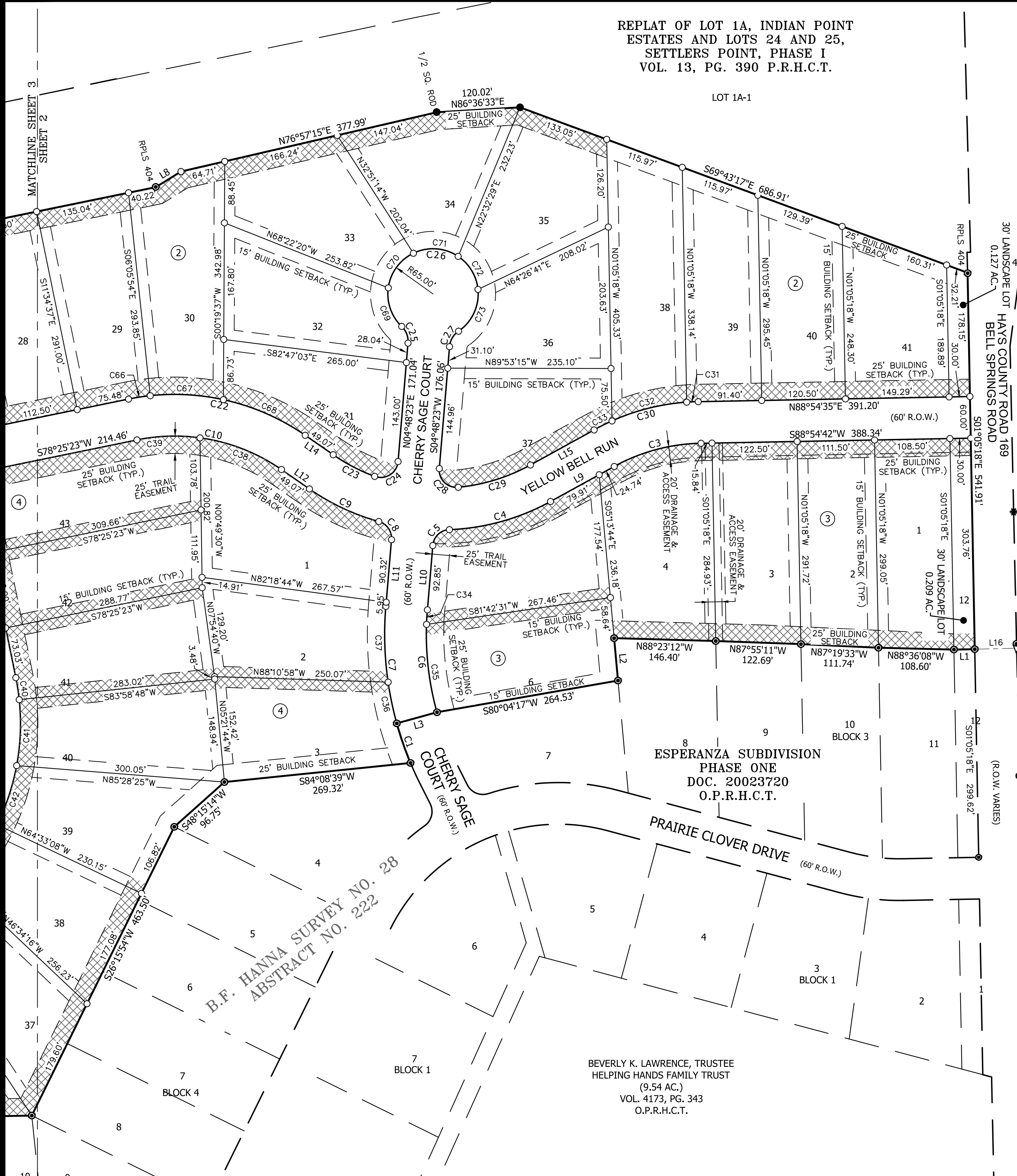
DRAWING NAME:
ESPERANZA SUBD
PH 2.DWG

SHEET
01 of 04

REPLAT OF LOT 1A, INDIAN POINT ESTATES AND LOTS 24 AND 25, SETTLERS POINT, PHASE I VOL. 13, PG. 390 P.R.H.C.T.



LANDESIGN SERVICES, INC. 10090 W HIGHWAY 29, LIBERTY HILL, TEXAS 78642 TIBBELS FIRM NO. 10001800 512-238-7901



VICINITY MAP (NOT TO SCALE)

LEGEND

- IRON REBAR FOUND (1/2", OR AS NOTED)
NAIL FOUND (60D, OR AS NOTED)
1/2" REBAR WITH CAP SET STAMPED "LSI SURVEY" SET (OR AS NOTED)
1/2" REBAR WITH CAP STAMPED "LSI SURVEY" FOUND (OR AS NOTED)
COTTON SPINDLE SET
CALCULATED POINT NOT SET
O.P.H.C.T. OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS
P.R.H.C.T. PLAT RECORDS OF HAYS COUNTY, TEXAS
WATER QUALITY EASEMENTS

REDIVISION OF LOT H-36 & LOT H-37 HARMON HILLS, SECTION ONE VOL. 10, PG. 277 P.R.H.C.T.

OWNER/DEVELOPER: JAMES DORNEY MANAGER, TBJ DEVELOPMENT, LLC 8601 RANCH ROAD 2222 BUILDING 1, SUITE 150 AUSTIN, TEXAS 78730
SURVEYOR: LANDESIGN SERVICES, INC. 10090 W HIGHWAY 29 LIBERTY HILL, TEXAS 78642 FIRM REGISTRATION NO. 10001800
ENGINEER: ADRIAN H. ROSAS, PE TRE & ASSOCIATES 6101 W. COURTYARD DR. BLDG. 1, SUITE 100 AUSTIN, TEXAS, 78730

Table with 2 columns: Description and Value. Includes: TOTAL NUMBER OF LOTS = 58, RESIDENTIAL LOTS = 56, LANDSCAPE LOT = 2, STREET AREA = 6.01 ACRES, TOTAL AREA = 52.40 ACRES, LINEAR FEET STREET = 4,117 L.F.

BYRON JAMES FOSTER & ALEXANDRA ELIZABETH FOSTER INST. NO. 16028442 P.R.H.C.T.

THIS PROJECT IS REFERENCED FOR ALL BEARING AND COORDINATE BASIS TO THE TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83 - 2011 ADJUSTMENT), SOUTH CENTRAL ZONE (4204).

DISTANCES SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A GRID-TO-SURFACE COMBINED ADJUSTMENT FACTOR OF 1.0000833 AND SCALED FROM AN ORIGIN POINT OF GRID COORDINATES: N=13,991,210.22, E=2,245,286.24

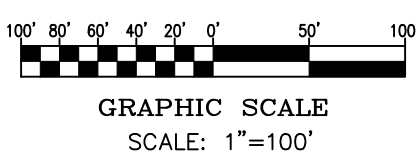
B.F. HANNA SURVEY NO. 28 ABSTRACT NO. 222

BEVERLY K. LAWRENCE, TRUSTEE HELPING HANDS FAMILY TRUST (9.54 AC.) VOL. 4173, PG. 343 O.P.R.H.C.T.

ESPERANZA SUBDIVISION PHASE TWO FINAL PLAT

Table with 2 columns: Field Name and Value. Includes: PROJECT NAME: BELL SPRINGS, JOB NUMBER: 376-15-1, DATE: 04/29/2020, SCALE: 1" = 100', DRAWING FILE PATH: L:\BELL SPRINGS\DWGS\ESPERANZA SUBD PH 2.DWG, FIELDNOTE FILE PATH: L:\BELL SPRINGS\Metas and Bounds, RPLS: TST, TECH: HAS, PARTYCHIEF: N/A, CHECKED BY: TST, FIELDBOOK: N/A

DRAWING NAME: ESPERANZA SUBD PH 2.DWG

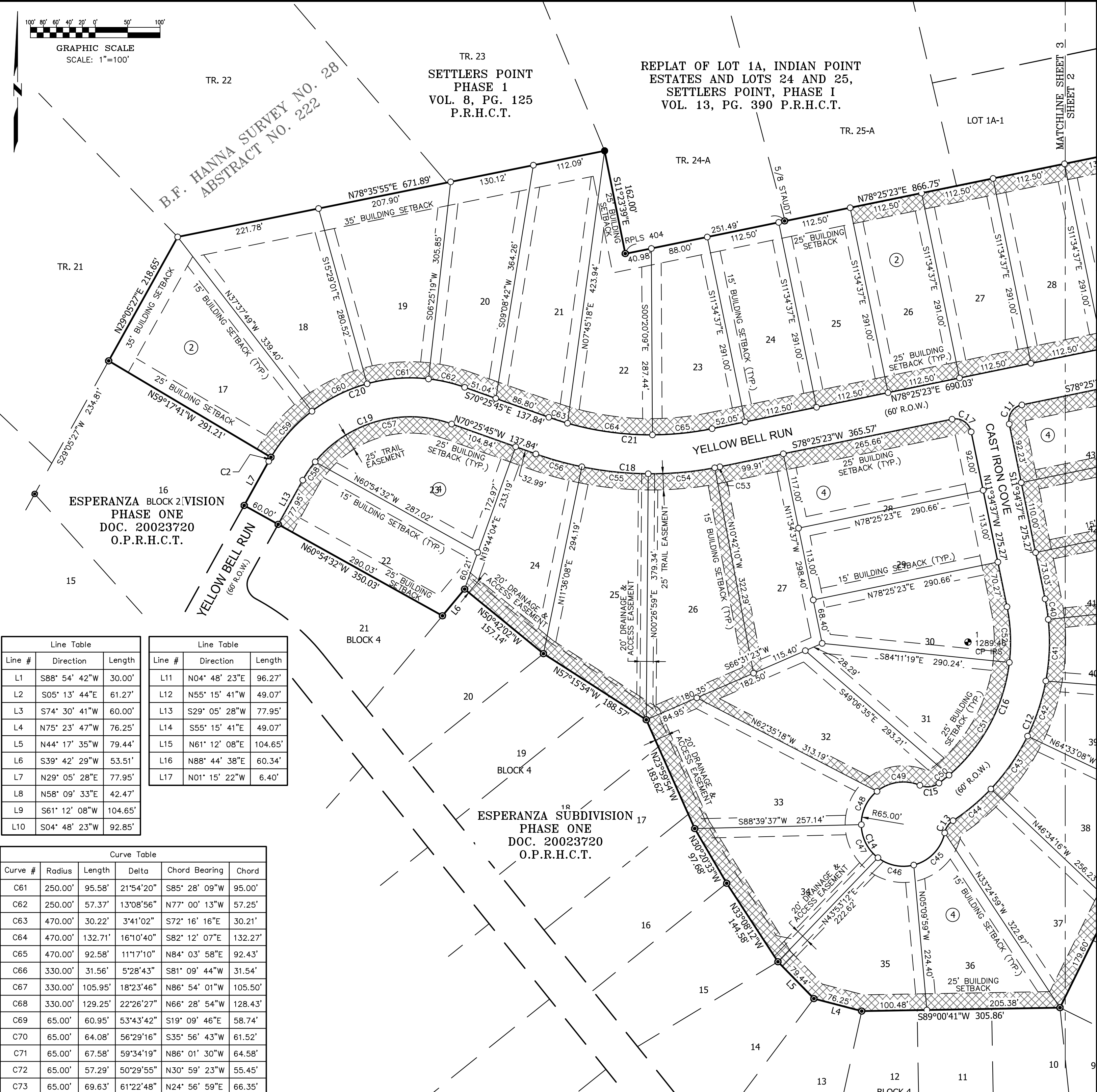


Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord
C1	480.00'	60.37'	7°12'20"	S19° 05' 40"E	60.33'
C2	250.00'	7.04'	1°36'51"	N29° 53' 54"E	7.04'
C3	270.00'	130.58'	27°42'34"	S75° 03' 25"W	129.31'
C4	330.00'	152.44'	26°28'01"	S74° 26' 09"W	151.09'
C5	25.00'	36.16'	82°51'47"	S46° 14' 16"W	33.09'
C6	420.00'	148.79'	20°17'54"	S05° 20' 34"E	148.02'
C7	480.00'	170.05'	20°17'52"	N05° 20' 33"W	169.16'
C8	25.00'	34.60'	79°18'11"	N34° 50' 42"W	31.91'
C9	330.00'	110.79'	19°14'07"	N64° 52' 44"W	110.27'
C10	270.00'	218.26'	46°18'56"	N78° 25' 09"W	212.36'
C11	25.00'	39.27'	90°00'00"	S33° 25' 23"W	35.36'
C12	330.00'	393.08'	68°14'55"	S22° 32' 50"W	370.25'
C13	30.00'	23.40'	44°41'33"	S34° 19' 32"W	22.81'
C14	65.00'	318.72'	280°56'45"	N27° 32' 52"W	82.74'
C15	30.00'	30.98'	59°09'44"	N83° 20' 38"E	29.62'
C16	270.00'	307.91'	65°20'24"	N21° 05' 35"E	291.49'
C17	25.00'	39.27'	90°00'00"	N56° 34' 37"W	35.36'
C18	530.00'	288.12'	31°08'52"	N86° 00' 11"W	284.59'
C19	190.00'	266.88'	80°28'47"	S69° 19' 51"W	245.48'
C20	250.00'	344.12'	78°51'55"	N70° 08' 17"E	317.59'
C21	470.00'	255.51'	31°08'52"	S86° 00' 11"E	252.37'
C22	330.00'	266.76'	46°18'56"	S78° 25' 09"E	259.56'
C23	270.00'	67.53'	14°19'49"	S62° 25' 35"E	67.35'
C24	25.00'	46.08'	105°36'07"	N57° 36' 26"E	39.83'
C25	30.00'	26.62'	50°50'00"	N20° 36' 37"W	25.75'
C26	65.00'	319.54'	281°40'00"	S85° 11' 37"E	82.11'
C27	30.00'	26.62'	50°50'00"	S30° 13' 23"W	25.75'
C28	25.00'	43.80'	100°22'16"	S45° 22' 45"E	38.41'
C29	270.00'	109.48'	23°13'58"	N72° 49' 07"E	108.73'
C30	318.68'	156.85'	28°11'59"	N74° 48' 32"E	155.27'
C31	318.68'	16.61'	2°59'09"	S87° 24' 57"W	16.60'
C32	318.68'	111.41'	20°01'49"	S75° 54' 28"W	110.84'
C33	318.68'	28.83'	5°11'01"	S63° 18' 03"W	28.82'
C34	420.00'	20.97'	2°51'37"	S03° 22' 35"W	20.96'
C35	420.00'	127.83'	17°26'17"	S06° 46' 22"E	127.34'
C36	480.00'	60.68'	7°14'34"	S11° 52' 14"E	60.64'
C37	480.00'	109.37'	13°03'20"	S01° 43' 17"E	109.14'
C38	270.00'	126.97'	26°56'35"	N68° 43' 58"W	125.80'
C39	270.00'	91.29'	19°22'21"	S88° 06' 33"W	90.86'
C40	330.00'	32.01'	5°33'25"	N08° 47' 55"W	31.99'
C41	330.00'	95.33'	16°33'05"	N02° 15' 20"E	95.00'
C42	330.00'	89.82'	15°35'43"	N18° 19' 44"E	89.55'
C43	330.00'	99.65'	17°18'08"	N34° 46' 40"E	99.28'
C44	330.00'	76.27'	13°14'34"	N50° 03' 01"E	76.10'
C45	65.00'	72.51'	63°55'04"	N43° 56' 17"E	68.81'
C46	65.00'	58.28'	51°22'20"	S78° 25' 01"E	56.35'
C47	65.00'	59.02'	52°01'43"	S26° 43' 00"E	57.02'
C48	65.00'	58.79'	51°49'04"	S25° 12' 24"W	56.80'
C49	65.00'	70.12'	61°48'35"	S82° 01' 13"W	66.77'
C50	270.00'	19.75'	4°11'26"	N51° 40' 04"E	19.74'
C51	270.00'	201.83'	42°49'44"	N28° 09' 29"E	197.16'
C52	270.00'	86.33'	18°19'14"	N02° 25' 00"W	85.97'
C53	530.00'	8.09'	0°52'27"	N78° 51' 36"E	8.09'
C54	530.00'	103.16'	11°09'09"	N84° 52' 25"E	103.00'
C55	530.00'	103.16'	11°09'09"	S83° 58' 26"E	103.00'
C56	530.00'	73.71'	7°58'07"	S74° 24' 49"E	73.65'
C57	190.00'	232.64'	70°09'20"	S74° 29' 35"W	218.38'
C58	190.00'	34.24'	10°19'27"	S34° 15' 11"W	34.19'
C59	250.00'	95.58'	21°54'20"	S41° 39' 29"W	95.00'
C60	250.00'	95.58'	21°54'20"	S63° 33' 49"W	95.00'

Line Table		
Line #	Direction	Length
L1	S88° 54' 42"W	30.00'
L2	S05° 13' 44"E	61.27'
L3	S74° 30' 41"W	60.00'
L4	N75° 23' 47"W	76.25'
L5	N44° 17' 35"W	79.44'
L6	S39° 42' 29"W	53.51'
L7	N29° 05' 28"E	77.95'
L8	N58° 09' 33"E	42.47'
L9	S61° 12' 08"W	104.65'
L10	S04° 48' 23"W	92.85'

Line Table		
Line #	Direction	Length
L11	N04° 48' 23"E	96.27'
L12	N55° 15' 41"W	49.07'
L13	S29° 05' 28"W	77.95'
L14	S55° 15' 41"E	49.07'
L15	N61° 12' 08"E	104.65'
L16	N88° 44' 38"E	60.34'
L17	N01° 15' 22"W	6.40'

Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord
C61	250.00'	95.58'	21°54'20"	S85° 28' 09"W	95.00'
C62	250.00'	57.37'	13°08'56"	N77° 00' 13"W	57.25'
C63	470.00'	30.22'	3°41'02"	S72° 16' 16"E	30.21'
C64	470.00'	132.71'	16°10'40"	S82° 12' 07"E	132.27'
C65	470.00'	92.58'	11°17'10"	N84° 03' 58"E	92.43'
C66	330.00'	31.56'	5°28'43"	S81° 09' 44"W	31.54'
C67	330.00'	105.95'	18°23'46"	N86° 54' 01"W	105.50'
C68	330.00'	129.25'	22°26'27"	N66° 28' 54"W	128.43'
C69	65.00'	60.95'	53°43'42"	S19° 09' 46"E	58.74'
C70	65.00'	64.08'	56°29'16"	S35° 56' 43"W	61.52'
C71	65.00'	67.58'	59°34'19"	N86° 01' 30"W	64.58'
C72	65.00'	57.29'	50°29'55"	N30° 59' 23"W	55.45'
C73	65.00'	69.63'	61°22'48"	N24° 56' 59"E	66.35'



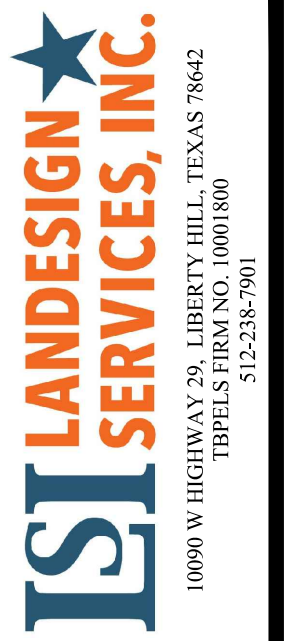
LSI
LANDESIGN SERVICES, INC.

10090 W HIGHWAY 29, LIBERTY HILL, TEXAS 78642
TIBBELS FIRM NO. 10001800
512-238-7901

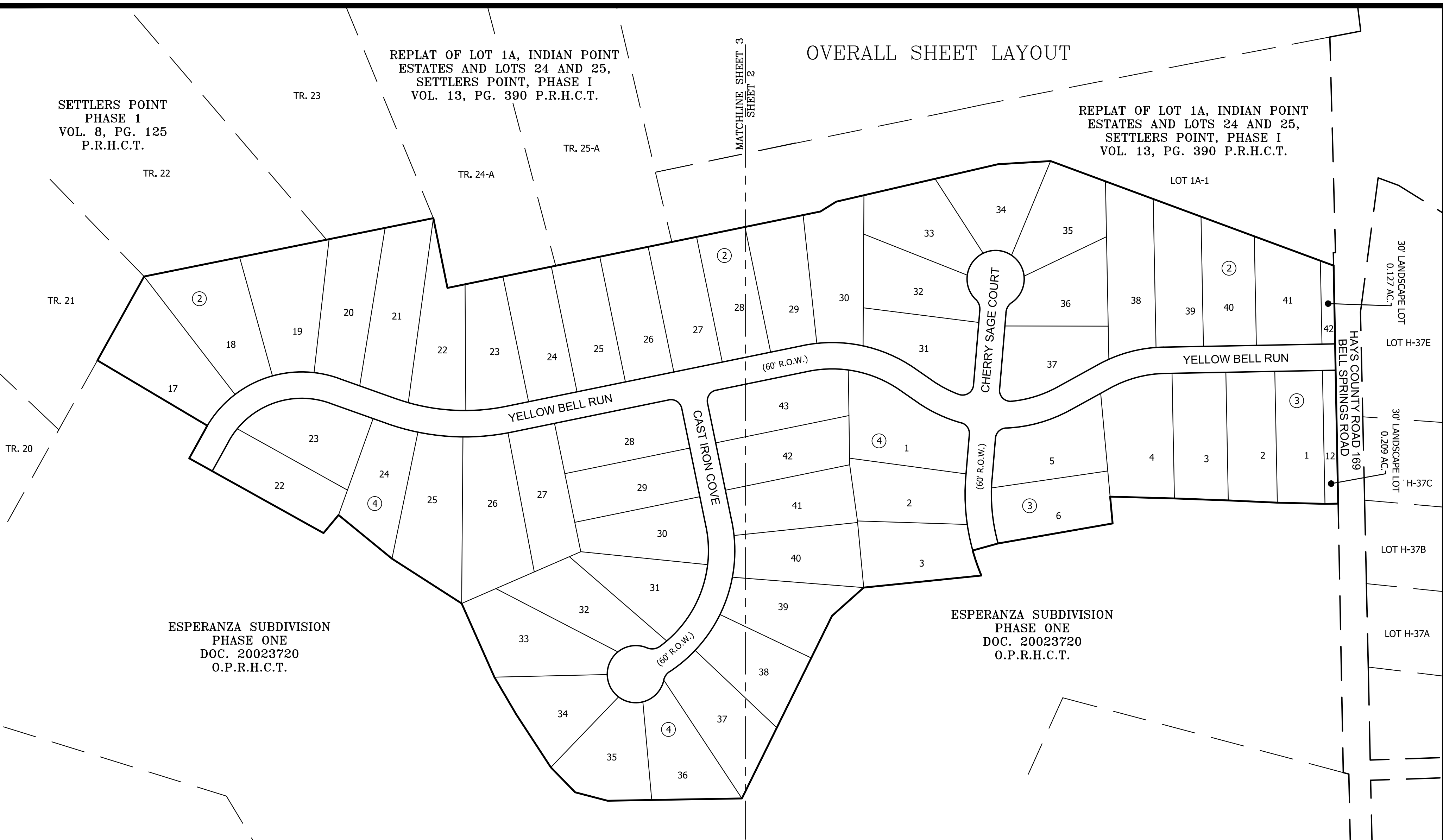
**ESPERANZA SUBDIVISION
PHASE TWO
FINAL PLAT**

PROJECT NAME: BELL SPRINGS	SCALE: 1" = 100'
JOB NUMBER: 376-15-1	DRAWING FILE PATH: L:\BELL SPRINGS\DWGS\ESPESPERANZA SUBD PH 2.DWG
DATE: 04/29/2020	FIELDNOTE FILE PATH: L:\BELL SPRINGS\Metes and Bounds
RPLS: TST	TECH: HAS
CHECKED BY: TST	PARTYCHIEF: N/A
	FIELDBOOK: N/A

DRAWING PATH: L:\BELL SPRINGS\DWGS\ESPESPERANZA SUBD PH 2.DWG SHEET PLOT SIZE: ARCH FULL BLEED C (18.00 X 24.00 INCHES) LAST SAVED: 3/9/2021 11:51 AM PLOT DATE: 3/9/2021 1:38 PM



OVERALL SHEET LAYOUT



SETTLERS POINT
PHASE 1
VOL. 8, PG. 125
P.R.H.C.T.

REPLAT OF LOT 1A, INDIAN POINT
ESTATES AND LOTS 24 AND 25,
SETTLERS POINT, PHASE I
VOL. 13, PG. 390 P.R.H.C.T.

REPLAT OF LOT 1A, INDIAN POINT
ESTATES AND LOTS 24 AND 25,
SETTLERS POINT, PHASE I
VOL. 13, PG. 390 P.R.H.C.T.

ESPERANZA SUBDIVISION
PHASE ONE
DOC. 20023720
O.P.R.H.C.T.

ESPERANZA SUBDIVISION
PHASE ONE
DOC. 20023720
O.P.R.H.C.T.

LOT C
SETTLERS POINT
PHASE 2
VOL. 9, PG. 105
P.R.H.C.T.

LOT TABLE			
LOT	BLOCK	Area (Sq Ft.)	Area (Ac.)
17	2	47376	1.09
18	2	46554	1.07
19	2	43061	0.99
20	2	38258	0.88
21	2	43480	1.00
22	2	35372	0.81
23	2	33738	0.77
24	2	32738	0.75
25	2	32737	0.75
26	2	32737	0.75
27	2	32738	0.75
28	2	32737	0.75
29	2	35253	0.81
30	2	38826	0.89

LOT TABLE			
LOT	BLOCK	Area (Sq Ft.)	Area (Ac.)
31	2	33150	0.76
32	2	33786	0.78
33	2	35086	0.81
34	2	32744	0.75
35	2	34638	0.80
36	2	33362	0.77
37	2	32694	0.75
38	2	39788	0.91
39	2	34193	0.78
40	2	32761	0.75
41	2	32710	0.75
42	2	5521	0.13

LOT TABLE			
LOT	BLOCK	Area (Sq Ft.)	Area (Ac.)
1	3	32702	0.75
2	3	32935	0.76
3	3	35320	0.81
4	3	41828	0.96
5	3	36257	0.83
6	3	33241	0.76
12	3	9113	0.21
1	4	42944	0.99
2	4	32840	0.75
3	4	34629	0.79
22	4	33002	0.76
23	4	36195	0.83
24	4	32730	0.75
25	4	45143	1.04
26	4	47615	1.09
27	4	34246	0.79

LOT TABLE			
LOT	BLOCK	Area (Sq Ft.)	Area (Ac.)
28	4	33873	0.78
29	4	32845	0.75
30	4	32697	0.75
31	4	32671	0.75
32	4	35722	0.82
33	4	42339	0.97
34	4	32860	0.75
35	4	35477	0.81
36	4	33362	0.77
37	4	37757	0.87
38	4	32700	0.75
39	4	33483	0.77
40	4	35098	0.81
41	4	33869	0.78
42	4	32914	0.76
43	4	37001	0.85

ESPERANZA SUBDIVISION
PHASE TWO
FINAL PLAT

PROJECT NAME: BELL SPRINGS
JOB NUMBER: 376-15-1
DATE: 04/29/2020 SCALE: 1" = 100'
DRAWING FILE PATH: L:\BELL SPRINGS\DWG\ESPERANZA SUBD PH 2.DWG
FIELDNOTE FILE PATH: L:\BELL SPRINGS\Metes and Bounds
RPLS: TST TECH: HAS PARTYCHIEF:
CHECKED BY: TST FIELDBOOK: N/A

DRAWING NAME:
ESPERANZA SUBD
PH 2.DWG



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384 • Dripping Springs, TX 78620
512.858.4725 • www.cityofdrippingsprings.com

Date: April 13, 2021

Dylan Holland
TRE & Associates, LLC
dholland@tr-eng.com

Permit Number: SUB2020-0040
Project Name: Esperanza Phase 2 Final Plat
Project Address: 4900 Bell Springs Road, Dripping Springs, TX 78620

City staff has completed its review of the above-named project. Reviewer comments are provided below. These comments are intended to be comprehensive; however, there may be additional comments after reviewing the submitted corrections. Applicants are encouraged to contact reviewers directly with questions.

Fire Marshal Comments

The following comments have been provided by Dillon Polk. Should you have any questions or require additional information, please contact Dillon Polk by email dpolk@northhaysfire.com.

1. Fire Approved

Engineer/Public Works Comments

The following comments have been provided by Chad Gilpin. Should you have any questions or require additional information, please contact Chad Gilpin by email cgilpin@cityofdrippingsprings.com.

2. The Final Plat cannot be approved until either;
 - a. Construction of Public Infrastructure is complete and accepted by the Jurisdiction that will own it; OR
 - b. Fiscal Surety is posted and approved by the Jurisdiction that will own the Public Infrastructure.

City Planner Comments

The following comments have been provided by Amanda Padilla. Should you have any questions or require additional information, please contact Amanda Padilla by email apadilla@cityofdrippingsprings.com.

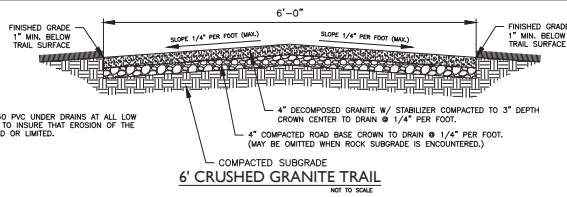
3. Planning Approves

Resubmittals must include a cover letter addressing each reviewer comment and noting where associated corrections/revisions/changes can be found in the submittal documents. **Please keep previous review comments on the document as you resubmit your response letter, so that staff can keep track of the original comments.** Resubmittals that do not include a cover letter will be considered incomplete and returned.

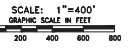
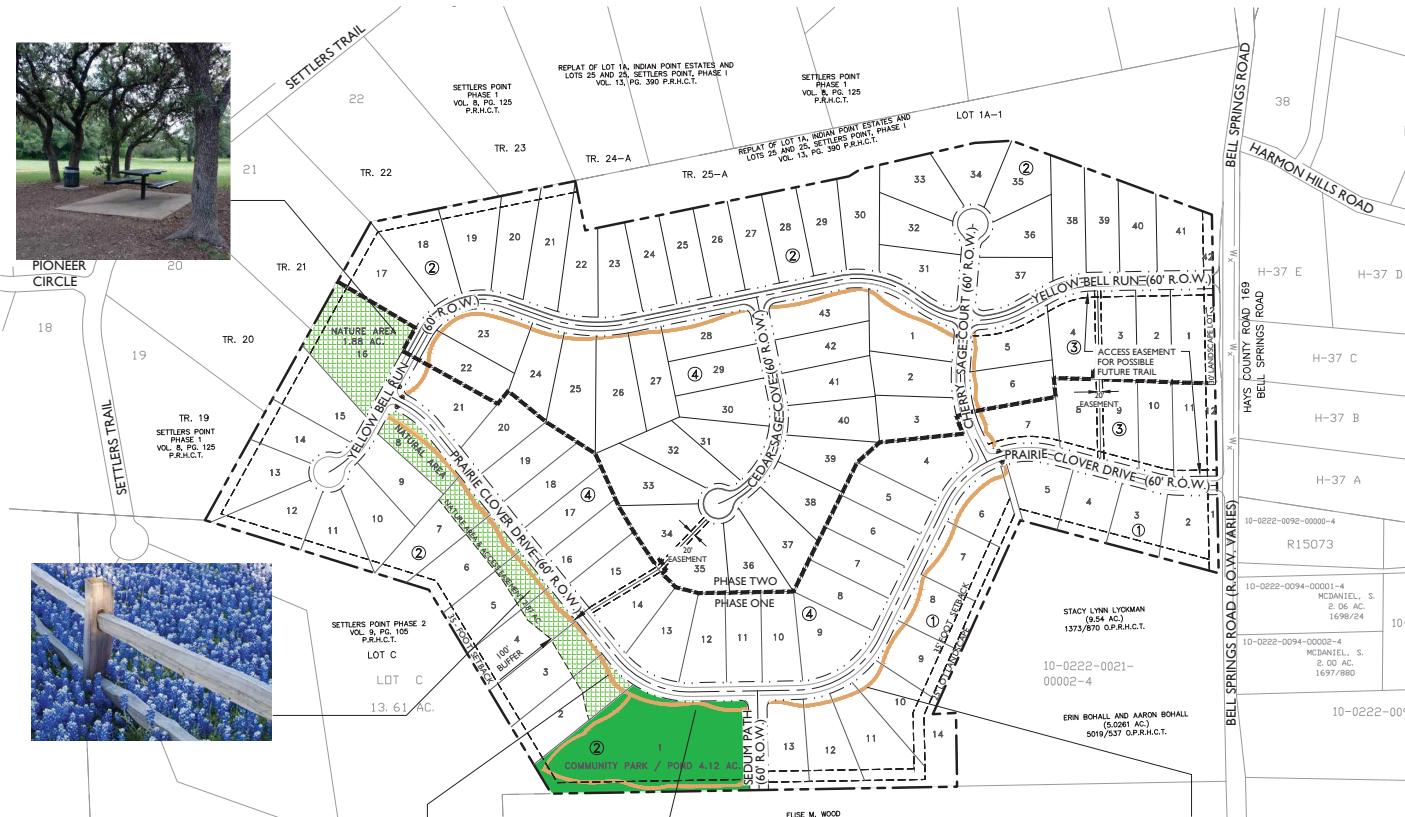
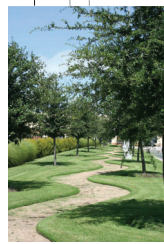
Note regarding plats subject to Planning and Zoning Commission review: Resubmittals of corrected plats and associated plans must be received no later than April 20th for final review and inclusion in the P&Z packets [Ch. 28, Ex. A, Sec. 3.8].

Regards,

Amanda Padilla



NOTE: 1) PROVIDE SCH 40 PVC UNDER DRAINS AT ALL LOW WATER CROSSINGS TO INSURE THAT EROSION OF THE TRAIL IS PREVENTED OR LIMITED.



LEGEND

SUBDIVISION BOUNDARY	---
PROPOSED PHASE LINE	----
TRAIL SYSTEM	—
NATURE AREA	
COMMUNITY PARK/ POND	

PUBLIC PARKS AND OPEN SPACE

COMMUNITY POND =	2.00 AC
COMMUNITY PARK =	2.12 AC
TRAILS =	0.75 AC
NATURE AREA =	4.75 AC
TOTAL PUBLIC PARK & OPEN SPACE	9.62 AC
PARKLAND REQUIRED	4.44 AC
PARKLAND PROVIDED	9.62 AC

PRELIMINARY LOT COUNT

RESIDENTIAL LOTS =	104
POND/PARK LOT =	7
TOTAL LOTS =	111

1 ACRE PER 25 LUEs = REQUIRED PARKLAND
111 LOTS / 25 LUEs = 4.44 AC REQ'D

LOT COUNT PER PHASE

RESIDENTIAL LOTS - PHASE 1 =	48
RESIDENTIAL LOTS - PHASE 2 =	56
PARK/POND/LANDSCAPE LOT - PHASE 1 =	5.5
PARK/POND/LANDSCAPE LOT - PHASE 2 =	1.5



Engineering Solutions
11100 Hwy. 196, Box 100
El Paso, Texas 79912
Tel: (915) 836-8000
Fax: (915) 836-8001

PROJECT NO. 1731-1127-132	DESIGNED BY: HD		
DWG FILE: PRELIMINARY PLAT	DRAWN BY: THE		
DATE: JANUARY 2017	CHECKED BY: AIR		
NO.	BY	DATE	REVISION DESCRIPTION

ESPERANZA SUBDIVISION

PARK PLAN

NOTICE:
ALTERATION OF A SEALED
DRAWING WITHOUT PROPER
NOTIFICATION TO THE
RESPONSIBLE ENGINEER IS
A VIOLATION OF THE TEXAS
ENGINEERING PRACTICE ACT.



03/08/2019

SHEET 3 OF 8

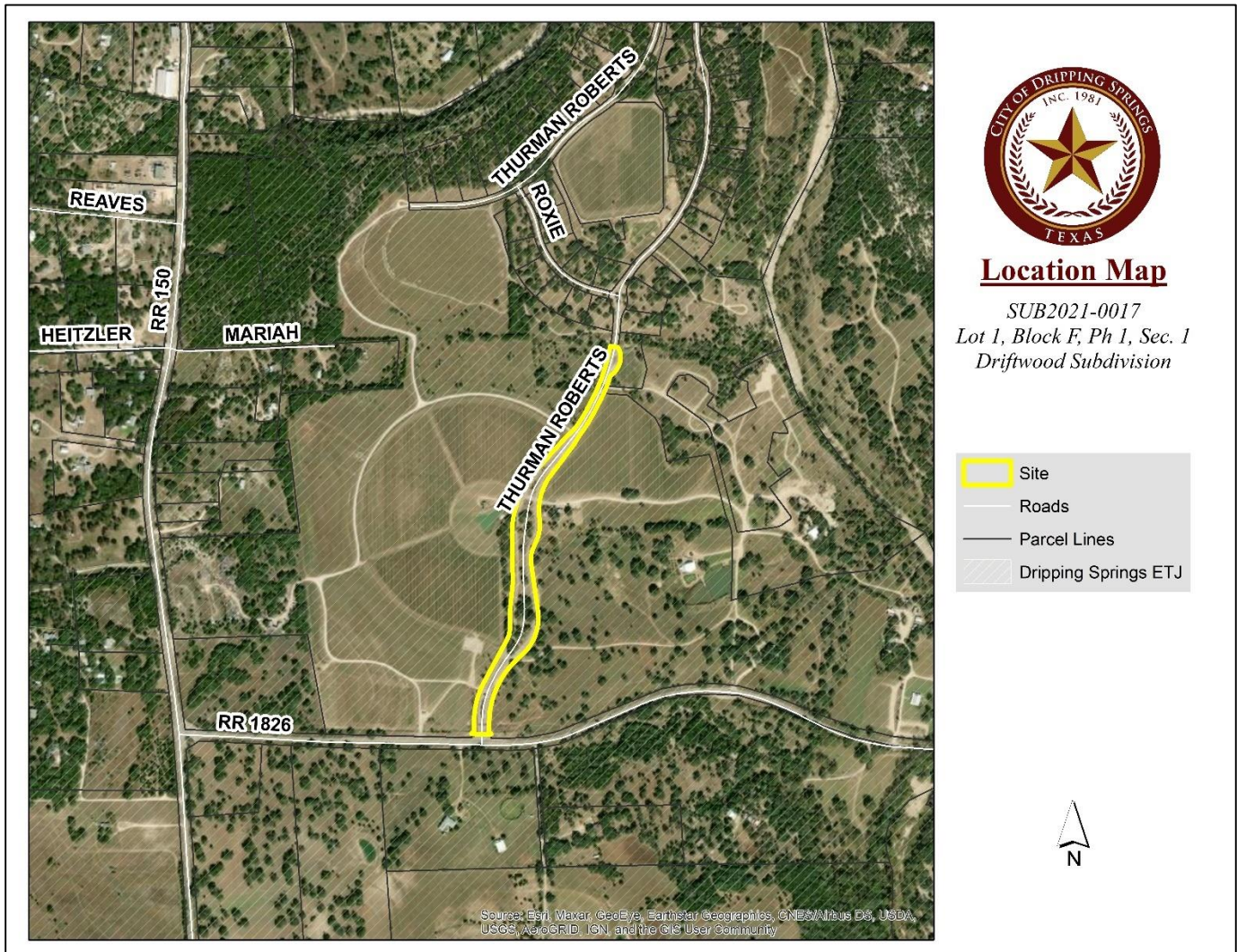


Planning & Zoning Commission Planning Department Staff Report

P & Z Meeting: April 27, 2021
Project Number: SUB2021-0017 – Driftwood Greeter House Vacation and Final Plat
Project Planner: Robyn Miga, Consulting Planner

Item Details

Project Name: Driftwood Greeter House
Property Location: 214 Thurman Roberts Way
Legal Description: Approximately 6.8292 acres, called Lot 1, Block F of the Driftwood Subdivision, Phase One, Section One, Book 18, Page 236
Applicant: Atwell, LLC, c/o Stephen Delgado
Property Owner: Driftwood Golf & Ranch Club, c/o Tommy Lawton
Request: Partial Vacation and Final Plat of Lot 1, Block F of the Driftwood Phase One, Section One Plat



Overview

The applicant requested to vacate Lot 1, Block F from the Driftwood Subdivision, Phase One, Section One, Final Plat to remove a note on the private right-of-way and public utility easement that calls out a drainage easement. The reason for the removal of the drainage easement is because the property owner would like to construct a greater house in the private right-of-way for the subdivision, and structures are not allowed in a drainage easement.

Local Government Code 212.013 allows for plat vacations if all owners of lots in the plat join in the application for vacation. In this proposed vacation, the applicant is vacating Lot 1, Block F from the existing subdivision, and then replatting the existing Lot 1 into two lots.

Action Requested

Approval with Conditions stated below for the application for a Final Plat (SUB2021-0017), consisting of approximately 6.8292 acres located at 214 Thurman Roberts Way, generally located north of FM 1826, east of FM 150, and south of Onion Creek.

Conditions

1. Remove Block F, Lot one from the title block, because it's repetitive and not the official name of the subdivision prior to this replat.
2. The applicant receives a 1445 approval letter from Hays County.
3. Staff work with the applicant to ensure plat vacation is signed by appropriate authority

Site Information

Location:

The subject property is located at 214 Thurman Roberts Way, generally located north of FM 1826, east of FM 150, and south of Onion Creek.

Zoning Designation: ETJ

Property History

This is the second request regarding this lot.

Recommendation

Staff is recommending *approval with conditions*.

Attachments

Exhibit 1 – Vacation Documents

Exhibit 2 – Proposed Final Plat for the Subdivision

Recommended Action:	Approval with conditions.
Budget/Financial Impact:	All fees have been paid.
Public Comments:	None Received at this time.
Enforcement Issues:	N/A

THE STATE OF TEXAS §

COUNTY OF HAYS §

PARTIAL VACATION OF SUBDIVISION, TO WIT: VACATION OF LOT 1, BLOCK F, DRIFTWOOD SUBDIVISION, PHASE ONE, SECTION ONE RECORDED IN VOL. 18, PAGES 236-240 IN HAYS COUNTY, TEXAS.

WHEREAS, Driftwood Golf Club Development, Inc., Owner of Lot 1, Block F, Driftwood Subdivision, Phase One, Section One, recorded in Vol. 18, Pages 236-240 of the Plat Records of Hays County, Texas out of the Freelove Woody Survey No. 23, Abstract No. 20, in Hays County, Texas as conveyed to it by Warranty Deed as recorded in Document Number 18031473 of the Official Public Records of Hays County, Texas; and

WHEREAS, on the 23rd day of March 2021, the Planning and Zoning Commission of the City of Dripping Springs, Texas, at its regular meeting, did approve the partial vacation of Lot 1, Block F, Driftwood Subdivision, Phase One, Section One, of that certain plat of record in Vol. 18, Pages 236-240 of the Plat Records of Hays County, Texas upon application thereof by the Owners of all land covered thereby; and

NOW THEREFORE, the Planning and Zoning Commission of the City of Dripping Springs, Texas does by these presents hereby declare that:

The above recitals are true and correct and that Lot 1, Block F, Driftwood Subdivision, Phase One, Section One, of that certain plat of record in Vol. 18, Pages 236-240 of the Plat Records of Hays County, Texas are to be partially vacated as shown in Instrument Number XXXXXXXX of the Plat Records of Hays County, Texas.

EXECUTED THIS, the ____ day of _____.

CITY OF DRIPPING SPRINGS:

F.H. “Mim” James, Planning and Zoning Commission Chair
City of Dripping Springs, Texas

THE STATE OF TEXAS §
 §
COUNTY OF HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared **F.H. “Mim” James**, known to me to be the person whose name is subscribed to the foregoing instrument as Chair of the Planning and Zoning Commission of the City of Dripping Springs, Texas, a municipal corporation, and he acknowledged to me that he executed the same for the purposes and considerations therein expressed, in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, this the ____th day of August 2021.

Andrea Cunningham, Notary Public
State of Texas

Driftwood Golf Club Development, Inc.

THE STATE OF TEXAS §
 §
COUNTY OF HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument as _____ and they acknowledged to me that they executed the same for the purposes and consideration therein expressed, in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, this the _____ day of _____ 2021.

Notary Public Signature
State of Texas

Driftwood Golf Club Development, Inc.

THE STATE OF TEXAS §
 §
COUNTY OF HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument as _____ and they acknowledged to me that they executed the same for the purposes and consideration therein expressed, in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, this the _____ day of _____ 2021.

Notary Public Signature
State of Texas

Final Plat of the Driftwood Subdivision, Phase One, Section One. Block F, Lot 1, Being a replat of Block F, Lot 1, of the Driftwood Subdivision, Phase One, Section One, within the Extraterritorial Jurisdiction of the City of Dripping Springs, Texas, as recorded in Book 18, Pages 236-240 of the Plat Records of Hays County, Texas.

STATE OF TEXAS)
COUNTY OF HAYS)

KNOW ALL MEN BY THESE PRESENTS, THAT SCHUYLER JOYNER, PARTNER OF DRIFTWOOD GOLF CLUB DEVELOPMENT, INC., OWNER OF LOT 1, BLOCK "F", DRIFTWOOD SUBDIVISION, PHASE ONE, SECTION ONE, (BOOK 18, PAGES 236 THROUGH 240, PLAT RECORDS OF HAYS COUNTY, TEXAS) OUT OF THE FREEMAN WOODY SURVEY No. 23, ABSTRACT No. 664, HAYS COUNTY, TEXAS, AS RECORDED IN DOCUMENT NO. 18031473 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, DESIRING TO REPLAT THE DRIFTWOOD PHASE ONE, SECTION ONE, SUBDIVISION, DO HEREBY SUBDIVIDE SAID LOT 1, BLOCK "F", TO BE KNOWN AS "THE REPLAT OF LOT 1, BLOCK "F", DRIFTWOOD SUBDIVISION, PHASE ONE, SECTION ONE" IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS HERETOFORE GRANTED AND DO HEREBY DEDICATE TO THE PUBLIC THE USE OF THE EASEMENTS SHOWN HEREON.

DRIFTWOOD GOLF CLUB DEVELOPMENT, INC.
A DELAWARE CORPORATION

BY: SCHUYLER JOYNER, PARTNER DATE
14605 NORTH 73rd ST.
SCOTTSDALE, ARIZONA 8526

STATE OF ARIZONA)
COUNTY OF MARICOPA)

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED SCHUYLER JOYNER, PARTNER OF DRIFTWOOD AUSTIN, LLC, KNOWN BY ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FORGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE ____ DAY OF _____, 2021. A.D.

NOTARY PUBLIC IN AND FOR THE STATE OF ARIZONA

THIS IS TO CERTIFY THAT I AM CERTIFIED TO PRACTICE THE PROFESSION OF ENGINEERING IN THE STATE OF TEXAS; THAT I PREPARED THE PLAN SUBMITTED HERewith, AND THAT ALL INFORMATION SHOWN THEREON IS ACCURATE AND CORRECT TO THE BEST OF MY KNOWLEDGE AS RELATED TO THE ENGINEERING PORTIONS THEREOF AND THAT SAID PLAN COMPLIES WITH ORDINANCE No. 1230.6 SETTING FORTH REQUIREMENTS AND OBLIGATIONS FOR SUBDIVISIONS IN THE CITY OF DRIPPING SPRINGS AND THE SUBDIVISION AND DEVELOPMENT REGULATIONS OF HAYS COUNTY, TEXAS, EXCEPT FOR THOSE VARIANCES GRANTED BY THE COMMISSIONERS COURT.

WITNESS MY HAND THIS THE ____ DAY OF _____, 2021.

STEPHEN R. DELGADO, PE
DIRECTOR
ATWELL, LLC
512.904.0505 TEL
512.584.8700 DIR
512.517.7282 MOBILE
3815 S. CAPITAL OF TEXAS HIGHWAY | SUITE 300 |
AUSTIN, TX 78704



PURPOSE OF REPLAT: TO FURTHER SUBDIVIDE LOT 1 BLOCK F, A PRIVATELY MAINTAINED RIGHT OF WAY, TO CREATE AN ADDITIONAL LOT (LOT 2, BLOCK F) FOR THE PURPOSE OF BUILDING A GREATER HOUSE IN THE MIDDLE OF THE PRIVATELY MAINTAINED RIGHT OF WAY; BUT WITHOUT LOT 2, BLOCK F BEING RESTRICTED BY THE DRAINAGE EASEMENT AND P.U.E. DESIGNATIONS TYPICAL OF A RIGHT OF WAY.

UTILITY NOTES:

- 1. WATER SERVICE TO BE PROVIDED DIRECTLY FROM THE CITY OF DRIPPING SPRINGS.
- 2. ELECTRIC UTILITY SERVICE WILL BE PROVIDED BY PEDERNALES ELECTRIC COOPERATIVE, INC.
- 3. WASTEWATER SERVICE WILL BE PROVIDED DIRECTLY FROM THE CITY OF DRIPPING SPRINGS OR BY AN APPROVED TLAP FACILITY.

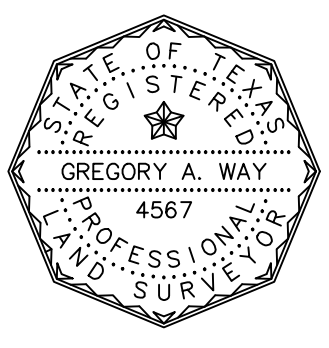
SURVEYOR'S NOTES:

- 1. NO PORTION OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER RECHARGE ZONE.
- 2. THE ENTIRETY OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.
- 3. NO PORTION OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF ANY MUNICIPALITY'S CORPORATE CITY LIMITS, BUT IS WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS.
- 4. A PORTION OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE 100 YEAR FLOODPLAIN (1% CHANCE) IN ZONE "AE" AS DELINEATED ON HAYS COUNTY COMMUNITY PANEL MAP #48209C0120F, EFFECTIVE DATE SEPTEMBER 2, 2005.

I GREGORY A. WAY, A PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT COMPLIES WITH THE SURVEY RELATED REQUIREMENTS OF THE CITY OF DRIPPING SPRINGS SUBDIVISION ORDINANCE AND FURTHER CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND IS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

WITNESS MY HAND THIS THE ____ DAY OF _____, 2021.

GREGORY A. WAY
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 4567 - STATE OF TEXAS
CAPITAL SURVEYING COMPANY, INC.
925 CAPITAL OF TEXAS HWY.
AUSTIN, TEXAS 78746



GENERAL NOTES:

- 1. THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF DRIPPING SPRINGS EXTRATERRITORIAL JURISDICTION.
- 2. THIS SUBDIVISION IS WITHIN THE HAYS CONSOLIDATED INDEPENDENT SCHOOL DISTRICT.
- 3. THIS SUBDIVISION IS LOCATED IN THE EDWARDS AQUIFER CONTRIBUTING ZONE.
- 4. NO FENCES SHALL BE PLACED SO AS TO IMPEDE THE FLOW OF DRAINAGE WITHIN AN EXISTING DRAINAGE WAY.
- 5. TOTAL ACREAGE OF DEVELOPMENT: 6.8292 TOTAL ACREAGE OF LOT: 6.8292
INTENDED USE OF LOTS: MIXED USE
TOTAL NUMBER OF LOTS: 2 AVERAGE SIZE OF LOTS: 3.4146
NUMBER OF LOTS: Greater than 10 acres 0
Larger than 5, less than 10 1
Between 2 & 5 acres 0 Between 1 & 2 acres 0
Less than an acre 1

GENERAL NOTES CONTINUED:

- 6. ALL CULVERTS, WHEN REQUIRED, SHALL COMPLY WITH THE CURRENT HAYS COUNTY STANDARDS, PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 705, SUBCHAPTER 8.03.
- 7. WHILE THE WATER AVAILABILITY RULES ARE INTENDED TO PRESERVE AND PROTECT THE WATER RESOURCES OF HAYS COUNTY, THE COMMISSIONERS COURT OF HAYS COUNTY DOES NOT MAKE ANY WARRANTY - EXPRESSED, IMPLIED, OR OTHERWISE - THAT SUBDIVISIONS THAT COMPLY WITH THESE RULES WILL BE ABLE TO MEET THE WATER NEEDS OF THOSE PURCHASING LOTS WITHIN THE SUBDIVISION.
- 8. THIS SUBDIVISION IS SUBJECT TO THE DEVELOPMENT AGREEMENT REACHED BETWEEN THE CITY OF DRIPPING SPRINGS AND M. SCOTT ROBERTS, RECORDED IN VOLUME 3381, PAGE 708 AND THE AMENDED AND THE RESTATED DEVELOPMENT AGREEMENT RECORDED IN VOLUME 5150, PAGE 594, BOTH OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AS AMENDED FROM TIME TO TIME. SITE DEVELOPMENT AND BUILDING PERMITS ARE REQUIRED FOR COMMERCIAL DEVELOPMENT.
- 9. THE OWNER WILL ALLOW THE RIGHT-OF-ENTRY TO THE CITY, UTILITY OR PUBLIC SERVICE PROVIDERS AND EMERGENCY VEHICLES AS NECESSARY.
- 10. DEVELOPMENT IN THE WATER QUALITY BUFFER ZONE IS PROHIBITED PER THE CITY'S WATER QUALITY PROTECTION ORDINANCE.
- 11. THIS SUBDIVISION IS WITHIN THE JURISDICTION OF THE DRIFTWOOD ECONOMIC DEVELOPMENT MUNICIPAL MANAGEMENT DISTRICT.
- 12. THIS PLAT AND SUBSEQUENT SITE DEVELOPMENT PLANS SHALL COMPLY WITH THE MOST CURRENT INTERNATIONAL FIRE CODE AS ADOPTED AND AMENDED BY THE EMERGENCY SERVICE DISTRICT No. 6 OR ITS SUCCESSORS.
- 13. HOMEOWNERS ASSOCIATION MAINTAINED STREETS: DRIFTWOOD GOLF CLUB DEVELOPMENT, INC., BY FILING OF THIS PLAT OF RECORD, AND ALL FUTURE OWNERS OF PROPERTY WITHIN THIS SUBDIVISION, BY PURCHASING SUCH PROPERTY, ACKNOWLEDGE AND AGREE THAT HAYS COUNTY SHALL HAVE NO OBLIGATION WHATSOEVER TO REPAIR OR ACCEPT MAINTENANCE OF THE ROAD SHOWN ON THIS SUBDIVISION: THURMAN ROBERTS WAY UNTIL AND UNLESS DRIFTWOOD GOLF CLUB DEVELOPMENT, INC. AND/OR THE DRIFTWOOD PROPERTY ASSOCIATION HAS IMPROVED THE ROADWAY TO THE THEN CURRENT STANDARDS REQUIRED BY HAYS COUNTY AND THE ROAD HAS BEEN ACCEPTED FOR MAINTENANCE BY FORMAL, WRITTEN ACTION OF THE COUNTY COMMISSIONERS COURT AND THE ROADWAY, WITH ALL REQUIRED RIGHT-OF-WAY, HAS BEEN DEDICATED BY THE OWNERS THEREOF, AND ACCEPTED BY THE COUNTY, AS A PUBLIC STREET. DRIFTWOOD GOLF CLUB DEVELOPMENT, INC. AND ALL FUTURE OWNERS OF THE PROPERTY WITHIN THIS SUBDIVISION SHALL LOOK SOLELY TO THE DRIFTWOOD PROPERTY OWNERS ASSOCIATION, INC. FOR FUTURE MAINTENANCE AND REPAIR OF THE ROAD AND STREETS SHOWN IN THIS SUBDIVISION.
- 14. THIS SUBDIVISION IS SUBJECT TO DECLARATIONS OF COVENANTS, CONDITIONS AND RESTRICTIONS AS REFERRED TO IN DOCUMENT No. 15007648 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

SUBDIVISION PLAT NOTES:

SEWAGE DISPOSAL/INDIVIDUAL WATER SUPPLY CERTIFICATION, TO-WIT:

- 1. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL OR STATE-APPROVED COMMUNITY WATER SYSTEM. DUE TO DECLINING WATER SUPPLIES AND DIMINISHING WATER QUALITY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY HAYS COUNTY TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY. RAIN WATER COLLECTION IS ENCOURAGED AND IN SOME AREAS, MAY OFFER THE BEST RENEWABLE WATER RESOURCE.
- 2. NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED BY HAYS COUNTY DEVELOPMENT SERVICES.
- 3. NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL HAYS COUNTY DEVELOPMENT PERMIT REQUIREMENTS HAVE BEEN MET.

TOM POPE, R.S., C.F.M. DATE MARCUS PACHECO, DIRECTOR DATE
HAYS COUNTY FLOODPLAIN ADMINISTRATOR HAYS COUNTY DEVELOPMENT SERVICES

STATE OF TEXAS)
COUNTY OF HAYS)
CITY OF DRIPPING SPRINGS)

THIS PLAT, FINAL PLAT OF THE DRIFTWOOD SUBDIVISION, PHASE ONE, SECTION ONE. BLOCK F, LOT 1, BEING A REPLAT OF BLOCK F, LOT 1, OF THE DRIFTWOOD SUBDIVISION, PHASE ONE, SECTION ONE, WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS, TEXAS, AS RECORDED IN BOOK 18, PAGES 236-240 OF THE PLAT RECORDS OF HAYS COUNTY, TEXAS, HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY OF DRIPPING SPRINGS AND IS HEREBY APPROVED.

APPROVED, THIS THE ____ DAY OF _____, 2021.

BY: MIM JAMES
PLANNING & ZONE COMMISSION CHAIRPERSON

ATTEST: ANDREA CUNNINGHAM, CITY SECRETARY

I, THE UNDERSIGNED, DIRECTOR OF THE HAYS COUNTY DEVELOPMENT SERVICES DEPARTMENT, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL HAYS COUNTY REQUIREMENTS AS STATED IN THE INTERLOCAL COOPERATION AGREEMENT BETWEEN HAYS COUNTY AND THE CITY OF DRIPPING SPRINGS FOR SUBDIVISION REGULATION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS.

MARCUS PACHECO, DIRECTOR DATE
HAYS COUNTY DEVELOPMENT SERVICES

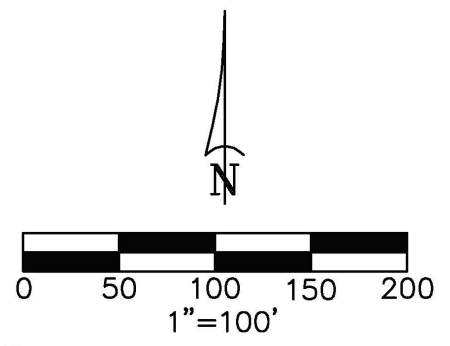
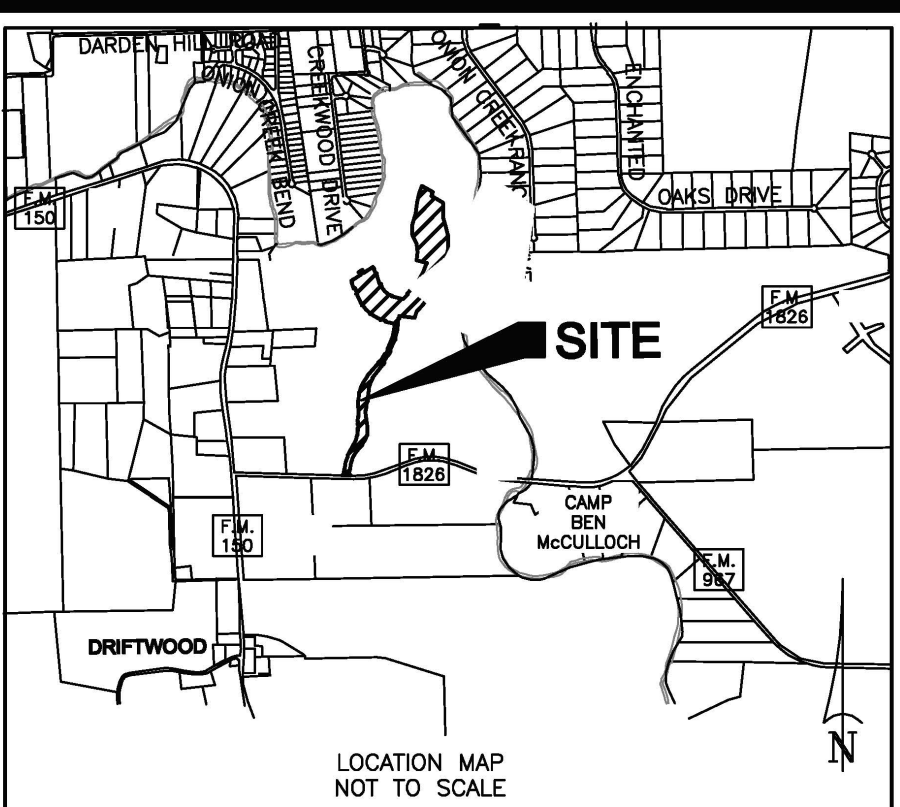
STATE OF TEXAS)
COUNTY OF HAYS)

I, ELAINE HANSON CARDENAS, CLERK OF HAYS COUNTY, TEXAS, HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, 2021, AT ____ O'CLOCK ____M., AND DULY RECORDED ON THE ____ DAY OF _____, 2021, AT ____ O'CLOCK ____M. IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS, IN DOCUMENT NO. _____.

ELAINE HANSON CARDENAS
COUNTY CLERK, HAYS COUNTY, TEXAS

CSCI CAPITAL SURVEYING COMPANY INCORPORATED
925 Capital of Texas Highway South Building 5, Suite 115 Austin, Texas 78746 (512) 327-4006 FIRM REGISTRATION No. 101287-0
DRAWN BY: WAL SCALE: 1" = 100' F.B.
JOB NO.: 07522.10 DATE: APRIL 9, 2021 SHEET NO.:
DRAWING NO.: 21504P1 CRD #: 07522 1 of 3

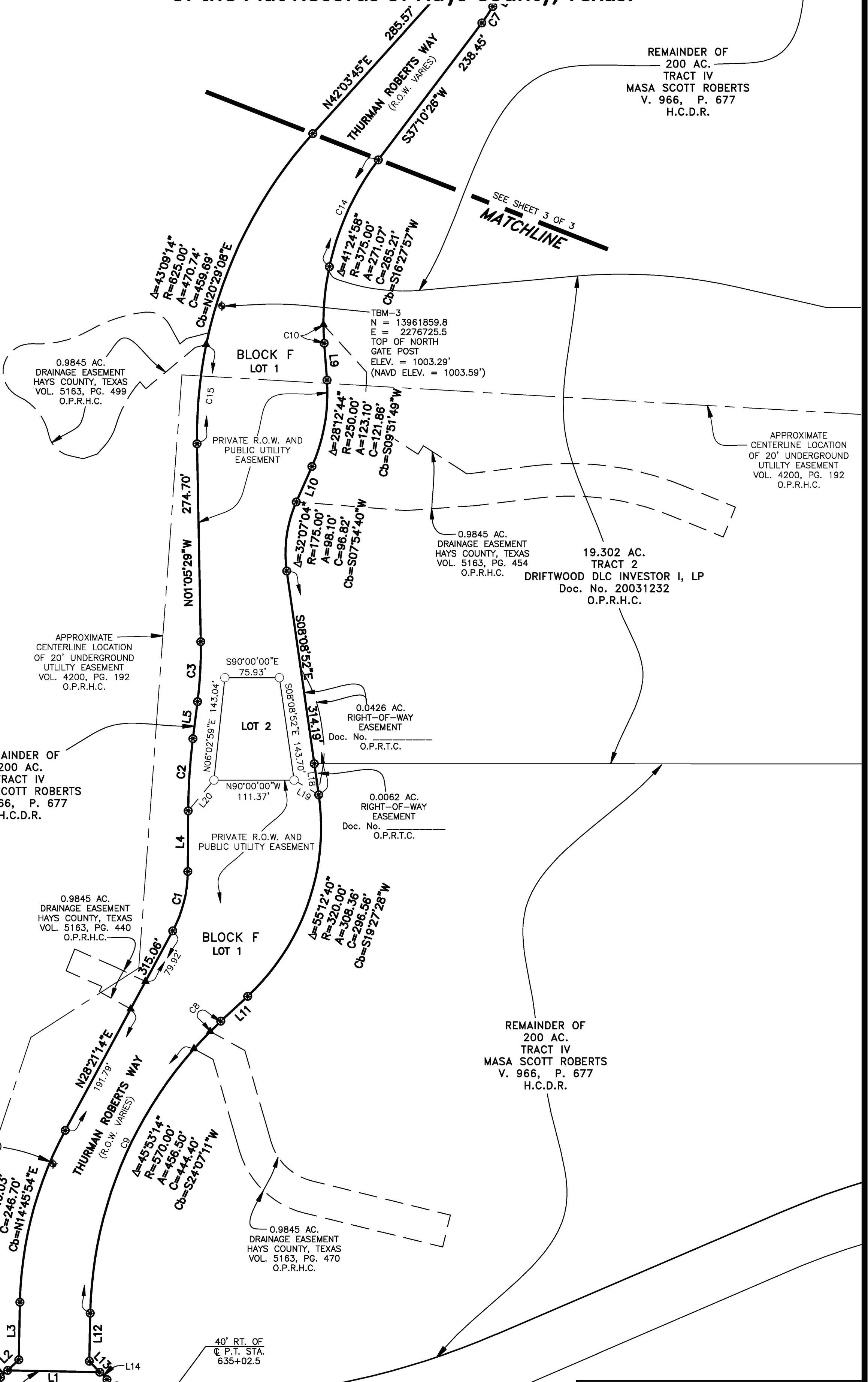
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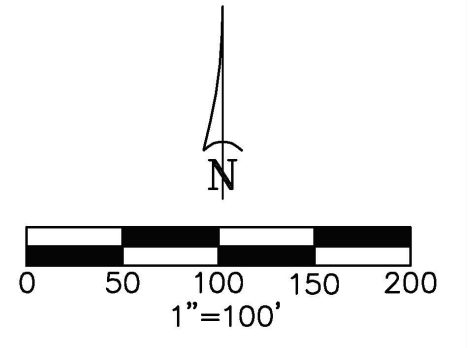
LEGEND

- O.P.R.H.C. OFFICIAL PUBLIC RECORDS HAYS COUNTY
 - H.C.P.R. HAYS COUNTY PLAT RECORD
 - H.C.D.R. HAYS COUNTY DEED RECORD
 - R.O.W. RIGHT OF WAY
 - CONCRETE MONUMENT FOUND
 - 1/2" IRON ROD FOUND WITH PLASTIC CAP MARKED "CAPITAL SURVEYING CO. INC."
 - 1/2" IRON ROD SET WITH PLASTIC CAP MARKED "CAPITAL SURVEYING CO. INC."
 - CALCULATED POINT
- NOTE: COORDINATES SHOWN HEREON ARE TEXAS STATE PLANE, SOUTH CENTRAL ZONE, NAD83(GRID). THE COMBINED SCALE FACTOR IS: 0.999920 (1.000080)

BENCHMARKS:
ELEVATIONS ARE BASED ON THE PANEL POINT DATUM USED FOR THE ORIGINAL AERIAL TOPOGRAPHIC SURVEY. TO OBTAIN NAVD88 DATUM ADD 0.30'.



Final Plat of the Driftwood Subdivision, Phase One, Section One. Block F, Lot 1, Being a replat of Block F, Lot 1, of the Driftwood Subdivision, Phase One, Section One, within the Extraterritorial Jurisdiction of the City of Dripping Springs, Texas, as recorded in Book 18, Pages 236-240 of the Plat Records of Hays County, Texas.



CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	CHORD	CH. BEARING
C1	28°05'06"	175.00'	85.78'	84.93'	N14°18'41"E
C2	6°58'09"	825.00'	100.35'	100.29'	N03°45'13"E
C3	8°19'46"	575.00'	83.59'	83.52'	N03°04'24"E
C4	50°39'22"	118.00'	104.33'	100.96'	S07°10'42"E
C5	38°48'54"	140.00'	94.84'	93.04'	S37°33'25"W
C6	7°20'15"	300.00'	38.42'	38.39'	S33°50'33"W
C7	7°00'00"	225.00'	27.49'	27.47'	S33°40'26"W
C8	02°03'32"	570.00'	20.48'	20.48'	N46°02'02"E
C9	40°30'21"	570.00'	402.97'	394.65'	N21°25'45"W
C10	03°55'55"	375.00'	25.74'	25.73'	N02°16'35"W
C11	03°13'29"	1275.00'	71.76'	71.75'	N20°18'20"E
C12	02°22'08"	1275.00'	52.72'	52.71'	N23°06'09"E
C13	03°30'19"	1725.00'	78.01'	77.99'	S26°02'23"W
C14	25°05'59"	375.00'	164.28'	162.97'	S24°37'27"W
C15	12°42'52"	625.00'	138.69'	138.41'	N05°15'56"E

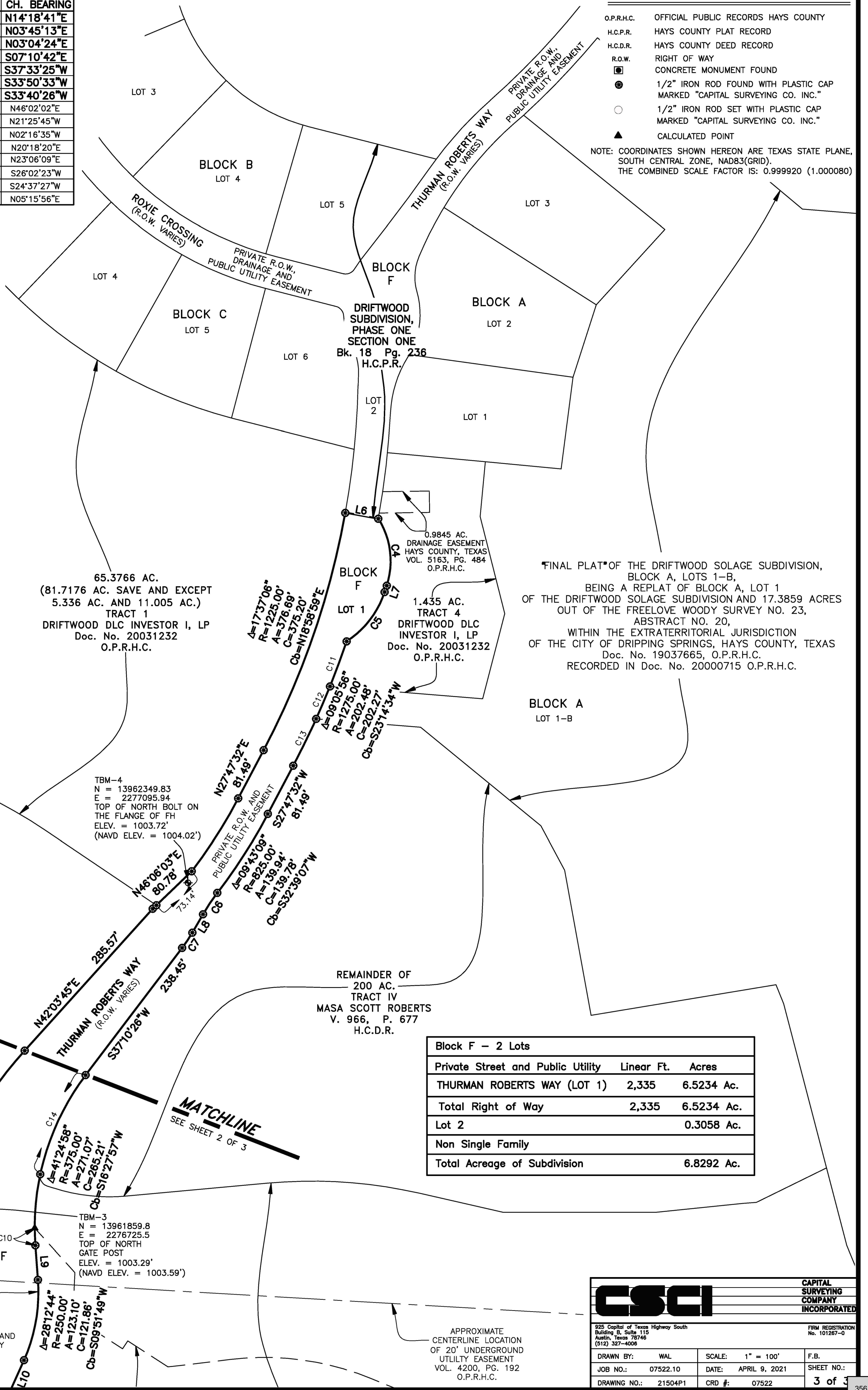
LEGEND

O.P.R.H.C. OFFICIAL PUBLIC RECORDS HAYS COUNTY
H.C.P.R. HAYS COUNTY PLAT RECORD
H.C.D.R. HAYS COUNTY DEED RECORD
R.O.W. RIGHT OF WAY
[Symbol] CONCRETE MONUMENT FOUND
[Symbol] 1/2" IRON ROD FOUND WITH PLASTIC CAP MARKED "CAPITAL SURVEYING CO. INC."
[Symbol] 1/2" IRON ROD SET WITH PLASTIC CAP MARKED "CAPITAL SURVEYING CO. INC."
[Symbol] CALCULATED POINT

NOTE: COORDINATES SHOWN HEREON ARE TEXAS STATE PLANE, SOUTH CENTRAL ZONE, NAD83(GRID). THE COMBINED SCALE FACTOR IS: 0.999920 (1.000080)

LINE TABLE		
LINE	BEARING	LENGTH
L1	N88°48'32"W	128.00'
L2	N46°10'34"E	21.21'
L3	N01°10'34"E	79.79'
L4	N00°16'08"E	84.26'
L5	N07°14'17"E	51.93'
L6	S79°49'34"E	50.00'
L7	S18°08'59"W	10.00'
L8	S30°10'26"W	31.85'
L9	S04°14'32"E	51.42'
L10	S23°58'11"W	53.58'
L11	S47°03'48"W	50.99'
L12	S01°10'34"W	66.45'
L13	S43°49'26"E	21.22'
L14	S43°49'26"E	14.15'
L15	S01°11'28"W	25.00'
L16	N01°11'28"E	25.00'
L17	N46°10'34"E	14.14'
L18	S08°08'52"E	43.64'
L19	S59°10'48"E	39.94'
L20	N06°16'50"W	14.14'

BENCHMARKS:
ELEVATIONS ARE BASED ON THE PANEL POINT DATUM USED FOR THE ORIGINAL AERIAL TOPOGRAPHIC SURVEY. TO OBTAIN NAVD88 DATUM ADD 0.30'.



"FINAL PLAT" OF THE DRIFTWOOD SOLAGE SUBDIVISION, BLOCK A, LOTS 1-B, BEING A REPLAT OF BLOCK A, LOT 1 OF THE DRIFTWOOD SOLAGE SUBDIVISION AND 17.3859 ACRES OUT OF THE FREELove WOODY SURVEY NO. 23, ABSTRACT NO. 20, WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS, HAYS COUNTY, TEXAS Doc. No. 19037665, O.P.R.H.C. RECORDED IN Doc. No. 20000715 O.P.R.H.C.

Block F - 2 Lots		
Private Street and Public Utility	Linear Ft.	Acres
THURMAN ROBERTS WAY (LOT 1)	2,335	6.5234 Ac.
Total Right of Way	2,335	6.5234 Ac.
Lot 2		0.3058 Ac.
Non Single Family		
Total Acreage of Subdivision		6.8292 Ac.

CSCI CAPITAL SURVEYING COMPANY INCORPORATED

925 Capital of Texas Highway South
Building B, Suite 115
Austin, Texas 78746
(512) 327-4006

FIRM REGISTRATION No. 101267-0

DRAWN BY: WAL	SCALE: 1" = 100'	F.B.
JOB NO.: 07522.10	DATE: APRIL 9, 2021	SHEET NO.:
DRAWING NO.: 21504P1	CRD #: 07522	3 of 3



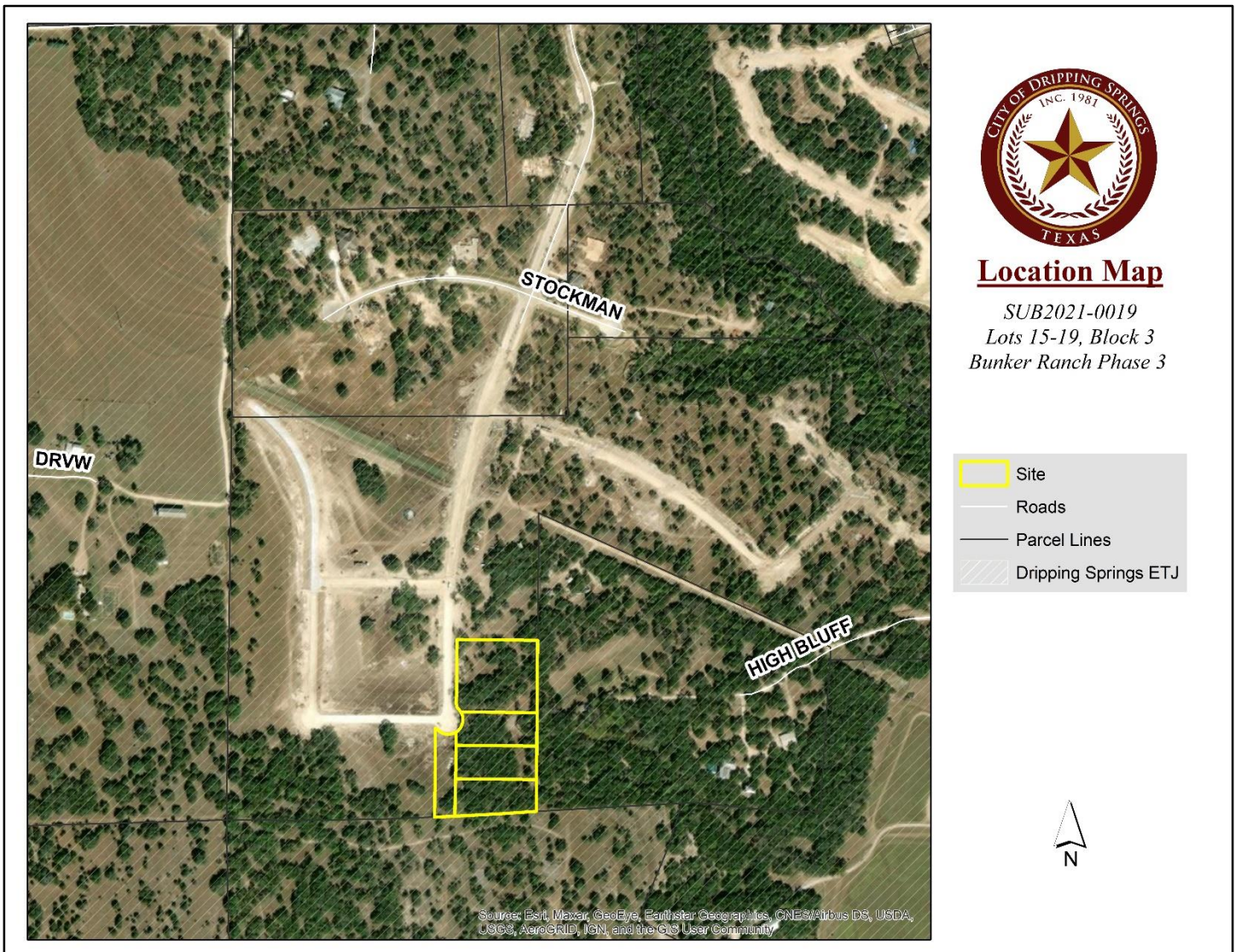
Planning & Zoning Commission Planning Department Staff Report

Item 5.

P & Z Meeting: April 27, 2021
Project Number: SUB2021-0019
Project Planner: Amanda Padilla, Senior Planner

Item Details

Project Name: Bunker Ranch Phase 3 Block 3 Lots 15-19 Plat Vacation and Final Plat
Property Location: Located off Bunker Ranch Boulevard
Legal Description: Bunker Ranch Phase 3 Lots 15-19
Applicant: Brian Estes, P.E. Civil & Environmental Consultants, Inc.
Property Owner: Steve Harren, Bunker Ranch LLC
Request: Vacation of lots 15-19 and Final Plat of lots 15-18 and additional right-of-way



Overview

The applicant requested to vacate Lots 15,16,17,18, and 19, Block 3 from the Bunker Ranch, Phase Three, Final Plat to add right-of-way for access to the Florio Tract that was recently annexed into the City Limits.

Local Government Code 212.013 allows for plat vacations if all owners of lots in the plat join in the application for vacation. In this proposed vacation, the applicant is vacating Lots 15,16,17,18, and 19, Block 3 from the existing subdivision, and then Final Platting the new lot as a new subdivision in accordance with City of Dripping Springs ordinances.

Action Requested

Disapproval for the Final Plat and Plat Vacation (SUB2021-0019), consisting of approximately 5.14-acres located within the Bunker Ranch Phase 3 subdivision.

Site Information

Location:

The subject property is located at the end of Bunker Ranch Boulevard, generally located at the intersection of Bunker Ranch Boulevard and Stockman Drive.

Zoning Designation: SF-2

Property History

This is the first request regarding these lots.

Outstanding Comments

1. Approval of this plat is pending the approval of the Revised Preliminary Plat for Phases 3 & 4.
Comment Response: Comment noted.
Comment 02: Approval of this plat is pending the approval of the Revised Preliminary Plat for Phases 3 & 4.
2. [Phase 3, Block 3 lots 15 through 19] does not match the lot layout on the as-builts. Please update lot layout on as-builts and verify water and utility service locations are placed correctly on lot lines to serve lots as shown on the Lot 3 Revision.

Recommendation

Staff is recommending *Disapproval of the Final Plat and Plat Vacation.*

Attachments

- Exhibit 1 – Subdivision Application
- Exhibit 2 – Plat Vacation Application
- Exhibit 3 – Vacation Documents
- Exhibit 4 – Proposed Final Plat for the Subdivision

Recommended Action:	Disapproval of the plat based on Outstanding Comments
---------------------	---

Planning Department Staff Report

Item 5.

Budget/Financial Impact:	All fees have been paid.
Public Comments:	None Received at this time.
Enforcement Issues:	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

Item 5.

SUBDIVISION APPLICATION

Case Number (staff use only): _____ - _____

MEETINGS REQUIRED

(AS APPLICABLE PER SITE DEVELOPMENT ORDINANCE)

INFORMAL CONSULTATION	PRE-APPLICATION CONFERENCE
DATE: _____	DATE: 1/7/2021
<input checked="" type="checkbox"/> NOT SCHEDULED	<input type="checkbox"/> NOT SCHEDULED

PLAT TYPE

- Amending Plat
- Minor Plat
- Replat
- Final Plat
- Plat Vacation
- Other: _____

CONTACT INFORMATION

APPLICANT NAME Brian Estes, PE
COMPANY Civil & Environmental Consultants, Inc.
STREET ADDRESS 3711 South Mopac Epressway, Building 1, Suite 550
CITY Austin **STATE** TX **ZIP CODE** 78746
PHONE (512)-439-0400 **EMAIL** bestes@cecinc.com

OWNER NAME Steve Harren
COMPANY Bunker Ranch, LLC
STREET ADDRESS 317 Grace Lane #240
CITY Austin **STATE** TX **ZIP CODE** 78746
PHONE (512)-644-6800 **EMAIL** steveharren@aol.com

PROPERTY INFORMATION	
PROPERTY OWNER NAME	Steve Harren (Bunker Ranch, LLC)
PROPERTY ADDRESS	2751 US 290, Dripping Springs, Texas 78620
CURRENT LEGAL DESCRIPTION	Final Plat of Bunker Ranch Phase 3
TAX ID #	R15053, R15068
LOCATED IN	<input checked="" type="checkbox"/> City Limits <input type="checkbox"/> Extraterritorial Jurisdiction
CURRENT LAND ACREAGE	40.20 Ac
SCHOOL DISTRICT	Dripping Springs ISD
ESD DISTRICT(S)	ESD #6
ZONING/PDD/OVERLAY	SF2
EXISTING ROAD FRONTAGE	<input checked="" type="checkbox"/> Private Name: <u>Bunker Ranch Blvd</u> <input type="checkbox"/> State Name: _____ <input type="checkbox"/> City/County (public) Name: _____
DEVELOPMENT AGREEMENT? (If so, please attach agreement)	<input type="checkbox"/> Yes (see attached) <input checked="" type="checkbox"/> Not Applicable Development Agreement Name: _____

ENVIRONMENTAL INFORMATION	
IS PROPERTY OVER THE EDWARDS AQUIFER RECHARGE ZONE?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY OVER THE BARTON SPRINGS CONTRIBUTING ZONE TO THE EDWARDS AQUIFER?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY WITHIN A FEMA FLOODPLAIN AS DEFINED BY THE MOST CURRENT FIRM?	<input type="checkbox"/> YES <input type="checkbox"/> NO

PROJECT INFORMATION	
PROPOSED SUBDIVISION NAME	Replat of Bunker Ranch Phase 3
TOTAL ACREAGE OF DEVELOPMENT	40.20 Ac
TOTAL NUMBER OF LOTS	39
AVERAGE SIZE OF LOTS	0.88 Ac
INTENDED USE OF LOTS	<input checked="" type="checkbox"/> RESIDENTIAL <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> INDUSTRIAL/OTHER: _____
# OF LOTS PER USE	RESIDENTIAL: 39 _____ COMMERCIAL: _____ INDUSTRIAL: _____
ACREAGE PER USE	RESIDENTIAL: 40.20 _____ COMMERCIAL: _____ INDUSTRIAL: _____
LINEAR FEET (ADDED) OF PROPOSED ROADS	PUBLIC: _____ PRIVATE: 300 LF Proposed ROW Addition
ANTICIPATED WASTEWATER SYSTEM	<input checked="" type="checkbox"/> CONVENTIONAL SEPTIC SYSTEM <input type="checkbox"/> CLASS I (AEROBIC) PERMITTED SYSTEM <input type="checkbox"/> PUBLIC SEWER
WATER SOURCES	SURFACE WATER <input checked="" type="checkbox"/> PUBLIC WATER SUPPLY <input type="checkbox"/> RAIN WATER GROUND WATER* <input type="checkbox"/> PUBLIC WELL <input type="checkbox"/> SHARED WELL <input type="checkbox"/> PUBLIC WATER SUPPLY
<p>*IF DOING GROUND WATER PROVISION FOR THE DEVELOPMENT USING GROUNDWATER RESOURCES, THE HAYS-TRINITY GROUNDWATER CONSERVATION DISTRICT MUST BE NOTIFIED:</p> <p>HAYS-TRINITY GCD NOTIFIED? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>	

COMMENTS: _____

TITLE: _____ SIGNATURE: _____

PUBLIC UTILITY CHECKLIST

ELECTRIC PROVIDER NAME (if applicable): _____ PEC (See signature on Ph 3 Plat Vacation application)

VERIFICATION LETTER ATTACHED NOT APPLICABLE

COMMUNICATIONS PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

WATER PROVIDER NAME (if applicable): _____ DSWSC (See signature on Ph 3 Plat Vacation application)

VERIFICATION LETTER ATTACHED NOT APPLICABLE

WASTEWATER PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

GAS PROVIDER NAME (if applicable): _____ Texas Gas (See signature on Ph 3 Plat Vacation application)

VERIFICATION LETTER ATTACHED NOT APPLICABLE

<u>PARKLAND DEDICATION?</u>	<u>AGRICULTURE FACILITIES (FINAL PLAT)?</u>
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT APPLICABLE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT APPLICABLE

COMPLIANCE WITH OUTDOOR LIGHTING ORDINANCE?*

(See attached agreement)

*If proposed subdivision is in the City Limits, compliance with the Lighting Ordinance is **mandatory**. If proposed subdivision is in the ETJ, compliance is **mandatory** when required by a Development Agreement, or as a condition of an Alternative Standard/Special Exception/Variance/Waiver.

Voluntary compliance is strongly encouraged by those not required by above criteria (see Outdoor Lighting tab on the city’s website at www.cityofdrippingsprings.com and online Lighting Ordinance under the Code of Ordinances tab for more information).

YES (REQUIRED) YES (VOLUNTARY*) NO

APPLICANT'S SIGNATURE

*Note: An additional signature is required on page 7 of the application verifying completeness. Applications should be submitted **only** when all required information is included in the submittal.*

The above information is true to the best of my knowledge. I attest that the real property described is owned by me and all others as signed below. If the below signed applicant is not the owner of said property, the signature of the property owner must be included below, or consent must be attached (If a corporation, please list title, and name of corporation.)



Applicant Name

Brian Estes, P.E.

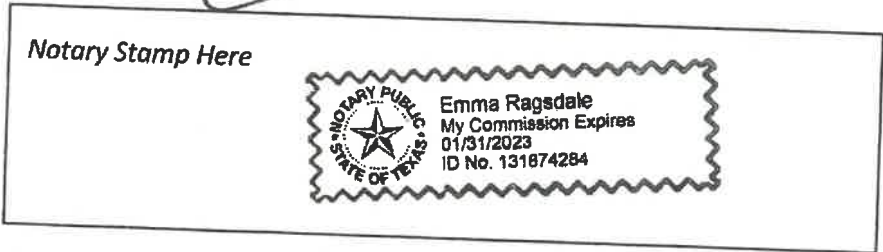
3/5/21

Applicant Signature

Date
3/5/21


Notary 

Date 3/5/21



Steve Harren

Property Owner Name

X 

Property Owner Signature

3/5/21
Date

All required items and information (including all applicable below listed exhibits and fees) must be received by the City for an application and request to be considered complete. Incomplete submissions will not be deemed filed and complete. By signing below, I acknowledge that I have read through and met all requirements for a complete submittal:

Applicants Signature:  Date: 3-5-21

FINAL, REPLAT, MINOR, AND AMENDING PLAT CHECKLIST		
Subdivision Ordinance, Section 5		
STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed application form – including all required notarized signatures
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application fee (refer to Fee Schedule)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Copies/PDF of all submitted items – please provide a coversheet outlining what digital contents are included on the CD/USB drive.
<input type="checkbox"/>	N/A	County Application Submittal – proof of online submission (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$240 Fee for ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contract Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Engineer’s Summary Report
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drainage Report – if not included in the Engineer’s summary
<input type="checkbox"/>	<input checked="" type="checkbox"/>	OSSF Facility Planning Report or approved OSSF permit (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Final Plats (11 x 17 to scale)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of Current Configuration of Plat (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of Preliminary Plat (if applicable)
<input type="checkbox"/>	N/A	Proof of final acceptance of all public infrastructure by the jurisdiction that will own and maintain it; or posting of fiscal for public infrastructure.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Data (GIS) of Subdivision
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tax Certificates – verifying that property taxes are current
<input type="checkbox"/>	N/A	Copy of Notice Letter to the School District – notifying of preliminary submittal
<input type="checkbox"/>	N/A	Outdoor Lighting Ordinance Compliance Agreement

(Refer to Bunker Septi Plan Report from Preliminary Plan Application)

(Refer to Preliminary Plat Revision Application-submitted concurrently)

Refer to Bunker Ranch Preliminary Plat Application Package, N/A for Replat

<input type="checkbox"/>	<input checked="" type="checkbox"/>	Development Agreement/PDD (If applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cost estimate of public infrastructure improvements (all public infrastructure improvements including water, wastewater, roads, drainage, curbs, sidewalks, etc.) (if applicable). *A Final Plat application will not be accepted if staff has not already approved this.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Documentation showing approval of driveway locations (TxDOT, County)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Documentation showing Hays County 911 Addressing approval (If applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Parkland Dedication fee (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	\$25 Public Notice Sign Fee
<input type="checkbox"/>	<input type="checkbox"/>	Ag Facility Fees - \$35 per residential LUE (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proof of Utility Service (Water & Wastewater) or permit to serve
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preliminary Conference Form signed by City Staff

FINAL PLAT INFORMATION REQUIREMENTS

<input type="checkbox"/>	<input checked="" type="checkbox"/>	A vicinity, or location, map that shows the location of the proposed Plat within the City (or within its ETJ) and in relationship to existing roadways.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Boundary lines, abstract/survey lines, corporate and other jurisdictional boundaries, existing or proposed highways and street right-of-way, bearings and distances sufficient to locate the exact area proposed for the subdivision, and all survey monuments including any required concrete monuments (per the City Engineer); the length and bearing of all straight lines, radii, arc lengths, tangent lengths and central angles of all curves shall be indicated along the lines of each lot or Unit (curve and line data may be placed in a table format); accurate reference ties via courses and distances to at least one recognized abstract or survey corner or existing subdivision corner shall be shown.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The name, location and recording information of all adjacent subdivisions (or property owners of adjacent unplatted property), including those located on the other sides of roads or creeks, shall be drawn to the same scale and shown in dotted lines adjacent to the tract proposed for subdivision in sufficient detail to show accurately the existing streets, alleys, building setbacks, lot and block numbering, easements, and other features that may influence the layout of development of the proposed subdivision; adjacent unplatted land shall show property lines, the names of owners of record, and the recording information.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The location, widths and names of all street right-of-way and easements (it shall be the applicant’s responsibility to coordinate with appropriate utility entities for placement of necessary utility easements and for location of all streets and median openings on highways or arterial roadways), existing or proposed, within the subdivision limits and adjacent to the subdivision; a list of proposed street names shall be submitted (in the form of a letter or memo along with the application form) for all new street names (street name approval is required at the time the Plat is approved)</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The location of all existing property lines, existing lot and block numbers and date recorded, easements of record (with recording information),</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Proposed arrangement and square footage of lots or Units (including lot and block numbers or Unit numbers).</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>All sheets shall have a title block which shows the title or name under which the proposed subdivision is to be recorded; the name, address and phone number of the property owner(s); the name, address and phone number of the licensed engineer or registered professional land surveyor who prepared the plat/plans; the scale of the plat/plans; the date the plat/plan was prepared; and the location of the property according to the abstract or survey records of Hays County, Texas.</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Sites, if any, to be reserved or dedicated for parks, schools, playgrounds, other public uses or for private facilities or amenities</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Scale (including a graphic scale), date, north arrow oriented to the top or left side of the sheet, and other pertinent informational data</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>All physical features of the property to be subdivided shall be shown, including:</p> <ul style="list-style-type: none"> - The location and size of all watercourses; and - 100-year floodplain according to Federal Emergency Management Agency (FEMA) information; and - Water Quality Buffer Zones as required by [WQO 22.05.017] - Drainage ways and drainage easements. Drainage easements are required for bypass of any offsite flows and for concentrated flows conveyed across lots. Drainage easements shall be large enough to contain the 100-yr storm [Sub. Ord. 12.2.2]. - U.S. Army Corps of Engineers flowage easement requirements; and - All critical environmental features (CEFs) such as karsts, springs, sinkholes,

		<p>caves, etc., to be located and documentation to be signed and certified by a geologist. All CEF to have a minimum setback of 150'. All designated wetlands to be certified as such by an accredited wetland biologist relying the presence of wetlands plant species.</p> <p>- Drainage area in acres or area draining into subdivisions (to be included in drainage report and construction plans); and</p>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Existing zoning of the subject property and all adjacent properties if within the city limits.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Provide notes identifying the following:</p> <ul style="list-style-type: none"> • Owner responsible for operation and maintenance of stormwater facilities. • Owner/operator of water and wastewater utilities. • Owner/operator of roadway facilities
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Certificates and other language shall be included on the plat, pursuant to the following Subsections: A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant.</p> <ul style="list-style-type: none"> - A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant. - An accurate legal, such as by metes and bounds, description by bearings and distances (including necessary curve and line data), accurate to the nearest one hundredth of a foot, for all boundary, block and lot lines, with descriptions correlated to a permanent survey monument. - The registered professional land surveyor's certificate, with a place for his or her signature and notarization of his or her signature. - A place for plat approval signature of the Chair or Vice Chair, in the Chair's absence) of the Planning and Zoning Commission, a place for the City Secretary to attest such signature, and the approval dates by Planning and Zoning Commission. - Appendices to this Chapter contain certificates and languages to be used on the plat to accommodate the above requirements:

NARRATIVE OF COMPLIANCE

A written narrative describing how all portions of the subdivision meets all requirements of this code and other codes, including landscaping, lighting, parkland dedication, site development, water quality protection, and zoning, as may be relevant.

<p>Outdoor Lighting, Article 24.06</p>	<p>N/A for Replat. Outdoor Lighting Agreement was submitted during the preliminary planning stage. Refer to Preliminary Plan submittal for Bunker Ranch Subdivision.</p>
<p>Parkland Dedication, Article 28.03</p>	<p>N/A for Replat. Fee in lieu of parkland dedication was paid during the Preliminary Planning stage of Bunker Ranch Subdivision for the overall subdivision. Refer to Preliminary Plan submittal for Bunker Ranch Subdivision.</p>
<p>Landscaping and Tree Preservation, Article 28.06</p>	<p>N/A for Replat. No existing trees will be impacted by the replat or plat vacation.</p>

Subdivision, 28.02, Exhibit A	This section shall also include, depending on what type of plat is being filed, how public or private improvements will meet City standards, including water quality, drainage, stormwater, and fire (if applicable). This Replat meets all requirements outlined in the Subdivision Ordinance.
Zoning, Article 30.02, Exhibit A	This Replat meets all requirements outlined in the Zoning Ordinance.

Project Number: _____ - _____

Only filled out by staff

Date, initials



BILLING CONTACT FORM

Project Name: Bunker Ranch Phase 3-Replat and Plat VacationProject Address: 2751 US 290, Dripping Springs, Texas 78620Project Applicant Name: Brian Estes, PE

Billing Contact Information

Name: Steve HarrenMailing Address: 317 Grace Lane #240Austin, 78746Email: steveharren@aol.com Phone Number: (512)644-6800

Type of Project/Application (check all that apply):

- | | |
|---|--|
| <input type="checkbox"/> Alternative Standard | <input type="checkbox"/> Special Exception |
| <input type="checkbox"/> Certificate of Appropriateness | <input type="checkbox"/> Street Closure Permit |
| <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Subdivision |
| <input type="checkbox"/> Development Agreement | <input type="checkbox"/> Waiver |
| <input type="checkbox"/> Exterior Design | <input type="checkbox"/> Wastewater Service |
| <input type="checkbox"/> Landscape Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Lighting Plan | <input type="checkbox"/> Zoning |
| <input type="checkbox"/> Site Development Permit | <input type="checkbox"/> Other <u>Replat and Plat Vacation</u> |

*Applicants are required to pay all associated costs associated with a project's application for a permit, plan, certificate, special exception, waiver, variance, alternative standard, or agreement, regardless of City approval. Associated costs may include, but are not limited to, public notices and outside professional services provided to the City by engineers, attorneys, surveyors, inspectors, landscape consultants, lighting consultants, architects, historic preservation consultants, and others, as required. Associated costs will be billed at cost plus 20% to cover the City's additional administrative costs. **Please see the online Master Fee Schedule for more details.** By signing below, I am acknowledging that the above listed party is financially accountable for the payment and responsibility of these fees.*

Signature of Applicant

3/9/2021

Date



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

Item 5.

PLAT VACATION APPLICATION

Case Number (staff use only): _____ - _____

CONTACT INFORMATION

APPLICANT NAME Brian Estes, PE
COMPANY Civil & Environmental Consultants, Inc.
STREET ADDRESS 3711 South MoPac Expressway, Building 1, Suite 550
CITY Austin **STATE** TX **ZIP CODE** 78746
PHONE (512)-230-6383 **EMAIL** bestes@cecinc.com

OWNER NAME Steve Harren
COMPANY Bunker Ranch, LLC
STREET ADDRESS 317 Grace Lane #240
CITY Austin **STATE** TX **ZIP CODE** 78746
PHONE (512)-644-6800 **EMAIL** steveharren@aol.com

PLAT VACATION

The purpose of a Plat Vacation is to nullify a portion of or the entire previously recorded plat. A plat vacation application must be considered by the Planning and Zoning Commission as permitted and in compliance with Ch. 28, Exhibit A, Sec 9 of the Code of Ordinances. There will be property owner notifications and newspaper notifications prior to the meeting that the plat vacation will be on the agenda. Please note: a vacation of plat is not guaranteed. If the vacation intends to vacate an easement and one of the utility providers refuses to grant the vacation, then you may, at your own expense, attempt to negotiate with the utility company. Depending on what is being vacated, other entities may need to sign off on the vacation. **Also, be aware that all plat vacation (partial or total) require the signatures of 100% of the property owners in the subdivision who own intact original lots as shown on the original plat as required by State Law per Section 212.013 of the Local Government Code, prior to submittal for completeness check.**

PROPERTY INFORMATION	
PROPERTY OWNER NAME	Steve Harren (Bunker Ranch, LLC)
PROPERTY ADDRESS	2751 US 290, Dripping Springs, Texas 78620
CURRENT LEGAL DESCRIPTION	Final Plat of Bunker Ranch Phase 3
TAX ID #	R15053, R15068
JURISDICTION	<input checked="" type="checkbox"/> City Limits <input type="checkbox"/> Extraterritorial Jurisdiction
CURRENT LAND ACREAGE	40.20 Ac
SCHOOL DISTRICT	Dripping Springs ISD
ESD DISTRICT(S)	ESD #6
ZONING/PDD/OVERLAY	SF2
DEVELOPMENT AGREEMENT? (If so, please attach agreement)	<input type="checkbox"/> Yes (see attached) <input checked="" type="checkbox"/> Not Applicable Development Agreement Name: _____

PLAT ATTRIBUTES

Requesting Partial Plat Vacation Total Plat Vacation

Do the lot(s) being vacated receive utility service? Yes No

Specific Services and utility provider(s):

Water DSWSC Waste Water: Private Septic

Electric: PEC Gas: Texas Gas

Communications: _____

Has any development occurred on the lot(s) being vacated? Yes No

Specify type of development:

Will a replat also be submitted? Yes (this is recommended) No

Have parkland fees been paid for the lot(s) being vacated? Yes No

Was a Right-of-Way dedicated by the plat? Yes No

Was an easement dedicated by the plat? Yes No

ENVIRONMENTAL INFORMATION

IS PROPERTY OVER THE EDWARDS AQUIFER RECHARGE ZONE?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
IS PROPERTY OVER THE BARTON SPRINGS CONTRIBUTING ZONE TO THE EDWARDS AQUIFER?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY WITHIN A FEMA FLOODPLAIN AS DEFINED BY THE MOST CURRENT FIRM?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Electric Utility Provider N/A

Provider: PEC

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Communications Utility Provider N/A

Provider: Spectrum

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Water Utility Provider N/A

Provider: DSWSC

Printed Name: Kyle Dannhaus

Title: General Manager

Contact Info:

Phone Number: 5128587897

Email: kyle@drippingspringswater.com

Approval of the Vacation ~~Yes~~ No

Signature: _____

Kyle Dannhaus

Sewer Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Gas Utility Provider N/A

Provider: Texas Gas

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Other Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Electric Utility Provider N/A

Provider: PEC

Printed Name: Wzzielh Marquez

Title: Electrical Distribution Planner 2

Contact Info:

Phone Number: 800-868-4791 Ext. 7923

Email: wzzielh.marquez@peci.com

Approval of the Vacation Yes No

Signature:

Wzzielh Marquez

Communications Utility Provider N/A

Provider: Spectrum

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature:

Water Utility Provider N/A

Provider: DSWSC

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature:

Sewer Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature:

Gas Utility Provider N/A

Provider: Texas Gas

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature:

Other Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature:

Electric Utility Provider N/A

Provider: PEC

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Communications Utility Provider N/A

Provider: Spectrum

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Water Utility Provider N/A

Provider: DSWSC

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Sewer Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

Gas Utility Provider N/A

Provider: Texas Gas

Printed Name: Christopher McKnight

Title: Manager, Commercial Project Management

Contact Info:

Phone Number: 512-465-1110

Email: christopher.mcknight@onegas.com

Approval of the Vacation Yes No

Signature: _____

Other Utility Provider N/A

Provider: _____

Printed Name: _____

Title: _____

Contact Info:

Phone Number: _____

Email: _____

Approval of the Vacation Yes No

Signature: _____

APPLICANT'S SIGNATURE

Note: An additional signature is required on page 7 of the application verifying completeness. Applications should be submitted only when all required information is included in the submittal.

The above information is true to the best of my knowledge. I attest that the real property described is owned by me and all others as signed below. If the below signed applicant is not the owner of said property, the signature of the property owner must be included below, or consent must be attached (If a corporation, please list title, and name of corporation.)



Applicant Name

Brian Estes, P.E.

3/5/21

Applicant Signature

Date

3/5/21

Notary 

Date 3/5/21

Notary Stamp Here



Steve Harren (Bunker Ranch, LLC)

Property Owner Name

X 

3/5/21

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384 • Dripping Springs, TX 78620

512.858.4725 • www.cityofdrippingsprings.com

Property Owner Signature

Date

All required items and information (including all applicable below listed exhibits and fees) must be received by the City for an application and request to be considered complete. Incomplete submissions will not be deemed filed and complete. By signing below, I acknowledge that I have read through and met all requirements for a complete submittal:

Applicants Signature:  Date: 3-5-21

For projects within the ETJ, per the City of Dripping Springs Interlocal Cooperation Agreement with Hays County, a county subdivision application must also be submitted for review to the City. Fees for Hays County shall also be paid. The City will forward the application and Hays County Fees to the County.

PLAT VACATION CHECKLIST

STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed application form – including all required notarized signatures
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application fee (refer to Fee Schedule)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Copies/PDF of all submitted items - please provide a coversheet outlining what digital contents are included on the CD/USB drive.
<input type="checkbox"/>	<input type="checkbox" value="N/A"/>	County Application Submittal - proof of online submission (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contract Form (Attached)
<input type="checkbox"/>	<input type="checkbox" value="N/A"/>	Drainage Study (if applicable) <small>(Refer to original Bunker Drainage Study submitted with Preliminary Plan Application)</small>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Plat to be vacated or plat containing lot(s) to be vacated
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tax Certificates and Deeds for lot(s) or plat to be vacated
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Letter of Intent - Specify the existing legal description (subdivision name, lot(s), block(s)) - Indicate the original legal description that will be resumed upon the plat vacation - Explain the location of all structures on the property
<input type="checkbox"/>	<input type="checkbox" value="N/A"/>	Development Agreement/PDD <i>(if applicable)</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Utility Service Provider Letters Authorizing the Vacation (if applicable)
<input type="checkbox"/>	<input type="checkbox" value="N/A"/>	Letter signed by the property owner(s) within the subdivision indicating their consent <small>(All affected lots are owned by Bunker Ranch, LLC) see signature on Page 5 of 9</small>

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384 • Dripping Springs, TX 78620

512.858.4725 • www.cityofdrippingssprings.com

<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$25 Public Notice Sign Fee
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Plat Vacation Affidavit <ul style="list-style-type: none"> - A signed and notarized affidavit filled out completely and accurately by the landowner for the type of plat that is proposed to be vacated must be included (Affidavit template is provided on the next page)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Vicinity Map (8 ½" X 11")
<input type="checkbox"/>	<input type="checkbox"/>	Survey of existing/proposed buildings No existing buildings. <ul style="list-style-type: none"> - Submit map(s) showing the location, size, use and arrangement of all buildings/structures showing height in stories and feet, total floor area, total square feet of ground area coverage of existing buildings which will remain, if any, and the location, designation and total area of all usable open space.
<input type="checkbox"/>	<input type="checkbox"/>	Hays Trinity Groundwater Conservation District approval of water well (<i>if applicable</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preliminary Conference Form signed by City Staff Meeting held 1/7/2021

Plat Vacation Affidavit

Total/Partial Vacation of "Bunker Ranch Phase" 3

STATE OF TEXAS

COUNTY OF Hays

WHEREAS, (Bunker Ranch, LLC), owner (Bunker Ranch Phase 3

), did heretofore subdivide the same into the subdivision

designated (), the plat of which is recorded in Book ____, Page ____ or

Document No. 21009701 of Hays County, Texas Plat Records, and WHEREAS, the following lots in

said subdivision are now owned by the parties indicated, to wit: LOT 15, 18, 19 OWNER

Bunker ranch, LLC

WHEREAS, (Bunker Ranch, LLC) who collectively constitute the owners of all original, intact lots in (Bunker Ranch Phase 3) are desirous of (partially) vacating said subdivision plat so as to destroy the force and effect of the recording of such subdivision plat insofar and only insofar as the same pertains to Lot(s).

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That (Bunker Ranch, LLC) for and in consideration of the premises and pursuant to he provisions of Chapter 212.013 of the Local Government Code, does hereby vacate Lot(s) 15, 18, 19 only. Said subdivision shall, however, remain in full force and effect as to all other lots in (Bunker Ranch Phase 3).

EXECUTED THE DAYS HEREAFTER NOTED.

Date

Owner's Signature

Date 3/8/21

Owner's Signature [Handwritten Signature]

BE IT KNOWN, that on the ___ day of _____, 20___, the _____ Commission of the

City of Dripping Springs, at its regular meeting, did approve the total/partial vacation of the subdivision known as _____, as recorded in Book _____, Page _____, _____ County Plat Records, upon application therefore by all of the owners of all of the lots in said subdivision.

EXECUTED, this _____ day of _____, 20____

Chair
_____ Commission
City of Dripping Springs
Hays County, Texas

ATTEST:

_____, Executive Secretary

_____ Commission of the City of Dripping Springs

STATE OF TEXAS

COUNTY OF HAYS

BEFORE ME, the undersigned authority, a Notary Public in and for the State of Texas, on this day personally appeared _____, known to be the person whose name is subscribed to the foregoing instrument as Chairperson of the _____ Commission of the City of Dripping Springs, Texas a municipal corporation, and she/he acknowledge to me that she/he executed the same for the purpose and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ DAY OF _____, 20____

Seal

Printed name _____
Notary Public in and for the State of Texas

My Commission Expires: _____

Plat Vacation Affidavit

PARTIAL VACATION OF "BUNKER RANCH PHASE 3"

THE STATE OF TEXAS §

COUNTY OF HAYS §

WHEREAS, Bunker Ranch, LLC, OWNER of Bunker Ranch Phase 3, recorded in Document No. 21009701 of the Official Public Records of Hays County, Texas out of the Benjamin F. Hanna Survey No. 28 Abstract No. 222, in Hays County, Texas as conveyed by Warranty Deed as recorded in Document No. 160120931 of the Official Public Records of Hays County, Texas; and

WHEREAS, the following lots in said subdivision are now owned by the parties indicated, to wit: LOTS 15, 16, 17, 18, 19 Block 3 OWNER Bunker Ranch, LLC; and

WHEREAS, Bunker Ranch, LLC, who collectively constitute the owners of all original, intact lots in Bunker Ranch Phase 3 are desirous of partially vacating said subdivision plat so as to destroy the force and effect of the recording of such subdivision plat insofar as and only insofar as the same pertains to Lots.

WHEREAS, on the _____ day of _____ 2021, the Planning and Zoning Commission of the City of Dripping Springs, Texas, at its regular meeting, did approve the partial vacation of Lots 15,16, 17, 18, 19 Block 3, Bunker ranch Subdivision, Phase Three, of that certain plat of record in Document No. 21009701 of the Plat Records of Hays County, Texas upon application thereof by the Owners of all land covered thereby; and

NOW, THEREFORE, THE PLANNING AND ZONING COMMISSION OF THE CITY OF DRIPPING SPRINGS, TEXAS DOES BY THESE PRESENTS HEREBY DECLARE THAT:

The above recitals are true and correct and that Lots 15,16, 17, 18, 19 Block 3, Bunker ranch Subdivision, Phase Three, of that certain plat of record in Document No. 21009701 of the Plat Records of Hays County, Texas are to be partially vacated as shown in Instrument Number 21009701 of the Plat Records of Hays County, Texas.

EXECUTED THIS, THE _____ DAY OF _____.

CITY OF DRIPPING SPRINGS:

By: _____

Planning and Zoning Commission Chair or Vice Chair

City of Dripping Springs, Texas

THE STATE OF TEXAS §

COUNTY OF HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument as _____ of the Planning and Zoning Commission of the City of Dripping Springs, Texas, a municipal corporation, and he acknowledged to me that he executed the same for the purposes and considerations therein expressed, in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, this the ___ day of _____ 2021.

Andrea Cunningham, Notary Public
State of Texas

Bunker Ranch, LLC.:

By: _____ 

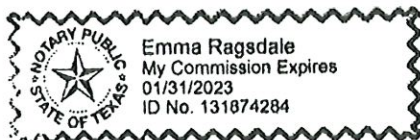
THE STATE OF TEXAS §

COUNTY OF HAYS §

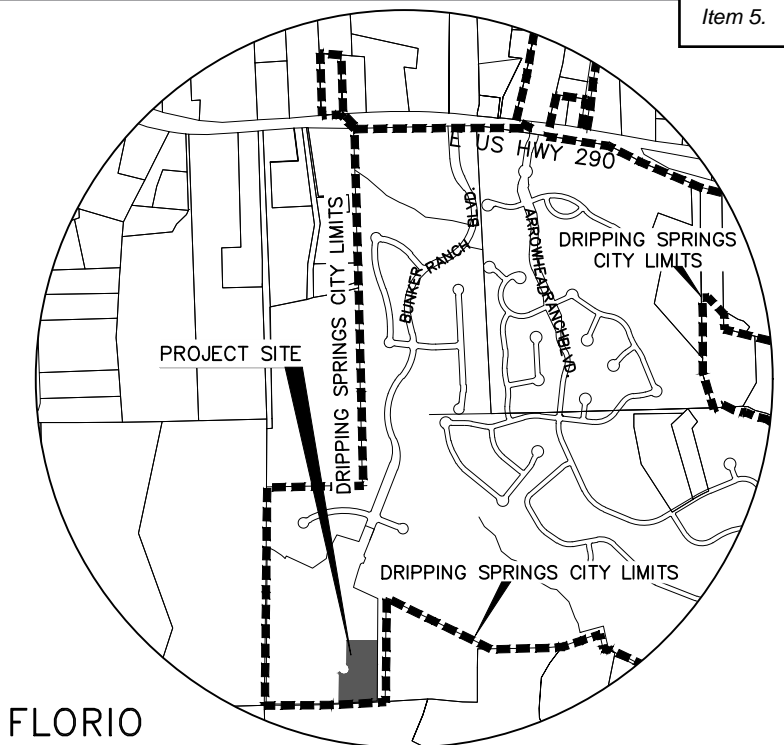
BEFORE ME, the undersigned authority, on this day personally appeared Steve Harren, known to me to be the person whose name is subscribed to the foregoing instrument as Member of Bunker Ranch, LLC and they acknowledged to me that they executed the same for the purposes and consideration therein expressed, in the capacity therein stated.

GIVEN UNDER MY HAND SEAL OF OFFICE, this the 21st day of April 2021.

Notary Public Signature
State of Texas



FINAL PLAT OF THE REPLAT OF LOTS 15-19, BLOCK "3" BUNKER RANCH PHASE 3 5.14 ACRES



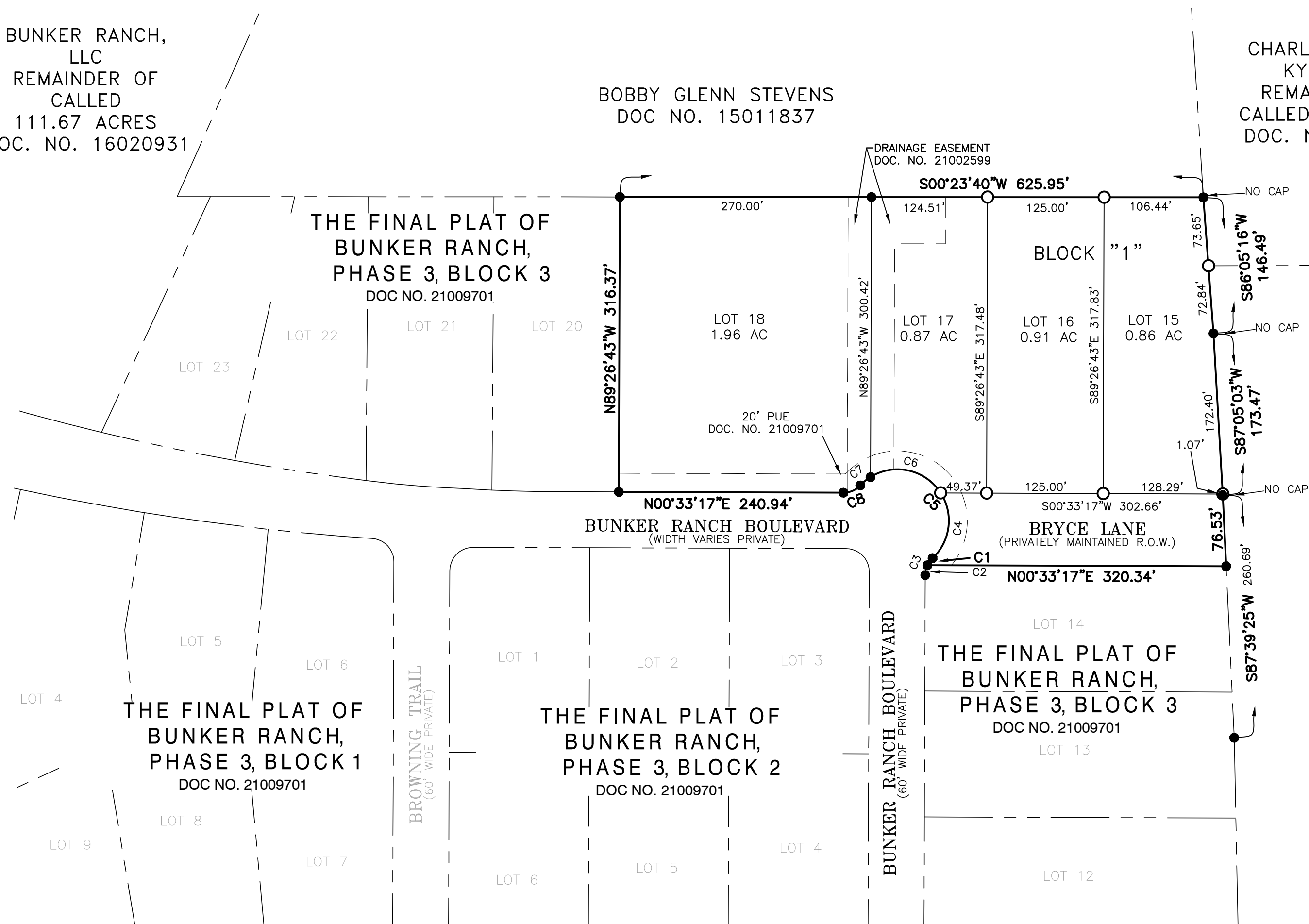
VICINITY MAP
SCALE: 1"=2000'

BUNKER RANCH,
LLC
REMAINDER OF
CALLED
111.67 ACRES
DOC. NO. 16020931

BOBBY GLENN STEVENS
DOC NO. 15011837

CHARLES B. FLORIO
KYLE FLORIO
REMAINDER OF A
CALLED 34.26 ACERS
DOC. NO. 15020909

LOT TABLE		
BLOCK "1"		
LOT #	SQUARE FEET	ACRES
15	37,541	0.86
16	39,706	0.91
17	38,046	0.87
18	85,341	1.96
STREET AREA		
SQUARE FEET	ACRES	
23,371	0.54	
TOTAL		
SQUARE FEET	ACRES	
224,005	5.14	



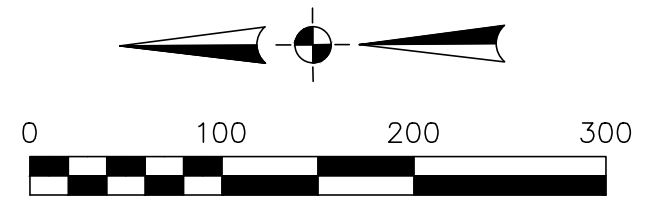
THE OVERLOOK AT BUNKER RANCH, LLC
CALLED 18.250 ACERS
DOC. NO. 20061246

LEGEND

- 1/2-INCH IRON ROD WITH "CEC" CAP FOUND
- 1/2-INCH IRON ROD WITH "CEC" CAP SET
- ▲ PK NAIL FOUND (UNLESS NOTED OTHERWISE)
- △ CALCULATED POINT
- W.Q.B.Z. WATER QUALITY BUFFER ZONE
- BSL BUILDING SETBACK LINE
- AC ACRES
- PUE PUBLIC UTILITY EASEMENT
- 100yr 100 YEAR FLOOD PLANE LINE
- BOUNDARY LINE
- - - ADJOINER BOUNDARY LINE
- INTERIOR LOT LINE
- - - BUILDING SETBACK LINE
- - - EASEMENT LINE

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	9.38'	9.32'	S53°37'28"E	21°29'36"
C2	25.00'	10.94'	10.85'	S76°54'29"E	25°04'27"
C3	25.00'	20.32'	19.76'	N66°09'41"W	46°34'03"
C4	55.00'	76.43'	70.43'	S82°41'22"E	79°37'23"
C5	55.00'	175.80'	109.96'	N45°33'17"E	183°08'06"
C6	55.00'	85.25'	76.97'	N13°05'44"E	88°48'24"
C8	25.00'	20.32'	19.76'	S22°43'44"E	46°34'03"
C7	55.00'	14.12'	14.08'	N38°39'37"W	14°42'18"



Civil & Environmental Consultants, Inc.
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
Texas Registered Surveying Firm 10194419 WWW.CECINC.COM Texas Registered Engineering Firm F-38

"FINAL PLAT" OF THE REPLAT OF LOTS
15-19, BLOCK "3" BUNKER RANCH PHASE
3, WITHIN THE CITY OF DRIPPING SPRINGS,
TEXAS

APPROVED BY:
FWF
JOB NUMBER: 181-500 ISSUE DATE: 04/13/2021
SHEET: 1 OF 2
SUBMITTAL DATE: 12/14/2020

FINAL PLAT OF THE REPLAT OF LOTS 15-19, BLOCK "3" BUNKER RANCH PHASE 3 5.14 ACRES

ENGINEER'S CERTIFICATION

THIS IS TO CERTIFY THAT: I AM AUTHORIZED TO PRACTICE THE PROFESSION OF ENGINEERING IN THE STATE OF TEXAS; I AM RESPONSIBLE FOR THE PREPARATION OF THE ENGINEERING PORTION THE PLAT SUBMITTED HERewith; ALL ENGINEERING INFORMATION SHOWN ON THE PLAT IS ACCURATE AND CORRECT; AND WITH REGARD TO THE ENGINEERING PORTIONS THEREOF, THE PLAT COMPLIES CITY OF DRIPPING SPRINGS CODE, AS AMENDED, AND ALL OTHER APPLICABLE CITY AND HAYS COUNTY CODES, ORDINANCES AND RULES,

BRIAN ESTES DATE
P.E. NO. 89270
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
3711 S. MOPAC EXPRESSWAY, STE. 550
AUSTIN, TX 78746

NO PORTION OF THIS TRACT IS WITHIN THE DESIGNATED FLOOD HAZARD AREA AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) #48209C0085F, HAYS COUNTY, TEXAS, DATED SEPTEMBER 2, 2005.

SURVEYOR'S CERTIFICATION

THIS IS TO CERTIFY THAT: I AM AUTHORIZED TO PRACTICE THE PROFESSION OF SURVEYING IN THE STATE OF TEXAS; I AM RESPONSIBLE FOR THE PREPARATION OF THE SURVEYING PORTIONS OF THE PLAT SUBMITTED HERewith; ALL SURVEYING INFORMATION SHOWN ON THE PLAT IS ACCURATE AND CORRECT; AND WITH REGARD TO THE SURVEYING PORTIONS THEREOF, THE PLAT COMPLIES WITH CITY OF DRIPPING SPRINGS CODE, AS AMENDED, AND ALL OTHER APPLICABLE CITY AND HAYS COUNTY CODES, ORDINANCES AND RULES.



FRANK WILLIAM FUNK DATE
R.P.L.S. NO. 6803
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
3711 S. MOPAC EXPRESSWAY, STE. 550
AUSTIN, TX 78746

STATE OF TEXAS
COUNTY OF HAYS

I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, 2021, A.D., AT _____ M., IN THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, IN INSTRUMENT NO. _____

WITNESS MY SEAL OF OFFICE, THIS THE ____ DAY OF _____, 2021, A.D.

ELAINE H. CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

STATE OF TEXAS}
COUNTY OF HAYS}
CITY OF DRIPPING SPRINGS}

THIS PLAT, THE REPLAT OF BUNKER RANCH PHASE 3, HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY OF DRIPPING SPRINGS AND IS HEREBY APPROVED.

APPROVED THIS THE ____ DAY OF _____ 2021.

BY:

PLANNING & ZONING COMMISSION CHAIR OR VICE CHAIR,
ATTEST:
ANDREA CUNNINGHAM, CITY SECRETARY

OWNER'S ACKNOWLEDGEMENT

STATE OF TEXAS §
COUNTY OF TRAVIS §

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, BUNKER RANCH, LLC, OWNERS OF 40.20 ACRES OF LAND, SUBDIVIDED AS BUNKER RANCH PHASE3, A SUBDIVISION OF RECORD IN DOCUMNET NUMBER 21009701, OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, DO HEREBY SUBDIVIDE 5.14 ACRES OF LAND TO BE KNOWN AS THE REPLAT OF LOTS 15-19, BLOCK "3", BUNKER RANCH PHASE 3 IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS HERETOFORE GRANTED, AND DO HEREBY DEDICATE THE STREETS DESIGNATED HEREON AS PUBLIC ROAD TO THE PUBLIC AND WILL CONVEY THE STREETS DESIGNATED HEREON AS PRIVATE AS WELL AS THE WATER QUALITY LOTS AND PRIVATE PARK LOTS TO THE HOMEOWNERS ASSOCIATION.

IN WITNESS WHEREOF THE SAID BUNKER RANCH, LLC, HAS CAUSED THESE PRESENTS TO BE EXECUCED BY ITS DULY AUTHORIZED OFFICER

WITNESS MY HAND THIS THE _____ DAY OF _____ A.D. 2021

BUNKER RANCH, LLC
6836 BEE CAVES RD.
BUILDING 3, SUITE 302
AUSTIN, TX 78746

STATE OF TEXAS §
COUNTY OF _____ §

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND THE STATE, ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THE HE/SHE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ DAY OF _____ A.D 2021.

NOTARY PUBLIC, IN AND FOR

MY COMMISSION EXPIRES:

PLAT NOTES:

1. THIS FINAL PLAT IS LOCATED WITHIN THE CITY OF DRIPPING SPRINGS CITY LIMITS.
2. NO PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER RECHARGE ZONE.
3. THIS PLAT LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.
4. THIS PLAT IS LOCATED WITHIN THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT.
5. ACCESS TO AND FROM CORNER LOTS SHALL ONLY BE PERMITTED FROM ONE STREET.
6. THE PROPERTY IS LOCATED WITHIN ZONE "X", AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FEDERAL INSURANCE RATE MAP, PANEL NOS. 48209C0085F & 48209C0105F, HAYS COUNTY, TEXAS DATED SEPTEMBER 2, 2005. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR THE STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
7. WATER SERVICE WILL BE PROVIDED TO EACH LOT FROM THE DRIPPING SPRINGS WATER SUPPLY CORPORATION.
8. WASTEWATER SERVICE WILL BE PROVIDED BY EACH LOT THROUGH USE OF O.S.S.F. PER CITY OF DRIPPING SPRINGS REGULATIONS.
9. ELECTRIC SERVICE WILL BE PROVIDED BY THE PEDERNALES ELECTRIC COOPERATIVE.
10. TELEPHONE SERVICE WILL BE PROVIDED BY AT&T.
11. GAS SERVICE TO BE PROVIDED BY TEXAS GAS.
12. ALL SETBACKS SHALL COMPLY WITH THE ZONING ORDINANCE.
13. UTILITY EASEMENTS OF 20 FEET SHALL BE LOCATED ALONG EACH SIDE OF DEDICATED R.O.W. AND 5' ALONG EACH SIDE LOT LINE.
14. ALL STREETS SHALL BE DESIGNED AS IN ACCORDANCE WITH APPLICABLE CITY OF DRIPPING SPRINGS AND HAYS COUNTY DEVELOPMENT REGULATIONS.
15. NO STRUCTURE SHALL BE OCCUPIED UNTIL A CERTIFICATE OF OCCUPANCY IS ISSUED BY THE CITY OF DRIPPING SPRINGS.
16. ANY DEVELOPMENT WITHIN A WQBZ ALLOWED UNDER SEC. 22.05.017(d) OF THE CITY WATER QUALITY ORDINANCE SHALL BE DESIGNED AND/OR CONDUCTED IN A MANNER WHICH LIMITS THE ALTERATION AND POLLUTION OF THE NATURAL RIPARIAN CORRIDOR TO THE MAXIMUM EXTENT FEASIBLE. IN NO CASE SHALL ANY WASTEWATER LINE BE LOCATED LESS THAN 100 FEET FROM THE CENTERLINE OF A STREAM UNLESS THE APPLICANT HAS DEMONSTRATED THAT INSTALLATION OF THE WASTEWATER LINE OUTSIDE OF THIS ZONE IS PHYSICALLY PROHIBITIVE OR ENVIRONMENTALLY UNSOUND. ANY WASTEWATER LINES LOCATED IN A WQBZ SHALL MEET DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS TO ENSURE ZERO LEAKAGE.
17. DRIVEWAYS SHALL BE PERMITTED BY THE CITY AND ALL REQUIRED CULVERTS MUST BE NO LESS THAN 18" CMP.
18. CITY IS AUTHORIZED TO ACCESS THE PRIVATE STREETS, EASEMENTS, ETC., FOR INSPECTION CODE COMPLIANCE, AND WASTEWATER MAINTENANCE AS NEEDED AND HAYS COUNTY EMERGENCY SERVICE DISTRICT #6 IS AUTHORIZED TO ACCESS THE PRIVATE STREETS FOR EMERGENCY ACCESS. BUNKER RANCH HOA TO PROVIDE CITY AND HAYS COUNTY EMERGENCY SERVICE DISTRICT #6 WITH GATE ACCESS CODE.
19. THE BUNKER RANCH HOA, WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL PRIVATE ROADS, WATER QUALITY LOTS, PRIVATE PARKS, AND TRAILS.
20. THIS PLAT AND SUBSEQUENT SITE DEVELOPMENT PLANS SHALL COMPLY WITH THE MOST CURRENT INTERNATIONAL FIRE CODE AS ADOPTED AND AMENDED BY THE EMERGENCY SERVICE DISTRICT #6, OR ITS SUCCESSORS.
21. THE BUNKER RANCH HOA WILL BE RESPONSIBLE FOR OPERATION AND MAINTENANCE OF STORMWATER FACILITIES AND EASEMENT.
22. LOT 19 HAS BEEN DELETED. LOT 19 AREA HAS BEEN COMBINED WITH LOT 18 AREA.
23. ALL SETBACK LINES FOR THE PREVIOUS PLAT, BUNKER RANCH PHASE 3, RECORDED IN DOCUMENT NUMBER 21009701 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, APPLY TO THIS PLAT.

SURVEY CONTROL:

THE BASIS OF BEARINGS SHOWN HEREON IS THE TEXAS COORDINATE SYSTEM, NAD 83(2012A), SOUTH CENTRAL ZONE, REFERENCING THE LEICA SMARTNET CONTINUALLY OPERATING REFERENCE NETWORK.



Civil & Environmental Consultants, Inc.
3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746
Ph: 512.439.0400 · Fax: 512.329.0096
Texas Registered Surveying Firm 10194419 WWW.CECINC.COM Texas Registered Engineering Firm F-38

"FINAL PLAT" OF THE REPLAT OF LOTS
15-19, BLOCK "3" BUNKER RANCH PHASE
3, WITHIN THE CITY OF DRIPPING SPRINGS,
TEXAS

APPROVED BY:
FWF
JOB NUMBER: 181-500 ISSUE DATE: 04/13/2021
SHEET: 2 OF 2
SUBMITTAL DATE: 12/14/2020



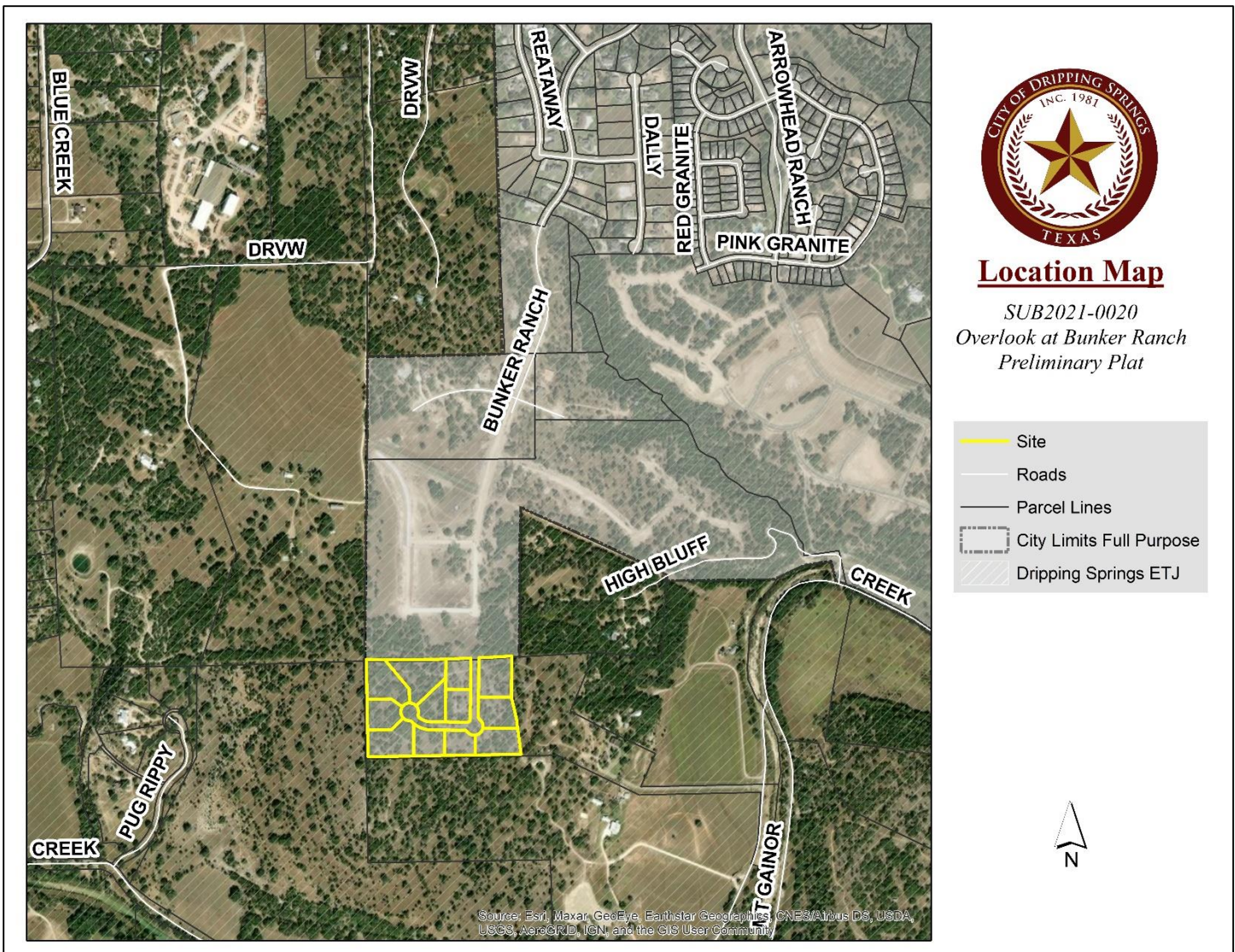
Planning and Zoning Commission Planning Department Staff Report

Item 6.

Planning and Zoning Commission Meeting: April 27, 2021
Project No: SUB2021-0020
Project Planner: Amanda Padilla, Senior Planner

Item Details

Project Name: Overlook at Bunker Ranch
Property Location: 2004 Creek Road, Dripping Springs, Texas 78620, south of Highway 290, north of Creek Road
Legal Description: Approximately 18.250 acres, situated in the Benjamin F. Hanna Survey No. 28, Abstract No. 222
Applicant: Brian Estes, P.E., Civil & Environmental Consultants, INC.
Property Owner: Steve Harren, Overlook at Bunker Ranch, LLC
Request: Preliminary Plat Overlook at Bunker Ranch
Staff recommendation: Disapproval of the Preliminary Plat based on outstanding comments



Planning Department Staff Report

Overview

The applicant is requesting to Preliminary Plat Overlook at Bunker Ranch. The Bunker Ranch development is planned as a low-density single-family residential development located South of Hwy 290 just west of the Arrowhead Ranch Development, within the City of Dripping Springs City Limits. The Overlook at Bunker Ranch was recently annexed and rezoned to SF-2, Moderate Density Residential at the March 9, 2021 City Council Meeting. The 18.250-acre Preliminary Plat consists of a total of 12 lots and right of way. The lots include 12 single family lots.

ACCESS AND TRANSPORTATION

Primary access to the subdivision will be through Bunker Ranch Blvd, located in Bunker Ranch Phase 3, the adjacent tract to the north.

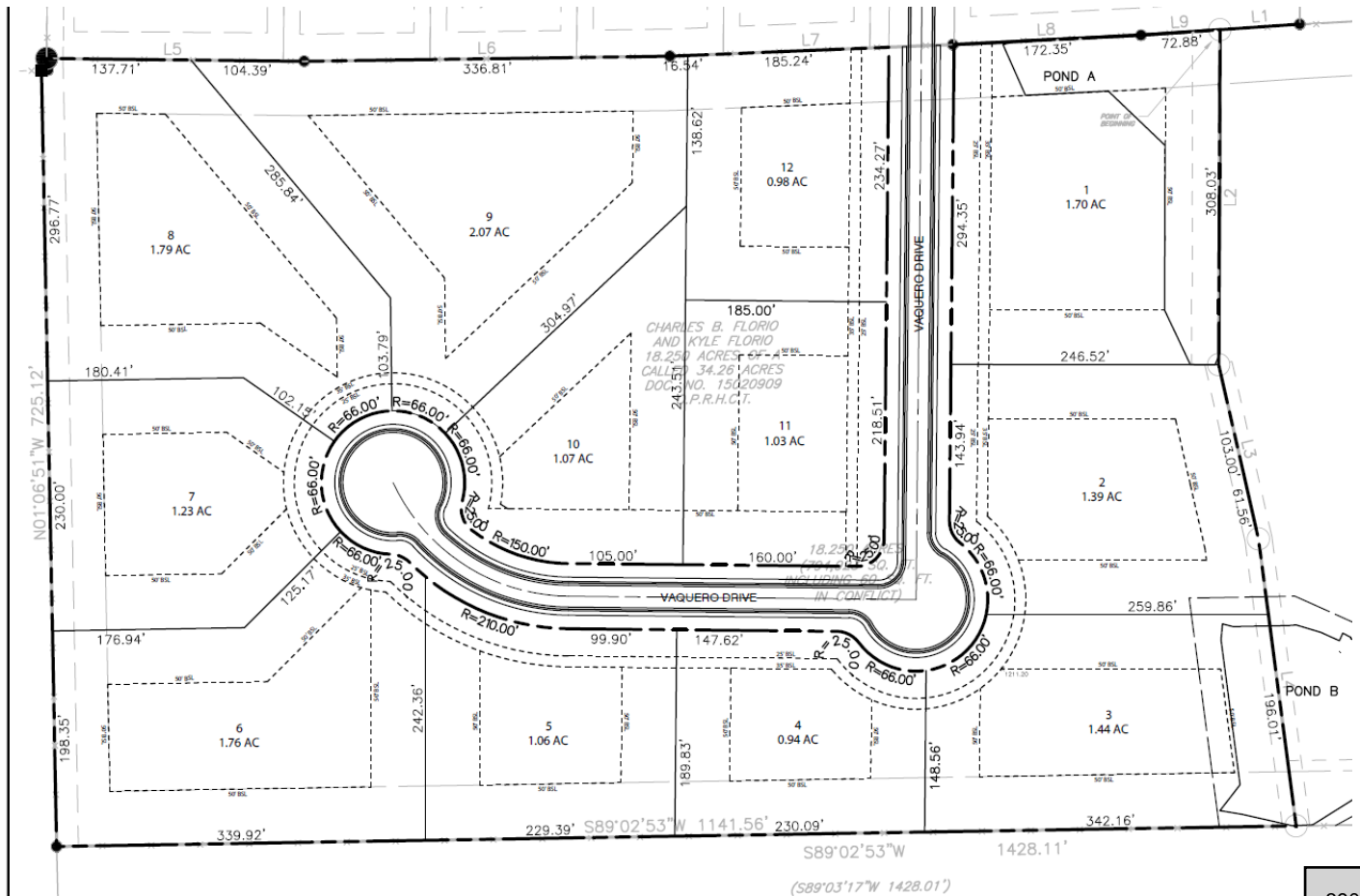
WATER AND WASTEWATER

Dripping Springs Water Supply Corp (DSWSC) is the water provider for the tract. An existing 8" water main is in the South right-of-way of Bunker Ranch Blvd, a road located on the south side of Bunker Ranch Phase 3, adjacent to the subject 18.25-acre tract. The proposed water line will connect to the existing 8" water main and run down the right-of-way of the proposed street as shown on the Preliminary Plat, servicing the project, and enhancing the overall water grid.

Private On Site Sewage Facilities (OSSF's) will service the subdivision for wastewater.

PARKLAND

The applicant intends to pay fee-in-lieu for Parkland. The City needs more information in order to improve the fee-in-lieu which will be handled administratively.



Planning Department Staff Report

Overlook at Bunker Ranch Preliminary Plat utility providers are listed below:

- Water: DSWSC
- Wastewater: OSSF
- Electric: PEC

Recommendation:

Staff is recommending *disapproval of the plat with the outstanding comments* attached (see below Section).
Once all outstanding comments have been met the proposed plat will be consistent and comply with the City Ordinances.

Outstanding Comments:

Please see Exhibit 3- Outstanding Comments Letter

Public Notification

Signs were posted on the site; notice was placed on the City Website.

Attachments

- Exhibit 1 – Subdivision Application
- Exhibit 2 – Overlook at Bunker Ranch Preliminary Plat
- Exhibit 3 – Outstanding Comments Letter

Recommended Action	Disapproval of the Plat with the outstanding comments.
Alternatives/Options	N/A
Budget/Financial impact	N/A
Public comments	No comments have been received at the time of the report.
Enforcement Issues	N/A
Comprehensive Plan Element	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

Item 6.

PRELIMINARY PLAT APPLICATION

Case Number (staff use only): _____ - _____

MEETINGS REQUIRED

(AS APPLICABLE PER SUBDIVISION ORDINANCE)

INFORMAL CONSULTATION

PRE-APPLICATION CONFERENCE

DATE: _____

DATE: 1/7/2021

NOT SCHEDULED

NOT SCHEDULED

CONTACT INFORMATION

APPLICANT NAME Brian Estes, PE

COMPANY Civil & Environmental Consultants, Inc.

STREET ADDRESS 3711 South Mopac Expressway, Building 1, Suite 550

CITY Austin STATE Texas ZIP CODE 78746

PHONE 5124390400 EMAIL bestes@cecinc.com

OWNER NAME Steve Harren

COMPANY Overlook at Bunker Ranch, LLC

STREET ADDRESS 317 Grace Lane #240

CITY Austin STATE Texas ZIP CODE 78746

PHONE 512-644-6800 EMAIL steveharren@aol.com

PROPERTY INFORMATION	
PROPERTY OWNER NAME	Overlook at Bunker Ranch, LLC
PROPERTY ADDRESS	2004 Creek Rd, DRIPPING SPRINGS, TX 78620
CURRENT LEGAL DESCRIPTION	18.25 Acre Tract of Land described in Exhibit "A" of Deed Recorded under Hays County Document # 20061246
TAX ID #	R143390
LOCATED IN	<input checked="" type="checkbox"/> City Limits <input type="checkbox"/> Extraterritorial Jurisdiction
CURRENT LAND ACREAGE	18.25
SCHOOL DISTRICT	Dripping Springs ISD
ESD DISTRICT(S)	Hays County ESD #6
ZONING/PDD/OVERLAY	SF-2
EXISTING ROAD FRONTAGE	<input type="checkbox"/> Private Name: <u>Creek Road</u> <input type="checkbox"/> State Name: _____ <input type="checkbox"/> City/County (public) Name: _____
DEVELOPMENT AGREEMENT? (If so, please attach agreement)	<input type="checkbox"/> Yes (see attached) <input type="checkbox"/> Not Applicable Development Agreement Name: _____

ENVIRONMENTAL INFORMATION	
IS PROPERTY OVER THE EDWARDS AQUIFER RECHARGE ZONE?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY OVER THE BARTON SPRINGS CONTRIBUTING ZONE TO THE EDWARDS AQUIFER?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY WITHIN A FEMA FLOODPLAIN AS DEFINED BY THE MOST CURRENT FIRM?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

PROJECT INFORMATION	
PROPOSED SUBDIVISION NAME	Overlook at Bunker Ranch
TOTAL ACREAGE OF DEVELOPMENT	18.25
TOTAL NUMBER OF LOTS	12
AVERAGE SIZE OF LOTS	1.37 acres
INTENDED USE OF LOTS	<input checked="" type="checkbox"/> RESIDENTIAL <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> INDUSTRIAL/OTHER: _____
# OF LOTS PER USE	RESIDENTIAL: <u>12</u> COMMERCIAL: _____ INDUSTRIAL: _____
ACREAGE PER USE	RESIDENTIAL: <u>18.25 AC</u> COMMERCIAL: _____ INDUSTRIAL: _____
LINEAR FEET (ADDED) OF PROPOSED ROADS	PUBLIC: _____ PRIVATE: <u>1080 LF</u>
ANTICIPATED WASTEWATER SYSTEM	<input checked="" type="checkbox"/> CONVENTIONAL SEPTIC SYSTEM <input type="checkbox"/> CLASS I (AEROBIC) PERMITTED SYSTEM <input type="checkbox"/> PUBLIC SEWER
WATER SOURCES	SURFACE WATER <input checked="" type="checkbox"/> PUBLIC WATER SUPPLY <input type="checkbox"/> RAIN WATER GROUND WATER* <input type="checkbox"/> PUBLIC WELL <input type="checkbox"/> SHARED WELL <input type="checkbox"/> PUBLIC WATER SUPPLY
<p>*IF DOING GROUND WATER PROVISION FOR THE DEVELOPMENT USING GROUNDWATER RESOURCES, THE HAYS-TRINITY GROUNDWATER CONSERVATION DISTRICT MUST BE NOTIFIED:</p> <p>HAYS-TRINITY GCD NOTIFIED? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>	

COMMENTS: _____

TITLE: _____ SIGNATURE: _____

PUBLIC UTILITY CHECKLIST

ELECTRIC PROVIDER NAME (if applicable): PEC

VERIFICATION LETTER ATTACHED NOT APPLICABLE

COMMUNICATIONS PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

WATER PROVIDER NAME (if applicable): DSWSC

VERIFICATION LETTER ATTACHED NOT APPLICABLE

WASTEWATER PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

GAS PROVIDER NAME (if applicable): Texas Gas Service

VERIFICATION LETTER ATTACHED NOT APPLICABLE

<u>PARKLAND DEDICATION?</u>	<u>AGRICULTURE FACILITIES (FINAL PLAT)?</u>
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NOT APPLICABLE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT APPLICABLE

COMPLIANCE WITH OUTDOOR LIGHTING ORDINANCE?*

(See attached agreement)

*If proposed subdivision is in the City Limits, compliance with the Lighting Ordinance is **mandatory**. If proposed subdivision is in the ETJ, compliance is **mandatory** when required by a Development Agreement, or as a condition of an Alternative Standard/Special Exception/Variance/Waiver.

Voluntary compliance is strongly encouraged by those not required by above criteria (see Outdoor Lighting tab on the city’s website at www.cityofdrippingsprings.com and online Lighting Ordinance under the Code of Ordinances tab for more information).

YES (REQUIRED) YES (VOLUNTARY*) NO

APPLICANT'S SIGNATURE

*Note: An additional signature is required on page 7 of the application verifying completeness. Applications should be submitted **only** when all required information is included in the submittal.*

The above information is true to the best of my knowledge. I attest that the real property described is owned by me and all others as signed below. If the below signed applicant is not the owner of said property, the signature of the property owner must be included below, or consent must be attached (If a corporation, please list title, and name of corporation.)



Applicant Name

Brian Estes, P.E.

3/5/21

Applicant Signature

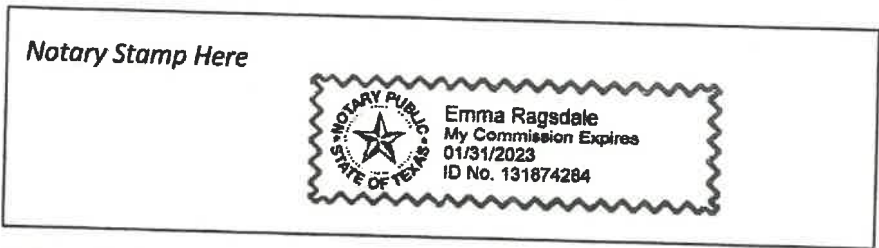
Date

3/5/21

Notary



Date 3/5/21



Steve Harren (Overlook at Bunker Ranch, LLC)

Property Owner Name

X 

Property Owner Signature

3/5/21

Date

All required items and information (including all applicable below listed exhibits and fees) must be received by the City for an application and request to be considered complete. Incomplete submissions will not be deemed filed and complete. By signing below, I acknowledge that I have read through and met all requirements for a complete submittal:

Applicants Signature:  Date: 3-5-21

For projects within the ETJ, per the City of Dripping Springs Interlocal Cooperation Agreement with Hays County, a county subdivision application must also be submitted for review to the City. Fees for Hays County shall also be paid. The City will forward the application and Hays County Fees to the County.

PRELIMINARY PLAT CHECKLIST
Subdivision Ordinance, Section 4

STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed application form – including all required notarized signatures
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application fee (refer to Fee Schedule)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Copies/PDF of all submitted items – please provide a coversheet outlining what digital contents are included on the CD/USB drive.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Data (GIS) of Subdivision
<input type="checkbox"/>	N/A	County Application Submittal – proof of online submission (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$240 Fee for ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contract Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Engineer’s Summary Report
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preliminary Drainage Study
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preliminary Plats (1 Copy required – 11 x 17)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tax Certificates – verifying that property taxes are current
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of Notice Letter to the School District – notifying of preliminary submittal
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement
<input type="checkbox"/>	N/A	Development Agreement/PDD (If applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Utility Service Provider “Will Serve” Letters
<input type="checkbox"/>	N/A	Documentation showing approval of driveway locations (TxDOT, County,)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Documentation showing Hays County 911 addressing approval (if applicable)

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<input type="checkbox"/>	<input type="checkbox"/>	Parkland Dedication Submittal (narrative, fees)
<input type="checkbox"/>	<input type="checkbox"/>	\$25 Public Notice Sign Fee
<input type="checkbox"/>	<input type="checkbox"/>	ITE Trip Generation Report, or if required; a Traffic Impact Analysis
<input type="checkbox"/>	<input type="checkbox"/>	Geologic Assessment Identifying Critical Environmental Features [Sub. Ord. 4.8(l)(4)]
<input type="checkbox"/>	<input type="checkbox"/>	OSSF Facility Planning Report or approved OSSF permit (<i>if applicable</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Hays Trinity Groundwater Conservation District approval of water well (<i>if applicable</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Preliminary Conference Form signed by City Staff
PRELIMINARY PLAT INFORMATION REQUIREMENTS		
<input type="checkbox"/>	<input type="checkbox"/>	A vicinity, or location, map that shows the location of the proposed Preliminary Plat within the City (or within its ETJ) and in relationship to existing roadways.
<input type="checkbox"/>	<input type="checkbox"/>	Boundary lines, abstract/survey lines, corporate and other jurisdictional boundaries, existing or proposed highways and streets (including right-of-way widths), bearings and distances sufficient to locate the exact area proposed for the subdivision, and all survey monuments including any required concrete monuments (per the City Engineer); the length and bearing of all straight lines, radii, arc lengths, tangent lengths and central angles of all curves shall be indicated along the lines of each lot or Unit (curve and line data may be placed in a table format); accurate reference ties via courses and distances to at least one recognized abstract or survey corner or existing subdivision corner shall be shown.
<input type="checkbox"/>	<input type="checkbox"/>	The name, location and recording information of all adjacent subdivisions (or property owners of adjacent unplatted property), including those located on the other sides of roads or creeks, shall be drawn to the same scale and shown in dotted lines adjacent to the tract proposed for subdivision in sufficient detail to show accurately the existing streets, alleys, building setbacks, lot and block numbering, easements, and other features that may influence the layout of development of the proposed subdivision; adjacent unplatted land shall show property lines, the names of owners of record, and the recording information.
<input type="checkbox"/>	<input type="checkbox"/>	The location, widths and names of all streets, alleys and easements (it shall be the applicant's responsibility to coordinate with appropriate utility entities for placement of necessary utility easements and for location of all streets and median openings on highways or arterial roadways), existing or proposed, within the subdivision limits and adjacent to the subdivision; a list of proposed street names shall be submitted (in the form of a letter or memo along with the application form) for all new street names (street name approval is required at the time the Preliminary Plat is approved)

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<input type="checkbox"/>	<input type="checkbox"/>	The location of all existing property lines, existing lot and block numbers and date recorded, easements of record (with recording information), buildings, existing sewer or water mains (can be shown on a separate sheet, if preferred), gas mains or other underground structures, or other existing features within the area proposed for subdivision;
<input type="checkbox"/>	<input type="checkbox"/>	Proposed arrangement and square footage of lots or Units (including lot and block numbers or Unit numbers) proposed use of same; for nonresidential uses, the location and size of buildings, existing and proposed. This information shall be provided on a separate sheet, such as on a concept plan or the final site plan.
<input type="checkbox"/>	<input type="checkbox"/>	All sheets shall have a title block which shows the title or name under which the proposed subdivision is to be recorded; the name, address and phone number of the property owner(s); the name, address and phone number of the licensed engineer or registered professional land surveyor who prepared the plat/plans; the scale of the plat/plans; the date the plat/plan was prepared; and the location of the property according to the abstract or survey records of Hays County, Texas.
<input type="checkbox"/>	<input type="checkbox"/>	Sites, if any, to be reserved or dedicated for parks, schools, playgrounds, other public uses or for private facilities or amenities
<input type="checkbox"/>	<input type="checkbox"/>	Scale (including a graphic scale), date, north arrow oriented to the top or left side of the sheet, and other pertinent informational data
<input type="checkbox"/>	<input type="checkbox"/>	Contours with intervals of two feet (2') or less shown for the area, with all elevations on the contour map referenced to sea level datum; and the limits of any portion of the 100-year floodplain (pursuant to the flood study, if required by the City Engineer) that may be within or adjacent to (i.e., within 100 feet of) the property (final monumentation of the floodplain shall occur, and shall be shown, on the final plat prior to approval and filing at the County) - if no floodplain is present, then a note stating this shall be shown on the plat
<input type="checkbox"/>	<input type="checkbox"/>	Areas contributing drainage to the proposed subdivision shall be shown in the drainage study and construction plans; locations proposed for drainage discharge from the site shall be shown by directional arrows.
<input type="checkbox"/>	<input type="checkbox"/>	All physical features of the property to be subdivided shall be shown, including: <ul style="list-style-type: none"> - The location and size of all watercourses; and - 100-year floodplain according to Federal Emergency Management Agency (FEMA) information; and

		<ul style="list-style-type: none"> - Water Quality Buffer Zones as required by [WQO 22.05.017] - Drainage ways and drainage easements. Drainage easements are required for bypass of any offsite flows and for concentrated flows conveyed across lots. Drainage easements shall be large enough to contain the 100-yr storm [Sub. Ord. 12.2.2]. - U.S. Army Corps of Engineers flowage easement requirements; and - All critical environmental features (CEFs) such as karsts, springs, sinkholes, caves, etc., to be located and documentation to be signed and certified by a geologist. All CEF to have a minimum setback of 150'. All designated wetlands to be certified as such by an accredited wetland biologist relying the presence of wetlands plant species. Applicant to include a slope map identifying the breakdown of all lands in categories from 0% to 15 slope, 15 to 30 slope, and over 30% slope; and - Ravines; and - Bridges; and - Culverts; and - Existing structures; and - Drainage area in acres or area draining into subdivisions (to be included in drainage study and construction plans); and - Outline of major wooded areas or the location of major or important individual trees (excluding Cedar Trees) with trunk diameters exceeding twelve inches (12") measured four feet (4') above the ground, and other features pertinent to subdivision; is defined in the City's Technical Construction Standards and Specifications, and the City's Landscape Ordinance.
<input type="checkbox"/>	<input type="checkbox"/>	<p>Provide notes identifying the following:</p> <ul style="list-style-type: none"> • Owner responsible for operation and maintenance of stormwater facilities. • Owner/operator of water and wastewater utilities. • Owner/operator of roadway facilities
<input type="checkbox"/>	<input type="checkbox"/>	<p>Schematic Engineering plans of water and sewer lines and other infrastructure (including sizes) to be constructed in the subdivision; the proposed connections to distribution mains shall be indicated</p>

<input type="checkbox"/>	<input type="checkbox"/>	<p>Proposed phasing of the development: Where a subdivision is proposed to occur in phases, the applicant, in conjunction with submission of the Preliminary Plat, shall provide a schedule of development, the dedication of rights-of-way for streets and street improvements, whether on-site or off-site, intended to serve each proposed phase of the subdivision. The City Engineer shall determine whether the proposed streets and street improvements are adequate pursuant to standards herein established, and may require that a traffic impact analysis be submitted for the entire project or for such phases as the City Engineer determines to be necessary to adjudge whether the subdivision will be served by adequate streets and thoroughfares.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<p>All Preliminary Plats shall be submitted in a legible format that complies with Hays County requirements for the filing of plats.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Existing zoning of the subject property and all adjacent properties if within the city limits.</p>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Construction Traffic Plan showing proposed routes for construction vehicle traffic and points of ingress and egress of such vehicles during construction; temporary construction easement approvals if needed, this shall be sealed by a registered engineer</p>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Certificates and other language shall be included on the plat, pursuant to the following Subsections: A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant.</p> <ul style="list-style-type: none"> - A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant. - An accurate legal, such as by metes and bounds, description by bearings and distances (including necessary curve and line data), accurate to the nearest one hundredth of a foot, for all boundary, block and lot lines, with descriptions correlated to a permanent survey monument. - The registered professional land surveyor’s certificate, with a place for his or her signature and notarization of his or her signature. - A place for plat approval signature of the Chair or Vice Chair, in the Chair’s absence) of the Planning and Zoning Commission, a place for the City Secretary to attest such signature, and the approval dates by Planning and Zoning Commission. - Appendices to this Chapter contain certificates and languages to be used on the plat to accommodate the above requirements:
<input type="checkbox"/>	<input type="checkbox"/>	<p>If any amount of surface water is to be used by the subject property, the Applicant must provide documentation to the City establishing that the Applicant has notified the following entities of the Applicant’s plans for the</p>

	<p>project: Lower Colorado River Authority (LCRA), and the United States Fish and Wildlife Service (USFWS).</p>
--	---

NARRATIVE OF COMPLIANCE

A written narrative describing how all portions of the subdivision meets all requirements of this code and other codes, including landscaping, lighting, parkland dedication, site development, water quality protection, and zoning, as may be relevant.

<p>Outdoor Lighting, Article 24.06</p>	<p>The outdoor lighting ordinance agreement form has been submitted and the project will be in compliance with City code per Article 24.06.</p>
<p>Parkland Dedication, Article 28.03</p>	<p>Parkland dedication will be paid in lieu of providing parkland area. Refer to the Parkland Narrative provided with this submittal.</p>
<p>Landscaping and Tree Preservation, Article 28.06</p>	<p>Tree Mitigation will be provided per City code Article 28.06.</p>

<p>Subdivision, 28.02, Exhibit A</p>	<p>This section shall also include, depending on what type of plat is being filed, how public or private improvements will meet City standards, including water quality, drainage, stormwater, and fire (if applicable). This project complies with all requirements out lined in Exhibit A of the Subdivision Ordinance.</p>
<p>Zoning, Article 30.02, Exhibit A</p>	<p>The property is zoned SF-2 and the proposed development complies with zoning requirements for SF-2.</p>

Project Number: _____ - _____
 Only filled out by staff

Date, initials



BILLING CONTACT FORM

Project Name: Overlook at Bunker Ranch
 Project Address: 2004 Creek Road, DRIPPING SPRINGS, TX 78620
 Project Applicant Name: Brian Estes, PE

Billing Contact Information

Name: Steve Harren
 Mailing Address: 317 Grace Lane #240
Austin, TX 78746
 Email: steveharren@aol.com Phone Number: 512-644-6800

Type of Project/Application (check all that apply):

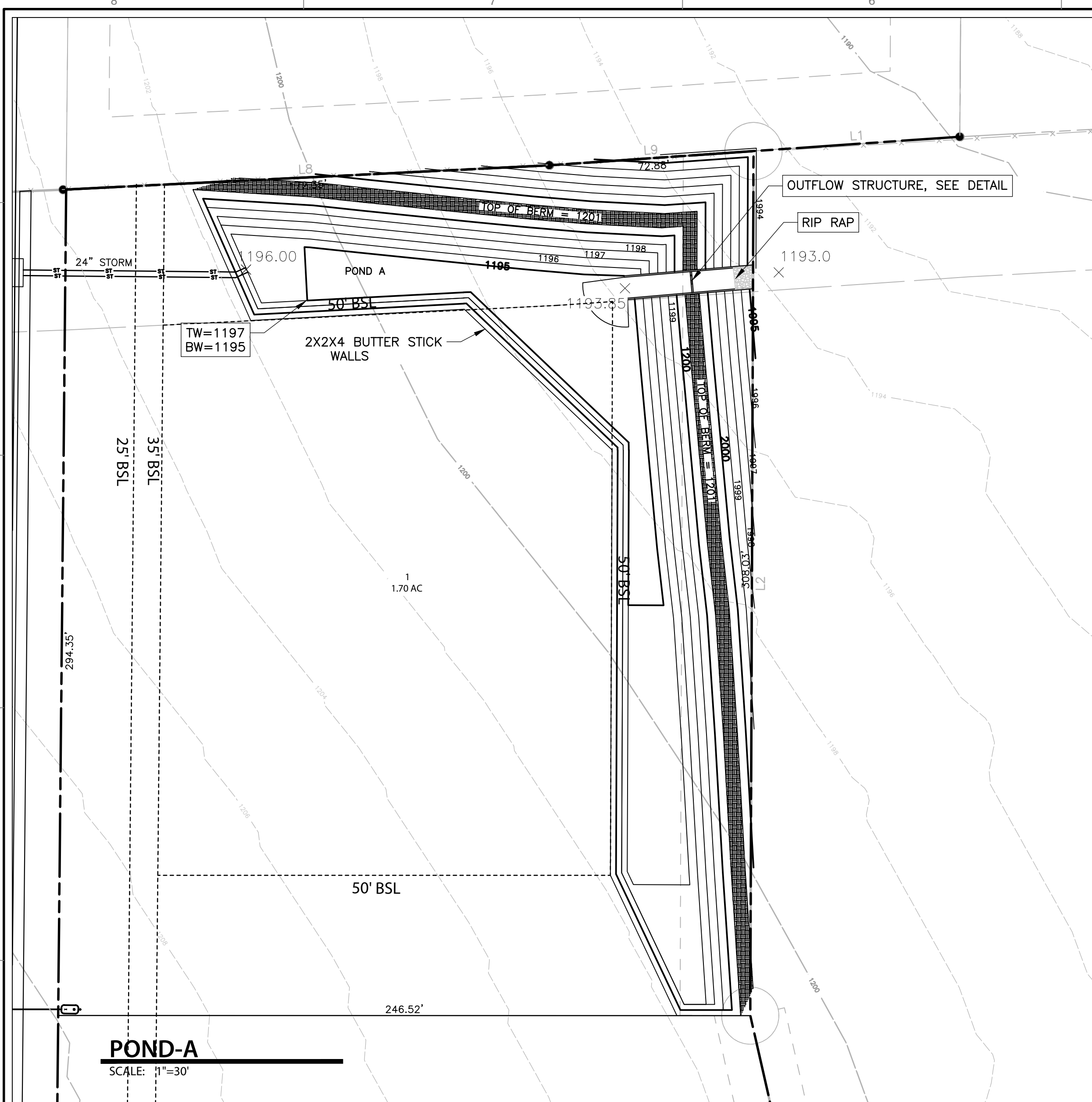
- | | |
|---|--|
| <input type="checkbox"/> Alternative Standard | <input type="checkbox"/> Special Exception |
| <input type="checkbox"/> Certificate of Appropriateness | <input type="checkbox"/> Street Closure Permit |
| <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Subdivision |
| <input type="checkbox"/> Development Agreement | <input type="checkbox"/> Waiver |
| <input type="checkbox"/> Exterior Design | <input type="checkbox"/> Wastewater Service |
| <input type="checkbox"/> Landscape Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Lighting Plan | <input type="checkbox"/> Zoning |
| <input type="checkbox"/> Site Development Permit | <input type="checkbox"/> Other _____ |

*Applicants are required to pay all associated costs associated with a project's application for a permit, plan, certificate, special exception, waiver, variance, alternative standard, or agreement, regardless of City approval. Associated costs may include, but are not limited to, public notices and outside professional services provided to the City by engineers, attorneys, surveyors, inspectors, landscape consultants, lighting consultants, architects, historic preservation consultants, and others, as required. Associated costs will be billed at cost plus 20% to cover the City's additional administrative costs. **Please see the online Master Fee Schedule for more details.** By signing below, I am acknowledging that the above listed party is financially accountable for the payment and responsibility of these fees.*

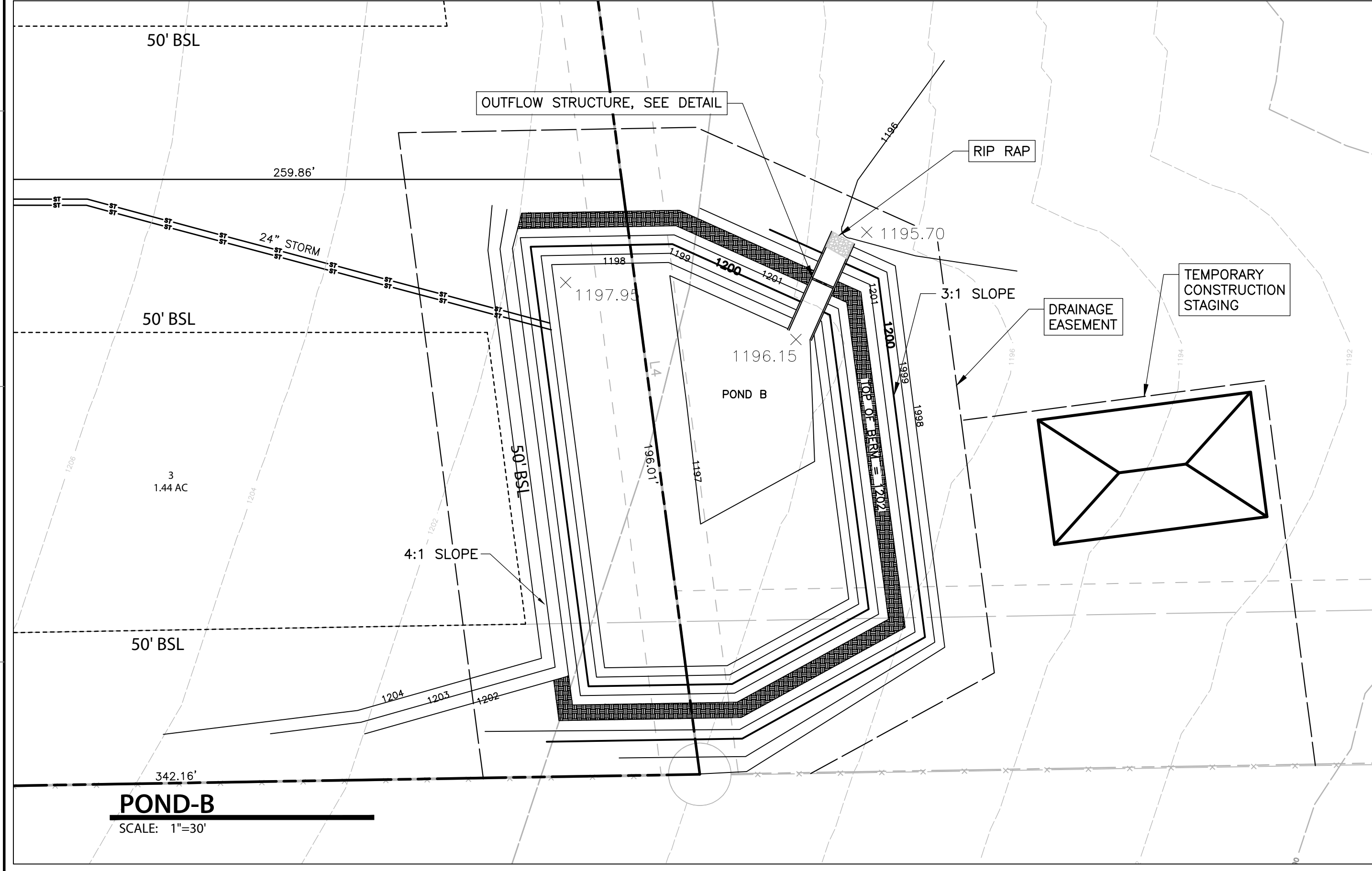
Signature of Applicant

3/9/2021

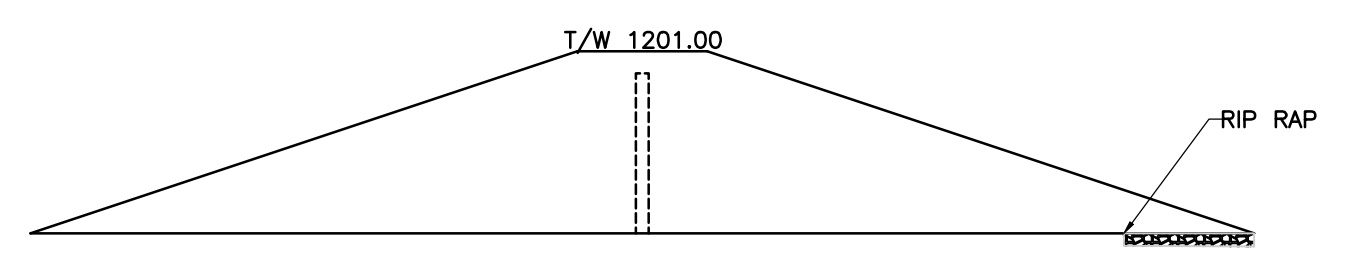
Date



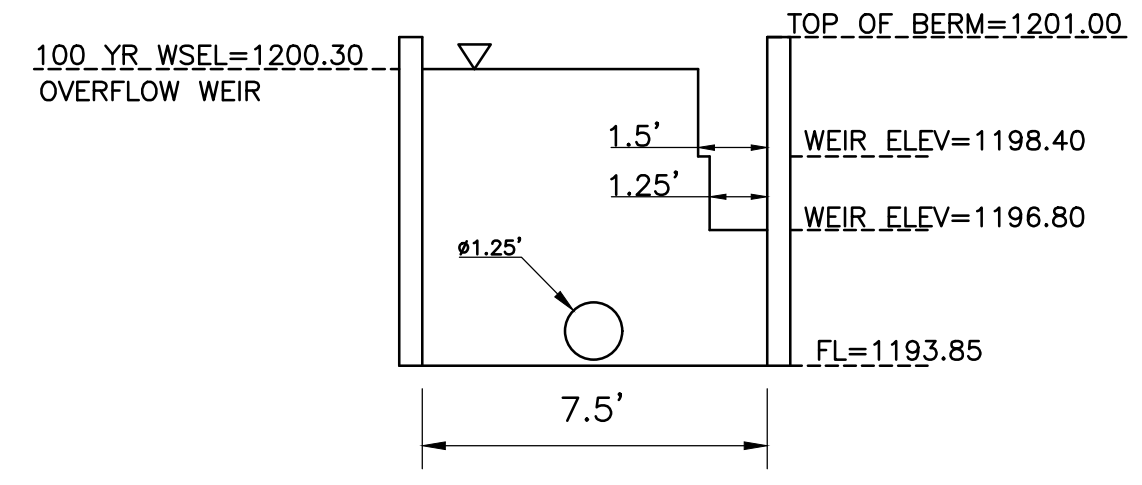
POND-A
SCALE: 1"=30'



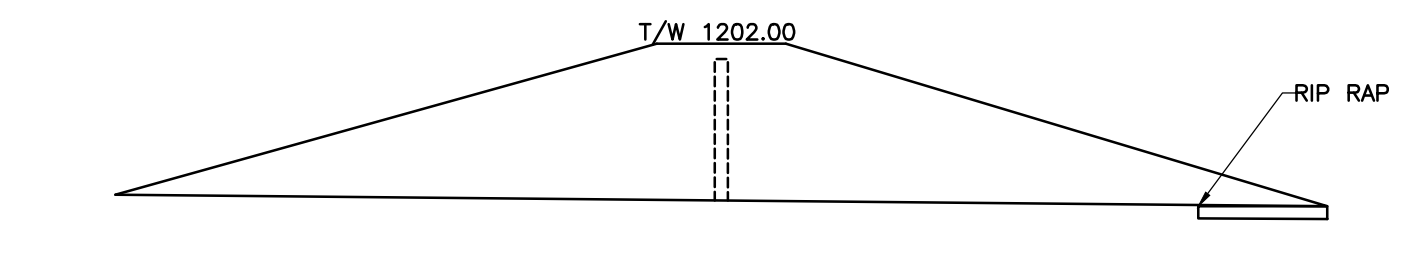
POND-B
SCALE: 1"=30'



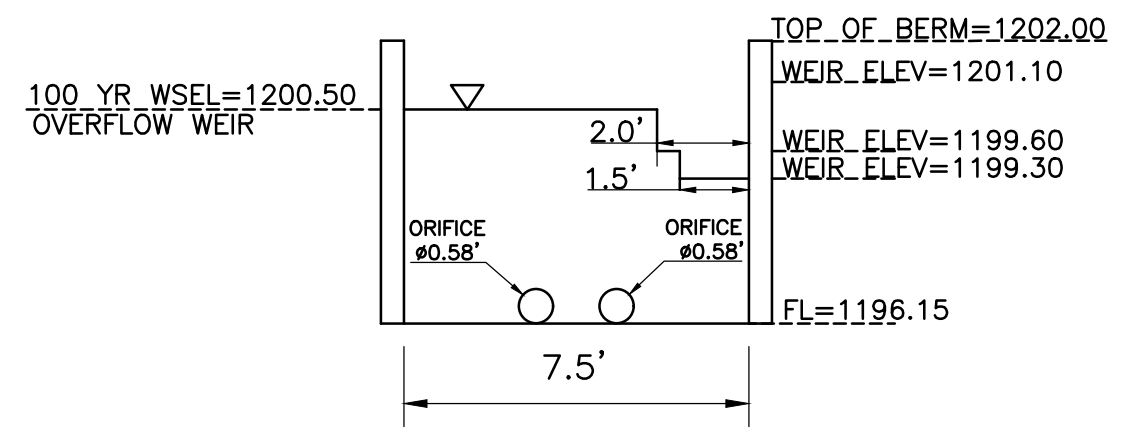
A SIDE VIEW CROSS SECTION - POND A
SCALE: NTS



B OUTFALL CROSS SECTION - POND A
SCALE: NTS



C SIDE VIEW CROSS SECTION - POND B
SCALE: NTS



D OUTFALL CROSS SECTION - POND B
SCALE: NTS

FLORIO POND A-Detention Pond Stage Values

Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
1193.85	0.00	0.00000	0 cf	0 cf	0.0000
1194.0	192.00	0.00441	14	14	0.0003
1195.0	3567.00	0.08189	1,880	1,894	0.0435
1196.0	6671.00	0.15315	5,119	7,013	0.1610
1197.0	9171.00	0.21054	7,921	14,934	0.3428
1198.0	10438.00	0.23962	9,805	24,738	0.5679
1199.0	12550.00	0.28811	11,494	36,232	0.8318
1200.0	13874.00	0.31850	13,212	49,444	1.1351
1201.0	16077.00	0.36908	14,976	64,420	1.4789

Pond A - Detention Pond Values from HEC-HMS Hydrologic Modeling Software

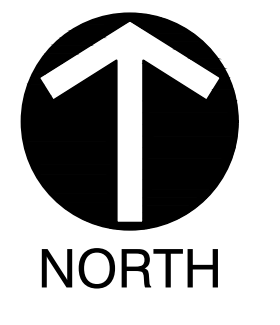
Storm Event	Q-Ex (cfs)	Q-Pr (cfs)	PR-Routed (cfs)	WS Elevation (ft)
2-yr	15.30	17.70	9.8	1197
10-yr	31.00	34.00	21.6	1198.5
25-yr	43.20	46.60	33.7	1199.3
100-yr	66.10	70.50	55.6	1200.3

FLORIO POND B-Detention Pond Stage Values

Stage	Area (sf)	Area (ac)	Volume (cf)	Cum. Volume (cf)	Ac-ft
1196.2	0 sf	0.00000	0 cf	0 cf	0.0000
1197.0	2425 sf	0.05567	1,031	1,031	0.0237
1198.0	9,956	0.22856	6,191	7,221	0.1658
1199.0	11,182	0.25670	10,569	17,790	0.4084
1200.0	12,475	0.28639	11,829	29,619	0.6800
1201.0	13,835	0.31761	13,155	42,774	0.9819
1202.0	15,255	0.35021	14,545	57,319	1.3159

Pond B - Detention Pond Values from HEC-HMS Hydrologic Modeling Software

Storm Event	Q-Ex (cfs)	Q-Pr (cfs)	PR-Routed (cfs)	WS Elevation (ft)
2-yr	3.70	6.60	3.2	1198
10-yr	7.40	12.70	4.2	1199.1
25-yr	10.30	17.40	6.3	1199.8
100-yr	15.70	26.20	15.3	1200.5



REVISION RECORD

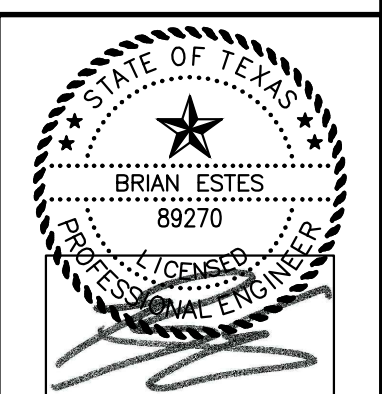
Civil & Environmental Consultants, Inc.
3711 South MoPac Expressway - Building 1, Suite 550 - Austin, TX 78746
Ph: 512.439.0400 - Fax: 512.329.0096
www.cechinc.com

**OVERLOOK AT BUNKER RANCH, LLC
OVERLOOK AT BUNKER RANCH
DRIPPING SPRINGS, HAYS COUNTY, TX**

DETENTION POND PLAN

DATE: MARCH, 2021
DRAWN BY: [Signature]
PROJECT NO: 304-065
APPROVED BY: [Signature]

811 !!! CAUTION !!!
IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION, and NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.



A:\100-2001\DWG\1001-0000\Drawings\1001-0000 - DETENTION POND PLAN.dwg - 3/16/2021 3:54 PM



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384 • Dripping Springs, TX 78620
512.858.4725 • www.cityofdrippingsprings.com

Date: April 13, 2021

Cristina Cordoba
Civil & Environmental Consultants, Inc.
ccordoba@cecinc.com

Permit Number: SUB2021-0020
Project Name: Overlook at Bunker Ranch Preliminary Plat
Project Address: 2004 Creek Road, Dripping Springs, TX 78620

City staff has completed its review of the above-named project. Reviewer comments are provided below. These comments are intended to be comprehensive; however, there may be additional comments after reviewing the submitted corrections. Applicants are encouraged to contact reviewers directly with questions.

Engineer/Public Works Comments

The following comments have been provided by Chad Gilpin. Should you have any questions or require additional information, please contact Chad Gilpin by email cgilpin@cityofdrippingsprings.com.

1. Provide documentation demonstrating that an additional access will be established to US 290 through the Hardy Tract with this development.
2. Revise Note 7 on the cover sheet. The entirety of this project lies within the Contributing Zone of the Edwards Aquifer.
3. Label the ROW width. [Plat Application Checklist]
4. Provide 10 ft PUE along the frontage of all lots. [Sub Ord 12.2.4]
5. The ponds appear to be on residential lots. Ponds need to be in drainage lots owned and maintained by the HOA.
6. Developed flow from PR-3 exceeds existing flow. Provide detention facilities for drainage area PR-3.
7. It appears that there is a hilltop on the west portion of the property and some portion of the storm flow will drain to the west. Please account for this western flow in your drainage areas and calculations.
8. Proposed drainage map should list resultant flows as "Proposed". Currently there is a typo listing proposed flows as existing on the proposed drainage area map.
9. Provide digital copy of HEC-HMS model.
10. List the Atlas 14 rainfall data used in the report. Please note that precipitation depths used for drainage calculations in Dripping Springs differ from Austin. Use Atlas 14 24-hour storm rainfall data for Drippings Springs:

24-hr (2yr, 4.08 in) (10yr, 6.77 in) (25yr, 8.87 in) (100yr, 13.0 in)

This data can be found at the following link:

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ne

11. Rainfall Intensity Duration Frequency Coefficients for Dripping Springs differ from Austin. Use Atlas 14 data for Hays County Zone 1 per the attached spreadsheet.
12. The addition of this tract to the Bunker Ranch Development triggers the threshold for a TIA. Please submit at TIA. [Plat Application Checklist]
13. Note who will be responsible for operation and maintenance of Stormwater Utilities and Ponds on the cover. [Plat Application Checklist]
14. Add the following note to the cover sheet: "Street Trees shall be planted in each lot prior to the issuance of a certificate of occupancy per the quantity, size and location requirements of Subdivision Ordinance 28.06.051."
15. Clarify the downstream path that storm discharge from the Ponds takes to reach an existing drainage easement, drainage way or public R.O.W. [Plat Application Checklist]
16. It appears Pond A may be over 6ft in height. *Per [COA DCM 8.3.3(B)] Dam Certification. Any hydraulic structure designed to impound storm water that has a height greater than or equal to six (6) feet at any point along the perimeter of the SWM pond is a dam and must be designed to safely pass the minimum design flood hydrograph expressed as a percentage of the probable maximum flood (PMF) as described in DCM 8.3.3.B.3 and as evidenced by certification using the statement provided in DCM 8.3.3.B.3 by an engineer licensed in the State of Texas. The certification statement may be divided into the four disciplines of hydrology, hydraulics, structural and geotechnical and independently certified.*
17. Demonstrate that there is maintenance access to the pond compliant with [COA DCM 1.2.4.E.1]
18. Demonstrate how you intend to comply with the City's water quality ordinance [22.05.015]
19. Add a note that Vaquero Drive shall be extended from Bunker Ranch Boulevard as a condition of this Preliminary Plat approval.
20. Review of the Facility Planning Report requires profile holes with soil evaluations be completed on each proposed lot. Once you have completed the profile holes and soil evaluations schedule an appointment with the City Environmental Health Inspector to go to the lots and review the soil profiles. [Plat Application Checklist]
21. Per [Sub Ord 4.7] provide an *Outline of major wooded areas or the location of major or important individual trees (excluding Cedar Trees) with trunk diameters exceeding twelve inches (12") measured four feet (4') above the ground, and other features pertinent to subdivision; as defined in the City's Technical Construction Standards and Specifications, and the City's Landscape Ordinance.*

City Planner Comments

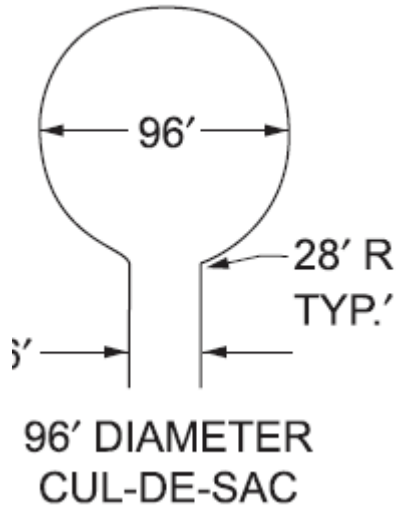
The following comments have been provided by Amanda Padilla. Should you have any questions or require additional information, please contact Amanda Padilla by email apadilla@cityofdrippingsprings.com.

22. Please replace all City Signatures with a signature block for plat approval signature of the Chair (or Vice Chair, in the Chair's absence) of the Planning and Zoning Commission, a place for the City Secretary to attest such signature, and the approval dates by the Planning and Zoning Commission. [4.7]
23. Provide access easement documents for the Hardy Tract and the Florio Tract.
24. Show zoning of property and adjacent property [4.7]
25. Provide a Vicinity Map that shows the CI/ETJ [4.7]
26. Parkland Dedication needs to be approved [28.03]
27. Provide a scale (including a graphic scale) [4.7]
28. Provide a statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant. [4.7]
29. Provide HOA or POA documents to show maintenance of roads [11.9]. The association documents shall be reviewed and approved by the City Administrator and the City's Attorney to ensure that they conform to these and other applicable City rules and regulations. [11.9.5]
30. Provide a lot table that shows the sqft and the acres, as well as block and Lot [SF-2 Zoning 3.4]
31. Provide the Street lengths and sqft. [11 street designs] show block lengths.
32. Provide 5' sidewalks [Ord 2020-39, sec 15]
33. Street names shall be approved by the Hays County [23.1]

Fire Marshal Comments

The following comments have been provided by Dillon Polk. Should you have any questions or require additional information, please contact Dillon Polk by email dpolk@northhaysfire.com.

34. Cul-de-sac radius must be 48ft. See attached detail.



Resubmittals must include a cover letter addressing each reviewer comment and noting where associated corrections/revisions/changes can be found in the submittal documents. **Please keep previous review comments on the document as you resubmit your response letter, so that staff can keep track of the original comments.** Resubmittals that do not include a cover letter will be considered incomplete and returned.

Note regarding plats subject to Planning and Zoning Commission review: Resubmittals of corrected plats and associated plans must be received no later than April 20th for final review and inclusion in the P&Z packets [Ch. 28, Ex. A, Sec. 3.8].

Regards,

Amanda Padilla



City Council Planning Department Staff Report

City Council Meeting: April 27, 2021
Project No: VAR2021-0005
Project Planner: Robyn Miga, Consulting Planner

Item Details

Project Name: Van Merkel Duplex
Property Location: 102 Rose Drive
Legal Description: Approximately .748 acres situated in the B.F. Hanna Survey No. 428, Hays County, Texas
Applicant: Dave Merkel and Fred Van Cura
Property Owner: Van Merkel, LLC
Request: Subdivision Variance request to vary from Section 14.7, minimum lot or unit size; and Subdivision Variance request to vary from Section 14.2, Frontage.



Overview

This property was annexed and zoned SF-4, Two-Family Residential (Duplex) in December 2020. The property will be served by public water, but will need a septic system for wastewater service in this area. Per Section 14.7 of the City’s Subdivision Ordinance, a property is required to have a minimum of .75 acres to be eligible to be served by septic. Furthermore, the lot is located at the corner of two private roadway easements, that are each 30 foot wide. Under Section 14.2, Frontage, of the City’s Code of Ordinances, each lot or unit on a subdivision plat shall front onto a dedicated, improved public street, unless platted as an approved private street subdivision.



Summary

Section 1.7 requires that in making a determination regarding a requested variance request, P&Z shall consider the following factors:

Factors	Staff Comments
Granting the variance will not be detrimental to the public safety, health or welfare, and will not be injurious to other property or to the owners of other property, and the waiver will not prevent the orderly subdivision of other property in the vicinity	Granting these variances will not be detrimental to the public safety, health, or welfare, and will not be injurious to other property or to the owners of other property. It will also not prevent orderly subdivision of other property in the vicinity.
The conditions upon which the request for a variance is based are unique to the property for which the variance is sought, and are not applicable generally to other property; and	The requests are unique and not applicable to another other property in the vicinity.

Because of the particular physical surroundings, shape and/or topographical conditions of the specific property involved, a particular hardship to the property owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations is carried out; and	This property is shy of the requirement for septic by .02 acres, and without the variance, the site would not be eligible to be served by a septic system, and public sewer is not in the immediate vicinity. The lot/parcel has also existed in this configuration along Rose Drive and Purcell Place, which were allowed to be created as easements prior to new subdivision regulations being put in place.
The variance will not in any manner vary the provisions of the Zoning Ordinance, Planned Development District Ordinance, or Comprehensive Plan, or any other adopted plan(s) or ordinance(s) of the City; and	The property owner is still required to follow all zoning requirements for the site.
An alternate design will generally achieve the same result or intent as the standards and regulations prescribed herein; and	There is not an alternative plan for this site to be served by a septic system.
The waiver variance will enable the applicant to preserve more native trees, provide more open space, or ensure more wildlife preservation than would be possible complying with the strict mandates of this Chapter.	N/A

Public Notification

A legal notice advertising the public hearing was placed in the Dripping Springs Century-News, signs were posted on the site, notice was placed on the City Website, and all property owners within a 300-foot radius of the site were notified of the request.

Meetings Schedule

April 27, 2021 – Planning and Zoning Commission

Attachments

- Exhibit 1: Variance Application for lot Size
- Exhibit 2: Variance Application for lot Frontage
- Exhibit 2: Site Plan

Recommended Action:	Staff is recommending approval of the requested variances.
Alternatives/Options:	Recommend denial of the variance applications.
Budget/Financial Impact:	None calculated at this time.
Public Comments:	No public comment was received for this request.
Enforcement Issues:	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

ALTERNATIVE STANDARD/SPECIAL EXCEPTION/VARIANCE/WAIVER APPLICATION

Case Number (staff use only): _____ - _____

CONTACT INFORMATION

PROPERTY OWNER NAME Van Merkel Addition

STREET ADDRESS 102 Rose Drive

CITY Dripping Springs STATE Texas ZIP CODE 78620

PHONE (512) 658-6776 EMAIL fastfred54@aol.com

APPLICANT NAME Jon Thompson

COMPANY J Thompson Professional Consulting, LLC

STREET ADDRESS PO Box 172

CITY Dripping Springs, STATE Tx ZIP CODE 78620

PHONE (512) 568-2184 EMAIL jthompsonconsultingds@gmail.com

APPLICATION TYPE

ALTERNATIVE STANDARD

VARIANCE

SPECIAL EXCEPTION

WAIVER

PROPERTY INFORMATION	
PROJECT NAME	Van Merkel Addition
PROPERTY ADDRESS	102 Rose Drive
CURRENT LEGAL DESCRIPTION	B. F. Hanna Survey, A0222, 0.748 ac
TAX ID#	R15132
LOCATED IN	<input checked="" type="checkbox"/> CITY LIMITS <input type="checkbox"/> EXTRATERRITORIAL JURISDICTION <input type="checkbox"/> HISTORIC DISTRICT OVERLAY

- o Description of request & reference to section of the Code of Ordinances applicable to request:

Subdivision Ordinance, Section 14.7 is the applicable ordinance that requires 0.75 ac in city limits with public water and septic.

- o Description of the hardship or reasons the Alternative Standard/Special Exception/Variance / Waiver is being requested:

This is an existing tract that is surveyed as 0.748 acre rather than the 0.75 acre minimum lot acreage required for a subdivision lot in the City limits utilizing OSSF.

- o Description of how the project exceeds Code requirements in order to mitigate or offset the effects of the proposed alternative standard/special exception/variance/waiver:

The property is in the city limits and is now subject to all City regulations - including lighting, zoning, and building permits whereas before December 8, 2020, it was in the ETJ and not subject to these ordinances.

APPLICANT'S SIGNATURE

The undersigned, hereby confirms that he/she/it is the owner of the above described real property and further, that Jon Thompson is authorized to act as my agent and representative with respect to this Application and the City's zoning amendment process.

(As recorded in the Hays County Property Deed Records, Vol. _____, Pg. _____.)

X Jon Thompson
Name

X OWNER
Title

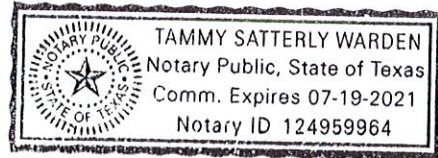
STATE OF TEXAS §
 §
COUNTY OF HAYS §

This instrument was acknowledged before me on the 15 day of March

2021 by Frederick K. Vancura.

Tammy Satterly Warden
Notary Public, State of Texas

My Commission Expires: 7-19-2021



Jon Thompson
Name of Applicant

All required items and information (including all applicable above listed exhibits and fees) must be received by the City for an application and request to be considered complete. **Incomplete submissions will not be accepted.** By signing below, I acknowledge that I have read through and met the above requirements for a complete submittal:


 Applicant Signature

March 15, 2021
 Date

CHECKLIST		
STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed Application Form - including all required signatures and notarized
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application Fee (refer to Fee Schedule) <i>\$ 500</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PDF/Digital Copies of all submitted documents When submitting digital files, a cover sheet must be included outlining what digital contents are included.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contact Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Photographs <i>N/A</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Map/Site Plan/Plat
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Architectural Elevations (if applicable) <i>N/A</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Description and reason for request (attach extra sheets if necessary) <i>included on app</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Public Notice Sign - \$25
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proof of Property Ownership-Tax Certificate or Deed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement - signed with attached photos/drawings (required if marked "Yes (Required)" on above Lighting Ordinance Section of application)



CITY OF DRIPPING SPRINGS

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Dripping Springs, TX 78620

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ALTERNATIVE STANDARD/SPECIAL EXCEPTION/VARIANCE/WAIVER APPLICATION

Case Number (staff use only): _____ - _____

CONTACT INFORMATION

PROPERTY OWNER NAME Van Merkel Addition
STREET ADDRESS 102 Rose Drive
CITY Dripping Springs STATE Texas ZIP CODE 78620
PHONE (512) 658-6776 EMAIL justfred54@aol.com

APPLICANT NAME Joe Thompson
COMPANY J Thompson Professional Consulting, LLC
STREET ADDRESS PO Box 172
CITY Dripping Springs STATE Texas ZIP CODE 78620
PHONE (512) 568-2184 EMAIL jthompsonconsultingds@gmail.com

APPLICATION TYPE

ALTERNATIVE STANDARD VARIANCE

SPECIAL EXCEPTION WAIVER

PROPERTY INFORMATION	
PROJECT NAME	Van Merkel Addition
PROPERTY ADDRESS	102 Rose Drive
CURRENT LEGAL DESCRIPTION	B.F. Hanna Survey, A0222, 0.748ac
TAX ID#	R15132
LOCATED IN	<input checked="" type="checkbox"/> CITY LIMITS <input type="checkbox"/> EXTRATERRITORIAL JURISDICTION <input type="checkbox"/> HISTORIC DISTRICT OVERLAY

- o Description of request & reference to section of the Code of Ordinances applicable to request:

Subdivision Ordinance, Section 14.2 requires lots to have frontage on a public street or on private streets in an approved subdivision. These roads are private but not in an approved subdivision.

- o Description of the hardship or reasons the Alternative Standard/Special Exception/Variance / Waiver is being requested:

Both of the roads that this tract fronts onto, Purcell Drive and Rose Drive, are existing privately-maintained roads.

- o Description of how the project exceeds Code requirements in order to mitigate or offset the effects of the proposed alternative standard/special exception/variance/waiver:

This project will be required to join the maintenance agreement for both of these streets, thus making the maintenance of the same more fiscally responsible.

APPLICANT'S SIGNATURE

The undersigned, hereby confirms that he/she/it is the owner of the above described real property and further, that Jon Thompson is authorized to act as my agent and representative with respect to this Application and the City's zoning amendment process.

(As recorded in the Hays County Property Deed Records, Vol. _____, Pg. _____.)

X [Signature]
Name

X OWNER
Title

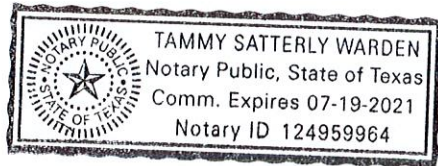
STATE OF TEXAS §
 §
COUNTY OF HAYS §

This instrument was acknowledged before me on the 15 day of MARCH, 2021 by Frederick K Vance.

[Signature]
Notary Public, State of Texas

My Commission Expires: 7-19-2021

[Signature]
Name of Applicant



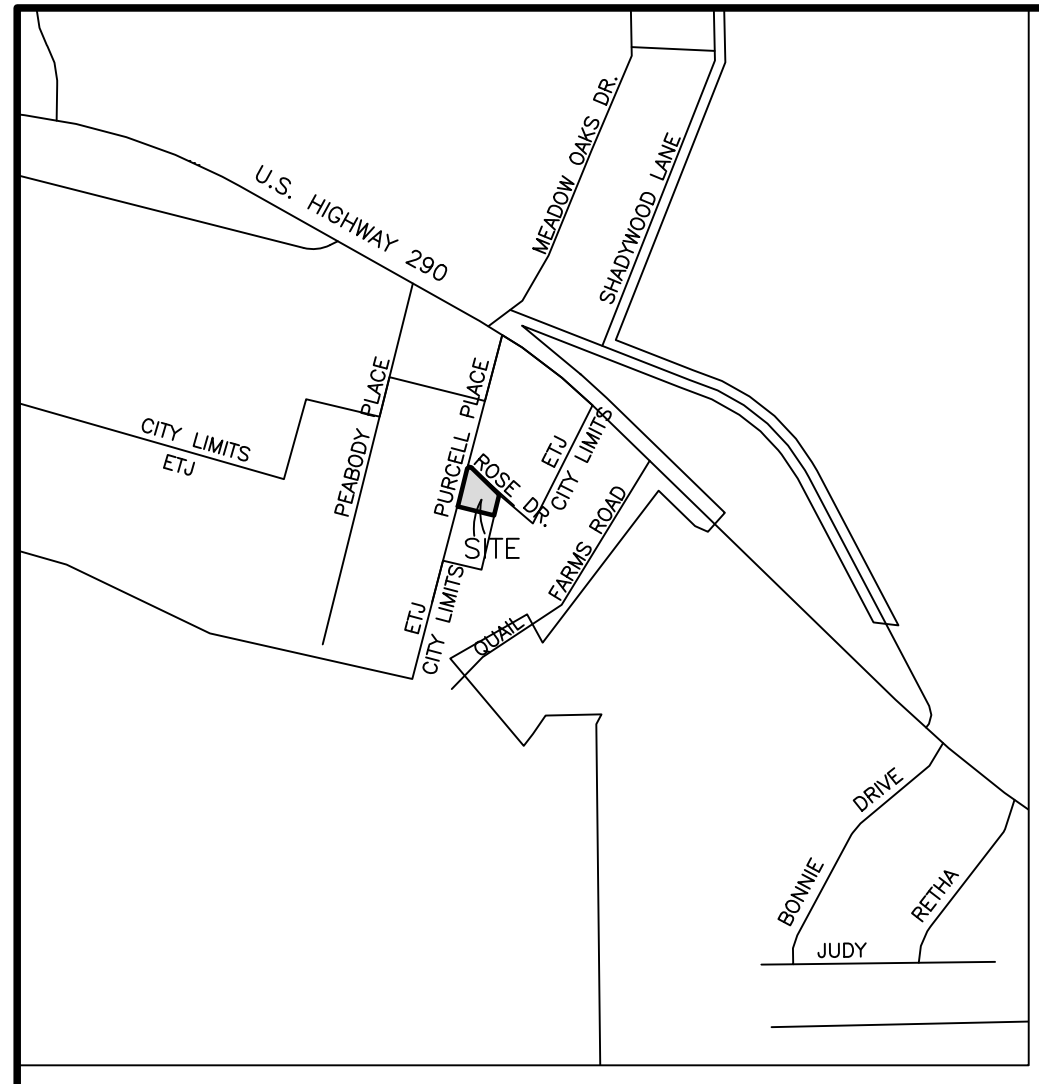
All required items and information (including all applicable above listed exhibits and fees) must be received by the City for an application and request to be considered complete. **Incomplete submissions will not be accepted.** By signing below, I acknowledge that I have read through and met the above requirements for a complete submittal:


 Applicant Signature

03/15/21
 Date

CHECKLIST

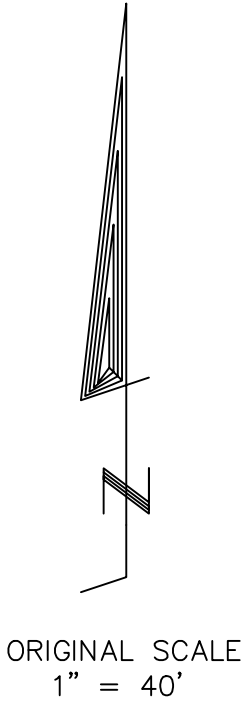
STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed Application Form - including all required signatures and notarized
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application Fee (<i>refer to Fee Schedule</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PDF/Digital Copies of all submitted documents When submitting digital files, a cover sheet must be included outlining what digital contents are included.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contact Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Photographs <i>N/A</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Map/Site Plan <i>Plat</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Architectural Elevations (if applicable) <i>N/A</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Description and reason for request (<i>attach extra sheets if necessary</i>) <i>included in app</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Public Notice Sign - \$25
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proof of Property Ownership-Tax Certificate or Deed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement - signed with attached photos/drawings (required if marked "Yes (Required)" on above Lighting Ordinance Section of application)



VICINITY MAP - 1"=1000'

- SURVEYORS NOTES**
1. FENCES MEANDER.
 2. BEARINGS, DISTANCES AND AREAS IN PARENTHESES ARE FROM RECORD INFORMATION.
 3. ACCORDING TO SCALING FROM THE CURRENT F.E.M.A. FLOOD INSURANCE RATE MAP NO. 48209C0105F, DATED 9/2/2005, THIS TRACT LIES WITHIN ZONE X, (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN).
 4. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND THIS SURVEYOR DID NOT RESEARCH THE DEED RECORDS FOR PREVIOUS CONFLICTS IN TITLE OR EASEMENT, THEREFORE, CERTAIN EASEMENTS MAY HAVE BEEN GRANTED WHICH ARE NOT REFLECTED HEREON.
 5. ACCORDING TO SCALING FROM TCEQ MAPS NO PORTION OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER RECHARGE ZONE AND ALL OF THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER CONTRIBUTING ZONE.
 6. THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT.
 7. THIS TRACT LIES WITHIN THE DRIPPING SPRINGS EXTRA TERRITORIAL JURISDICTION.
 8. THIS TRACT LIES WITHIN THE BOUNDARIES OF HAYS COUNTY ESD NUMBERS 1 AND 6.

- LEGEND**
- HAYS COUNTY DEED, REAL PROPERTY OR OFFICIAL PUBLIC RECORDS
 - HAYS COUNTY PLAT RECORDS
 - 1/2" IRON ROD SET WITH PLASTIC CAP STAMPED "BYRN SURVEY"
 - 1/2" IRON ROD FOUND OR DIAMETER NOTED
 - IRON ROD FOUND WITH PLASTIC CAP STAMPED "STAUDI"
 - WOOD FENCE
 - WIRE FENCE
 - UTILITY LINE, POLE AND GUY
 - WATER METER
 - ANTENNA
 - SIGN



DRIVEWAY PERMIT STATEMENT:

IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE PERMITTED ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS (A) A DRIVEWAY PERMIT HAS BEEN ISSUED BY THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY AND (B) THE DRIVEWAY SATISFIES THE MINIMUM SPACING REQUIREMENT FOR DRIVEWAYS SET FORTH IN CHAPTER 721 OF THE HAYS COUNTY DEVELOPMENT REGULATIONS.

ALL CULVERTS, WHEN REQUIRED SHALL COMPLY WITH THE CURRENT HAYS COUNTY STANDARD, PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 705, SUBCHAPTER 8.03.

- LOT SIZE CATEGORIES**
- TOTAL NUMBER OF LOTS = 1
 - AVERAGE LOT SIZE = 0.748 ACRES
 - 0 LOT LARGER THAN 10.0 ACRES
 - 0 LOT LARGER THAN 5.0 ACRES AND SMALLER THAN 10 ACRES
 - 0 LOTS 2.00 ACRES OR LARGER UP TO 5.00 ACRES
 - 0 LOTS LARGER THAN 1.00 ACRE AND SMALLER THAN 2.00 ACRES
 - 1 LOT SMALLER THAN 1.00 ACRE

UTILITIES:
 ELECTRIC-PEDERNALES ELECTRIC COOP.
 WATER-
 SEWER-INDIVIDUAL ON-SITE SEWAGE FACILITIES

CLIENT: VAN MERKEL, LLC
 DATE: 3/3/2021
 OFFICE: K. SMITH
 CREW: K. SMITH, HADEN
 FB/PG: 782/38
 PLAT NO. 27879-21-c

STATE OF TEXAS*
 COUNTY OF HAYS*

KNOW ALL MEN BY THESE PRESENTS, THAT I, VAN MERKEL, LLC, OWNER OF 0.748 OF AN ACRE, AS CONVEYED TO ME BY DEED DATED MARCH 29, 2011, AND RECORDED IN VOLUME 4091, PAGE 885, HAYS COUNTY OFFICIAL PUBLIC RECORDS, DO HEREBY SUBDIVIDE THIS PROPERTY TO BE KNOWN AS VAN MERKEL ADDITION, IN ACCORDANCE WITH THE PLAT SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS HERETOFORE GRANTED, AND DO HEREBY DEDICATE TO THE PUBLIC THE USE OF THE STREETS AND EASEMENTS SHOWN HEREON.

 VAN MERKEL, LLC, OWNER

STATE OF TEXAS*
 COUNTY OF HAYS*

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED _____ KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ DAY OF _____, A.D., 20____.

 NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

STATE OF TEXAS *
 COUNTY OF HAYS *

I, ELAINE CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS PLAT WAS FILED FOR RECORD IN MY OFFICE ON THE ____ DAY OF _____, 20____, AT ____ O'CLOCK ____M., AND DULY RECORDED ON THE ____ DAY OF _____, 20____ AT ____ O'CLOCK ____M., IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS IN BOOK _____, PAGE _____.

 ELAINE CARDENAS, COUNTY CLERK
 HAYS COUNTY, TEXAS

I, THE UNDERSIGNED, DIRECTOR OF THE HAYS COUNTY DEVELOPMENT AND COMMUNITY SERVICES DEPARTMENT, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL HAYS COUNTY REQUIREMENTS AS STATED IN THE INTERLOCAL COOPERATION AGREEMENT BETWEEN HAYS COUNTY AND THE CITY OF DRIPPING SPRINGS FOR SUBDIVISION REGULATION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS.

 CAITLYN STRICKLAND, DIRECTOR, HAYS COUNTY DEVELOPMENT SERVICES
 _____ DATE

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY OR A STATE APPROVED COMMUNITY WATER SYSTEM. DUE TO DECLINING WATER SUPPLIES AND DIMINISHING WATER QUALITY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY HAYS COUNTY TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY. RAIN WATER COLLECTION IS ENCOURAGED AND IN SOME AREAS MAY OFFER THE BEST RENEWABLE WATER RESOURCE.

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED BY HAYS COUNTY DEVELOPMENT SERVICES.

NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL HAYS COUNTY DEVELOPMENT PERMIT REQUIREMENTS HAVE BEEN MET.

 TOM POPE, C.F.M., R.S.
 HAYS COUNTY FLOODPLAIN ADMINISTRATOR
 _____ DATE

 CAITLYN STRICKLAND, DIRECTOR, HAYS COUNTY DEVELOPMENT SERVICES
 _____ DATE

THIS PLAT OF TREATY OAK SUBDIVISION HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY OF DRIPPING SPRINGS AS A MINOR PLAT IN ACCORDANCE WITH THE CITY OF DRIPPING SPRINGS CODE OF ORDINANCES, CHAPTER 28, EXHIBIT A, SECTION 10, "MINOR PLATS" AND IS HEREBY ADMINISTRATIVELY APPROVED.

 MICHELLE FISCHER, CITY ADMINISTRATOR
 _____ DATE

I, THE UNDERSIGNED, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY STATE THAT TO THE BEST OF MY SKILL AND KNOWLEDGE THIS PLAT IS TRUE AND CORRECTLY MADE AND IS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

 REGISTERED PROFESSIONAL LAND SURVEYOR
 KYLE SMITH, R.P.L.S. NO. 5307

BYRN & ASSOCIATES, INC.

SURVEYING

P.O. BOX 1433 SAN MARCOS, TEXAS 78667
 PHONE 512-396-2270 FAX 512-392-2945
 FIRM NO. 10070500

PLAT OF
VAN MERKEL ADDITION
 BEING 0.748 OF AN ACRE IN THE B. F. HANNA SURVEY, HAYS COUNTY, TEXAS



Planning and Zoning Commission

Planning Department Staff Report

Item 8.

Planning and Zoning Commission Meeting: April 27, 2021
Project No: VAR2021-0008
Project Planner: Amanda Padilla, Senior Planner

Item Details

Project Name: Crooked Oaks Lot Frontage Variance
Property Location: 823 Post Oak Drive, Dripping Springs, Tx 78620
Legal Description: Crooked Oaks, Lots 3, and 5B-2
Applicant: Jon Thompson, J Thompson Professional Consulting
Property Owner: Clint and Andrea Leschber
Request: Applicant is requesting a variance to Ordinance 30, Section 14 Standards and Specification Section J (5) Lot Frontage



Location Map

*VAR2021-0008
Lot 3 and 5B-2
Crooked Oaks Subdivision*

-  Site
-  Roads
-  Parcel Lines



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

Planning Department Staff Report

Overview

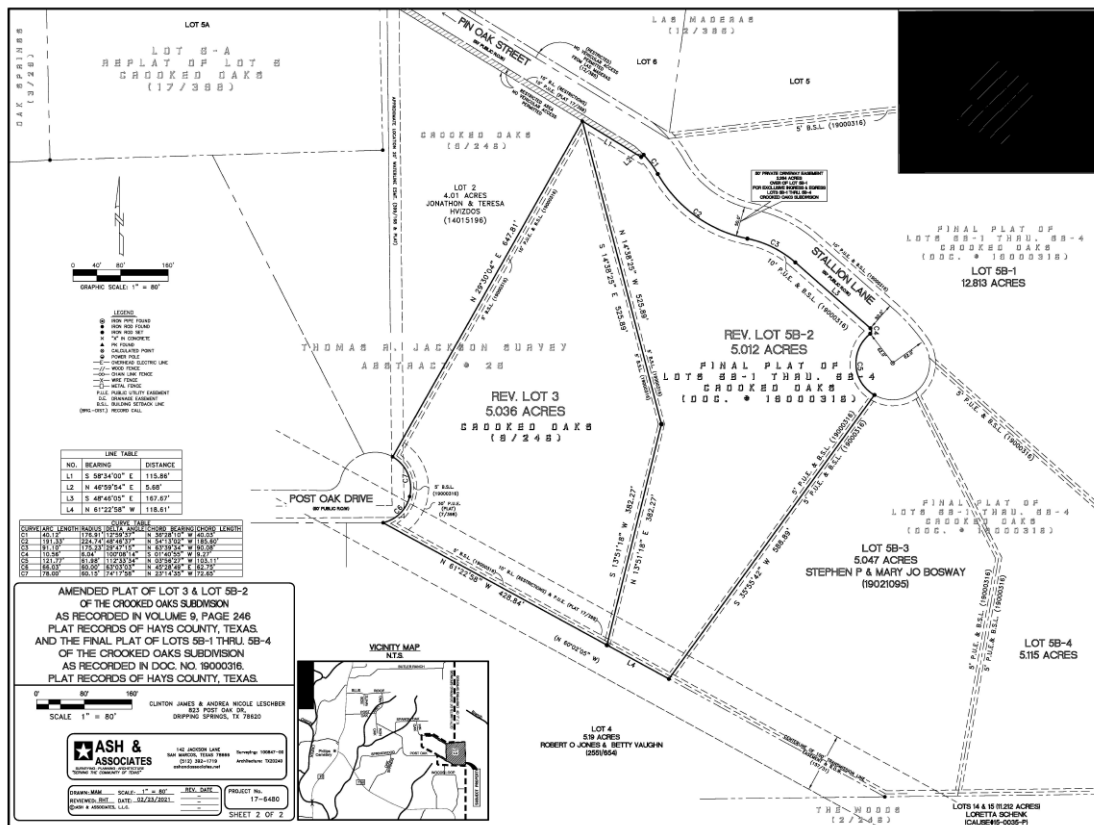
The applicant is requesting a variance to Ordinance 30, Section 14.J.5 Frontage. The applicant currently has an amending plat under review. For the amending plat application to be approved the applicant will need an approval for a variance to lot frontage. The amending plat will shift the property line between Lots 3 and 5B-2 of the Crooked Oaks Subdivision (See below Image). Below is the section of the code of ordinances that the applicant is requesting a Variance to:

14.J.5 Frontage

Each lot shall front upon a public street. Lots of irregular shape shall be discouraged, and shall be prohibited unless they have a street frontage of at least one hundred (100) feet. Lots on a standard street shall have a minimum street frontage of one hundred (100) feet, and that lots on a cul de—sac street shall have a minimum street frontage of sixty (60) feet.

It is important to note that this subdivision is vested under Ordinance 30 (attached as an exhibit), which was adopted in 1985. The applicant is requesting to meet the intent of the code for lot frontage by allowing Lot 5B-2 to have frontage on to an access easement, named Stallion Lane, located on lot 5B-1 of the Crooked Oaks Subdivision. The lots located to the east of the two lots utilize the access easement, Stallion Lane, as well. The plat allows 5B-2 to utilize the access easement.

Please see the below image for what the applicant is proposing:



Both lots are within the City’s Extra-Territorial Jurisdiction (ETJ). Within the City’s ETJ the City has limited jurisdiction and can regulate such items as Subdivision, Site Development, Water Quality, Drainage, Parkland Dedication, and Signage.

Planning Department Staff Report

The properties to the west of the two lots are within the City Limits and are zoned Single-Family Residential District - Low Density (SF-1). The lots to the west have lot frontage on public right-of-way owned and maintained by the City. The lots to the east do not have proper frontage and if they are to subdivide will need to come in for a similar variance.

Approval Criteria for Special Exceptions (2.22.2-Zoning Ordinance)

Approval Criteria	Staff Comments
1. The conditions upon which the request for a variance is based are unique to the property for which the variance is sought, and are not applicable generally to other property; and	Though the request is not unique the applicant is meeting the intent of the code with a shared access easement.
2. Because of the particular physical surroundings, shape and/or topographical conditions of the specific property involved, a particular hardship to the property owner would result, as distinguished from a mere inconvenience, if the strict letter of these regulations is carried out; and	The interpretation of the code will not deprive the applicant of the reasonable use of the land, this is a special circumstance where the intent of the code is being met by the applicant with a shared access easement, that will provide the applicant with proper ingress and egress.
3. The variance will not in any manner vary the provisions of the Zoning Ordinance, Planned Development District Ordinance, or Comprehensive Plan, or any other adopted plan(s) or ordinance(s) of the City; and	Not applicable at this time. The property is currently in the Extra-Territorial Jurisdiction. This variance does not allow the applicant any other deviations from City codes.
4. An alternate design will generally achieve the same result or intent as the standards and regulations prescribed herein; and	The applicant is meeting the intent of the code by the provided shared access easement that will provide adequate ingress and egress for the lot.
5. The variance will enable the applicant to preserve more native trees, provide more open space, or ensure more wildlife preservation than would be possible complying with the strict mandates of this Chapter.	The variance will not affect any open space or trees.
6. Granting the variance will not be detrimental to the public safety, health or welfare, and will not be injurious to other property or to the owners of other property, and the variance will not prevent the orderly subdivision of other property in the vicinity	The Variance will not be detrimental to the public health, safety, or welfare.

Summary and Recommendation

Based on the above findings staff believes that the intent of the code is being met, that the variance will not cause any undue harm to the properties within the vicinity and recommends approval of the variance with the following conditions:

1. The property shall comply with the City’s Lighting Ordinance

In September 2019, the City updated our Subdivision Ordinance process for Variances. Previously Variances would go to the Planning and Zoning Commission for recommendation and the Board of Adjustments for final action, the update now allows the Planning and Zoning Commission authorization to approve Subdivision Variances. Though the applicant is vested under older ordinances the applicant has asked to comply with the Current process for variance action.

Public Notification

Planning Department Staff Report

A legal notice advertising the public hearing was placed in the Dripping Springs Century-News, signs were posted on the-site, and notice was placed on the City Website.

Meetings Schedule

April 27, 2021 Planning and Zoning Commission

Attachments

Exhibit 1 – Variance Application

Exhibit 2 – Proposed Subdivision

Exhibit 3 – Lighting Ordinance Agreement

Recommended Action	Approve the requested Variance with staff and any additional conditions deemed necessary by the Commission
Alternatives/Options	Deny the Variance; Approve the Variance with no or alternate conditions.
Budget/Financial impact	N/A
Public comments	None received at this time
Enforcement Issues	N/A
Comprehensive Plan Element	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

ALTERNATIVE STANDARD/SPECIAL EXCEPTION/VARIANCE/WAIVER APPLICATION

Case Number (staff use only): _____ - _____

CONTACT INFORMATION

PROPERTY OWNER NAME Clint & Andrea Leschber
 STREET ADDRESS 823 Post Oak Drive
 CITY Dripping Springs STATE Texas ZIP CODE 78620
 PHONE (512) 508-6043 EMAIL clint.leschber@gmail.com

APPLICANT NAME Jon Thompson
 COMPANY J Thompson Professional Consulting, LLC
 STREET ADDRESS PO Box 172
 CITY Dripping Springs STATE TX ZIP CODE 78620
 PHONE (512) 568-2184 EMAIL jthompsonconsultingds@gmail.com

APPLICATION TYPE

ALTERNATIVE STANDARD VARIANCE

SPECIAL EXCEPTION WAIVER

PROPERTY INFORMATION	
PROJECT NAME	Crooked Oaks, Lots 3 & 5B-2 Amending Plat
PROPERTY ADDRESS	
CURRENT LEGAL DESCRIPTION	Replat of Crooked Oaks, Lot 5B
TAX ID#	
LOCATED IN	<input type="checkbox"/> CITY LIMITS <input checked="" type="checkbox"/> EXTRATERRITORIAL JURISDICTION <input type="checkbox"/> HISTORIC DISTRICT OVERLAY

- o Description of request & reference to section of the Code of Ordinances applicable to request:

The ordinance in question is Ordinance 30, Section 14 regarding lot frontage. The requirement is for lot frontage to be on a public street. The request is for Lot 5B-2 to front out onto the shared Access ~~Drive~~ Driveway approved as part of the replat of Lot 5B.

- o Description of the hardship or reasons the Alternative Standard/Special Exception/Variance / Waiver is being requested:

The hardship is that this Amending Plat is not able to amend the access approved by the County and City in 2019 as part of the Replat of Lot 5B, Crooked Oaks.

- o Description of how the project exceeds Code requirements in order to mitigate or offset the effects of the proposed alternative standard/special exception/variance/waiver:

This project of amending the common lot line between Lots 3 & 5B-2 will do away with an existing flag lot that is currently a part of Lot 3 and clarify Lot 3's access only being Post Oak by eliminating any frontage it has on Pin Oak/Stallion Lane.

APPLICANT'S SIGNATURE

The undersigned, hereby confirms that he/she/it is the owner of the above described real property and further, that Jon Thompson is authorized to act as my agent and representative with respect to this Application and the City's zoning amendment process.

(As recorded in the Hays County Property Deed Records, Vol. _____, Pg. _____.) Inst #

Andrea Lescher
Name

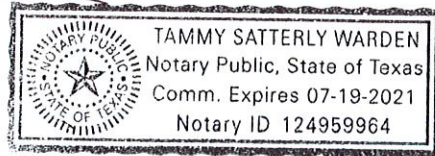
owner
Title

STATE OF TEXAS §
 §
COUNTY OF HAYS §

This instrument was acknowledged before me on the 15 day of March, 2021 by Andrea N. Lescher.

Tammy Satterly Warden
Notary Public, State of Texas

My Commission Expires: 7-19-2021



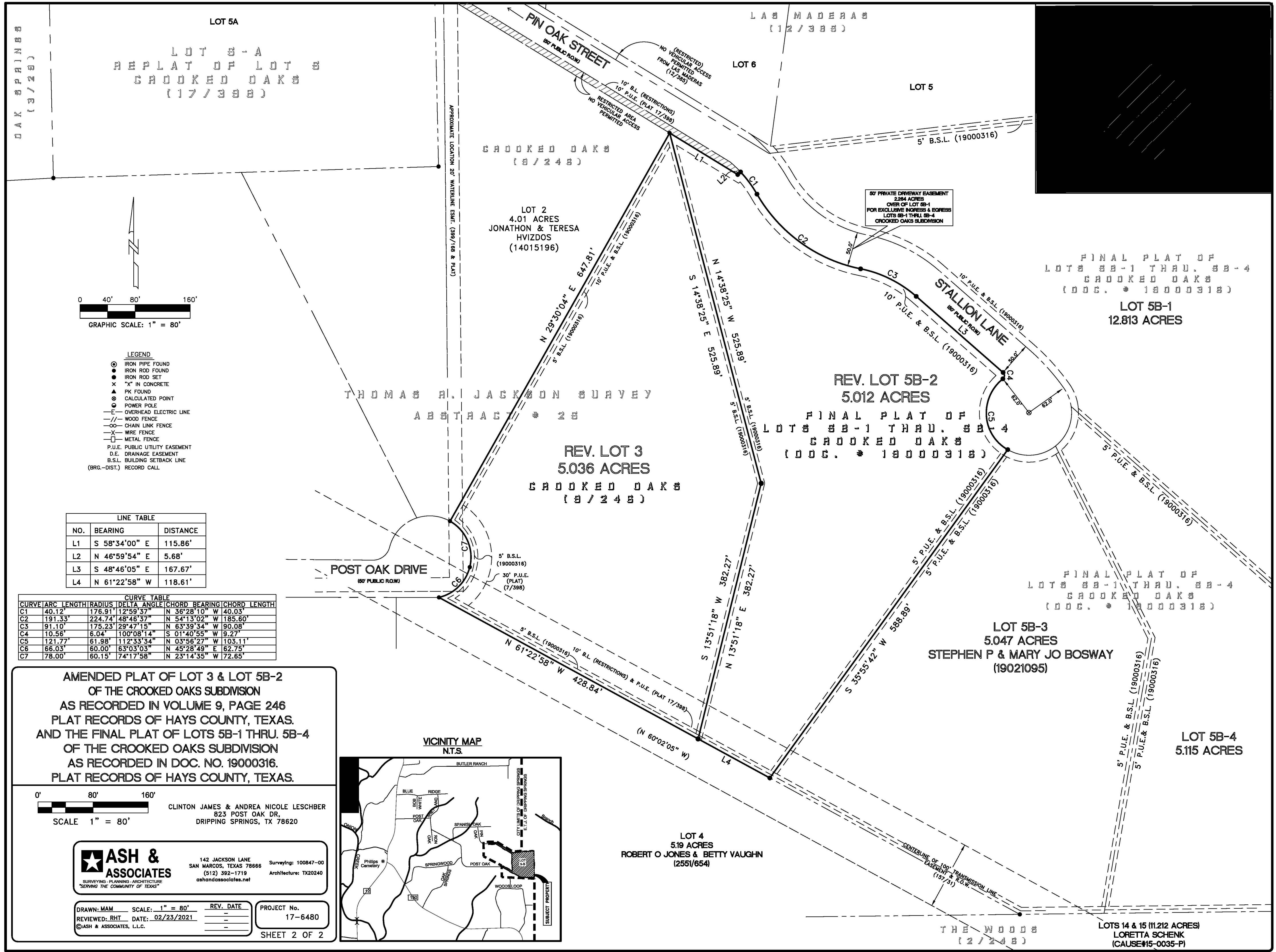
Jon Thompson
Name of Applicant

All required items and information (including all applicable above listed exhibits and fees) must be received by the City for an application and request to be considered complete. **Incomplete submissions will not be accepted.** By signing below, I acknowledge that I have read through and met the above requirements for a complete submittal:

Joe Thompson
Applicant Signature

Mar 15, 2021
Date

CHECKLIST		
STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed Application Form - including all required signatures and notarized
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application Fee (refer to Fee Schedule) <i>\$ 500</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PDF/Digital Copies of all submitted documents When submitting digital files, a cover sheet must be included outlining what digital contents are included.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contact Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Photographs <i>N/A</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Map/Site Plan/Plat
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Architectural Elevations (if applicable) <i>N/A</i>
<input type="checkbox"/>	<input type="checkbox"/>	Description and reason for request (attach extra sheets if necessary)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Public Notice Sign - \$25 <i>same check</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proof of Property Ownership - <u>Tax Certificate</u> or Deed
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement - signed with attached photos/drawings (required if marked "Yes (Required)" on above Lighting Ordinance Section of application)



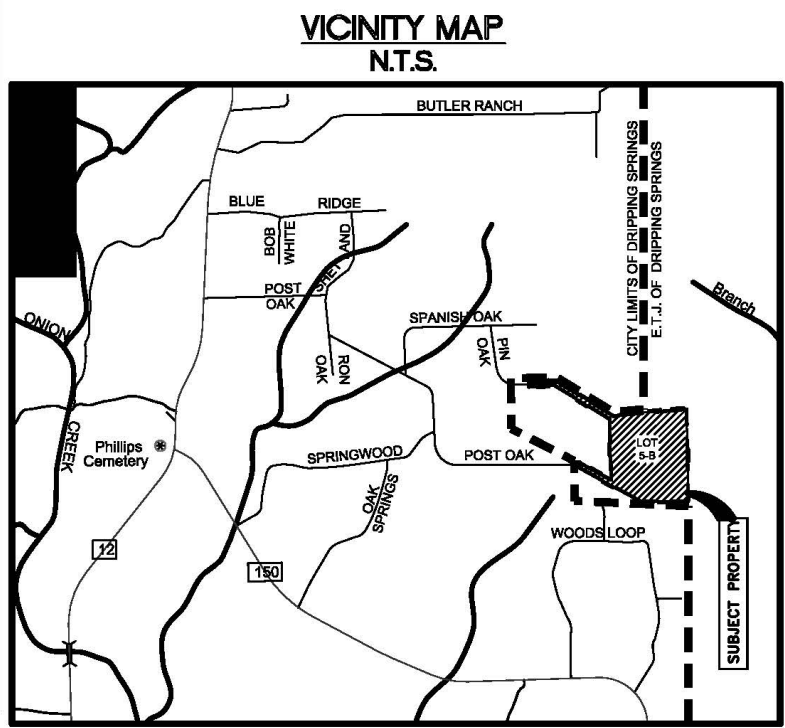
AMENDED PLAT OF LOT 3 & LOT 5B-2 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN VOLUME 9, PAGE 246 PLAT RECORDS OF HAYS COUNTY, TEXAS. AND THE FINAL PLAT OF LOTS 5B-1 THRU. 5B-4 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN DOC. NO. 19000316. PLAT RECORDS OF HAYS COUNTY, TEXAS.

CLINTON JAMES & ANDREA NICOLE LESCHBER
823 POST OAK DRIVE
DRIPPING SPRINGS, TX 78620

ASH & ASSOCIATES
142 JACKSON LANE
SAN MARCOS, TEXAS 78666
(512) 392-1719
ashandassociates.net

Surveying: 100847-00
Architecture: TX20240

DRAWN: MAM SCALE: 1" = 80' REV. DATE: _____
REVIEWED: RHT DATE: 02/23/2021 PROJECT No. 17-6480
SHEET 2 OF 2



STATE OF TEXAS *
COUNTY OF HAYS *
KNOW ALL MEN BY THESE PRESENTS

THAT CLINTON JAMES LESCHBER AND ANDREA NICOLE LESCHBER, OWNERS OF LOT 2 OF THE CROOKED OAKS SUBDIVISION, AN ADDITION TO HAYS COUNTY ACCORDING TO THE PLAT RECORDED IN VOLUME 9, PAGE 246, HAYS COUNTY, TEXAS, AS CONVEYED BY DEED RECORDED IN VOLUME 5084, PAGE 303, OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS, AND LOT 5B-2 OF THE FINAL PLAT OF LOTS 5B-1 THRU. 5B-4 OF THE CROOKED OAKS SUBDIVISION, AN ADDITION TO HAYS COUNTY ACCORDING TO THE PLAT RECORDED IN DOCUMENT NO. 19000316, HAYS COUNTY, TEXAS, AS CONVEYED BY DEED RECORDED IN DOCUMENT NO. 18015976, OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS, DO HEREBY ESTABLISH "AMENDED PLAT OF LOT 3 & LOT 5B-2 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN VOLUME 9, PAGE 246, PLAT RECORDS OF HAYS COUNTY, TEXAS, AND THE FINAL PLAT OF LOTS 5B-1 THRU. 5B-4 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN DOC. NO. 19000316. PLAT RECORDS OF HAYS COUNTY, TEXAS".

CLINTON JAMES LESCHBER _____ DATE _____
823 POST OAK DRIVE
DRIPPING SPRINGS, TX 78620-4110

ANDREA NICOLE LESCHBER _____ DATE _____
823 POST OAK DRIVE
DRIPPING SPRINGS, TX 78620-4110

STATE OF TEXAS *
COUNTY OF HAYS *

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED CLINTON J. LESCHBER AND ANDREA N. LESCHBER, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE _____ DAY OF _____, A.D., 20____.

NOTARY PUBLIC
STATE OF TEXAS

PLAT NOTES:

- THE LOTS IN THIS SUBDIVISION RECEIVE POTABLE WATER SERVICE, EITHER DIRECTLY OR VIA WHOLESALE CONTRACT, FROM THE WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY. AS SUCH, THE PROPERTY IS SUBJECT TO COMPLIANCE WITH THE TERMS SET FORTH IN THE MAY 24TH, 2000, UNITED STATES FISH AND WILDLIFE SERVICE MEMORANDUM OF UNDERSTANDING WITH THE LOWER COLORADO RIVER AUTHORITY.
- THE PURPOSE OF THIS REPLAT IS TO AMEND 2 RESIDENTIAL HOMESITES.
- IMPERVIOUS COVER SHALL COMPLY WITH THE WATER QUALITY PLAN APPROVED FOR THIS SUBDIVISION AND SHALL NOT BE ALTERED.
- DECLARANT AGREES THAT THE LOTS IN THIS PLAT DOCUMENT ARE SUBJECT TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY OPTIONAL ENHANCED MEASURES.
- THE LOTS IN THIS SUBDIVISION ARE IN COMPLIANCE WITH THE CITY OF DRIPPING SPRINGS LIGHTING ORDINANCE.
- FUTURE DEVELOPMENT SHALL BE LIMITED TO ONE SINGLE FAMILY RESIDENCE PER LOT, AND TCEQ REGULATED DEVELOPMENT SHALL NOT BE ALLOWED, PER HAYS COUNTY REGULATIONS, CHAPTER 725, SUBCHAPTER 5.01.
- ALL CULVERTS, WHEN REQUIRED SHALL COMPLY WITH THE CURRENT HAYS COUNTY STANDARD, PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 705, SUBCHAPTER 8.03.
- MAIL BOXES PLACED WITHIN THE RIGHT-OF-WAY, SHALL BE OF AN APPROVED TxDOT OF FHWA DESIGN, PER HAYS COUNTY DEVELOPMENT REGULATIONS, CHAPTER 721, SUBCHAPTER 2.01.
- ALL LOTS SERVED BY SHARED ACCESS DRIVEWAY ARE RESTRICTED TO ONE SINGLE FAMILY RESIDENCE PER LOT AND IF ANY OTHER DEVELOPMENT OF A DWELLING UNIT OCCURS ON ANY OF THE LOTS OBTAINING ACCESS THROUGH SHARED ACCESS DRIVEWAY, THEN SUCH NEW DWELLING MUST BE CONSTRUCTED ON A SEPARATELY PLATTED LOT WITH DIRECT FRONTAGE ONTO AND PHYSICAL ACCESS TO A REGULATED ROADWAY PRIOR TO CONSTRUCTION OF THE DWELLING UNIT. A DUPLEX WILL NOT BE CONSIDERED A SINGLE FAMILY RESIDENCE FOR PURPOSES OF THIS SUBPARAGRAPH.
- THE OWNERS OF THE SINGLE FAMILY RESIDENCES OBTAINING ACCESS THROUGH THE SHARED ACCESS DRIVEWAY SHALL BE SOLELY RESPONSIBLE FOR ALL MAINTENANCE OF THE DRIVEWAY, INCLUDING MAINTAINING ANY DRAINAGE STRUCTURES ASSOCIATED WITH THE DRIVEWAY. THE DRIVEWAY MUST BE MAINTAINED AT ALL TIMES IN A CONDITION THAT WILL PERMIT UNENCUMBERED VEHICULAR ACCESS BY EMERGENCY VEHICLES.
- ACCORDING TO CURRENT COMMITMENT FOR TITLE ISSUED 06/30/20, THE PROPERTY IS SUBJECT TO RESTRICTIONS RECORDED IN VOLUME 9, PAGE 246 AND VOLUME 17, PAGE 398, HAYS COUNTY PLAT RECORDS, AND VOLUME 355, PAGE 694, HAYS COUNTY DEED RECORDS, AND ALL ITEMS AFFECTING THE SUBJECT PROPERTY, TO THE EXTENT THEY CAN BE PLOTTED, HAVE BEEN ILLUSTRATED HEREON.

STATE OF TEXAS *
COUNTY OF HAYS *

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO AN INDIVIDUAL WATER SUPPLY OR A STATE APPROVED COMMUNITY WATER SYSTEM. DUE TO DECLINING WATER SUPPLIES AND DRINKING WATER QUALITY, PROSPECTIVE PROPERTY OWNERS ARE CAUTIONED BY HAYS COUNTY TO QUESTION THE SELLER CONCERNING GROUND WATER AVAILABILITY. RAIN WATER COLLECTION IS ENCOURAGED AND IN SOME AREAS MAY OFFER THE BEST RENEWABLE WATER RESOURCE.

NO STRUCTURE IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC SEWER SYSTEM OR TO AN ON-SITE WASTEWATER SYSTEM WHICH HAS BEEN APPROVED AND PERMITTED BY HAYS COUNTY DEVELOPMENT SERVICES.

NO CONSTRUCTION OR OTHER DEVELOPMENT WITHIN THIS SUBDIVISION MAY BEGIN UNTIL ALL HAYS COUNTY DEVELOPMENT PERMIT REQUIREMENTS HAVE BEEN MET.

CAITLYN STRICKLAND _____ DATE _____
DIRECTOR,
HAYS COUNTY DEVELOPMENT SERVICES

TOM POPE R.S. C.F.M. _____ DATE _____
HAYS COUNTY FLOODPLAIN ADMINISTRATOR

FLOOD NOTE:

NO PORTION OF THIS SUBDIVISION IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA, AS DEFINED BY HAYS COUNTY, TEXAS FIRM PANEL NO. 48209C0115F, EFFECTIVE 09/02/2005 PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

EDWARDS AQUIFER NOTE:

THIS SUBDIVISION DOES NOT LIE WITHIN THE EDWARDS AQUIFER RECHARGE ZONE. THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE CONTRIBUTING ZONE OF THE EDWARDS AQUIFER.

PLAT INFORMATION:

TOTAL AREA: 10.048 ACRES

NUMBER OF LOTS OVER 10 ACRES: 0

TOTAL NUMBER OF LOTS: 2

NUMBER OF LOTS 5-10 ACRES: 2

NUMBER OF RESIDENTIAL LOTS: 2

NUMBER OF LOTS 2-5 ACRES: 0

NUMBER OF COMMERCIAL LOTS: 0

NUMBER OF LOTS 1-2 ACRES: 0

AVERAGE SIZE OF LOTS: 5.02 ACRES

NUMBER OF LOTS LESS THAN 1 ACRES: 0

E.T.J. NOTE

THIS SUBDIVISION LIES WITHIN THE BOUNDARIES OF THE CITY OF DRIPPING SPRINGS EXTRA TERRITORIAL JURISDICTION.

UTILITY INFORMATION

WATER: DRIPPING SPRINGS WATER SUPPLY CORPORATION
SEWER: INDIVIDUAL ON-SITE SEWAGE FACILITY
ELECTRICITY: PEDERNALES ELECTRIC COOPERATIVE, INC.
TELEPHONE: PIONEER COMMUNICATION

SCHOOL DISTRICT

THIS SUBDIVISION LIES WITHIN THE DRIPPING SPRINGS INDEPENDENT SCHOOL DISTRICT.

EMERGENCY SERVICE DISTRICT

THIS SUBDIVISION LIES WITHIN EMERGENCY SERVICE DISTRICTS NO. 1 & NO. 6.

DRIVEWAY PERMIT NOTE

"IN ORDER TO PROMOTE SAFE USE OF ROADWAYS AND PRESERVE THE CONDITIONS OF PUBLIC ROADWAYS, NO DRIVEWAY CONSTRUCTED ON ANY LOT WITHIN THIS SUBDIVISION SHALL BE PERMITTED TO ACCESS ONTO A PUBLICLY DEDICATED ROADWAY UNLESS (A) A DRIVEWAY PERMIT HAS BEEN ISSUED BY THE TRANSPORTATION DEPARTMENT OF HAYS COUNTY AND (B) THE DRIVEWAY SATISFIES THE MINIMUM SPACING REQUIREMENTS FOR DRIVEWAYS SET FORTH IN CHAPTER 721 OF THE HAYS COUNTY DEVELOPMENT REGULATIONS."

STATE OF TEXAS *
COUNTY OF HAYS *

I, THE UNDERSIGNED, DIRECTOR OF THE HAYS COUNTY DEVELOPMENT AND COMMUNITY SERVICES DEPARTMENT, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL HAYS COUNTY REQUIREMENTS AS STATED IN THE INTERLOCAL COOPERATION AGREEMENT BETWEEN HAYS COUNTY AND THE CITY OF DRIPPING SPRINGS FOR SUBDIVISION REGULATION WITHIN THE EXTRATERRITORIAL JURISDICTION OF THE CITY OF DRIPPING SPRINGS.

CAITLYN STRICKLAND _____ DATE _____
DIRECTOR, HAYS COUNTY
DEVELOPMENT SERVICES

STATE OF TEXAS *
COUNTY OF HAYS *
CITY OF DRIPPING SPRINGS *

THIS PLAT, "AMENDED PLAT OF LOT 3 & LOT 5B-2 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN VOLUME 9, PAGE 246, PLAT RECORDS OF HAYS COUNTY, TEXAS, AND THE FINAL PLAT OF LOTS 5B-1 THRU. 5B-4 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN DOC. NO. 19000316, PLAT RECORDS OF HAYS COUNTY, TEXAS", HAS BEEN, SUBMITTED TO AND CONSIDERED BY THE CITY OF DRIPPING SPRINGS AND IS HEREBY APPROVED.

APPROVED, THIS THE _____ DAY OF _____, 20____.

BY: _____

MAYOR OR MAYOR PRO TEM, _____

ATTEST: _____

ANDREA CUNNINGHAM, CITY SECRETARY

STATE OF TEXAS *
COUNTY OF HAYS *

I, RICHARD H. TAYLOR, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND IS PREPARED FROM AN ACTUAL SURVEY ON THE PROPERTY UNDER MY SUPERVISION ON THE GROUND AND THAT CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

PRELIMINARY
REV. 02/23/2021

RICHARD H. TAYLOR _____ DATE _____
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF TEXAS, NO. 3986

STATE OF TEXAS *
COUNTY OF HAYS *

I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, CERTIFY THAT THIS PLAT WAS FILED FOR RECORD IN MY OFFICE ON THE _____ DAY OF _____, 20____, AT _____ O'CLOCK _____ M., AND RECORDED ON THE _____ DAY OF _____, 20____, AT _____ O'CLOCK _____ M., IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS, IN DOCUMENT # _____.

ELAINE H. CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

AMENDED PLAT OF LOT 3 & LOT 5B-2 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN VOLUME 9, PAGE 246 PLAT RECORDS OF HAYS COUNTY, TEXAS. AND THE FINAL PLAT OF LOTS 5B-1 THRU. 5B-4 OF THE CROOKED OAKS SUBDIVISION AS RECORDED IN DOC. NO. 19000316. PLAT RECORDS OF HAYS COUNTY, TEXAS.

CLINTON JAMES & ANDREA NICOLE LESCHBER
823 POST OAK DR.
DRIPPING SPRINGS, TX 78620

ASH & ASSOCIATES
142 JACKSON LANE
SAN MARCOS, TEXAS 78666
(512) 392-1719
ashandassociates.net

Surveying: 100847-00
Architecture: TX20240

DRAWN: MAM SCALE: 1" = 80' REV. DATE: _____
REVIEWED: RHT DATE: 02/23/2021 PROJECT No. 17-6480
SHEET 1 OF 2

Received on/by:

Date, initials



LIGHTING ORDINANCE COMPLIANCE AGREEMENT

Property Address: 823 Post Oak Drive

Commercial Residential

Applicant's Name (and Business Name, if Applicable):

Clint & Andrea Leschber (Owners) - Joe Thompson

Applicant's Address: PO Box 172, DS, TX 78620 Thompson Professional Consulting, acting as

Applicant's Email: jthompsonconsultingds@gmail.com their agent

VOLUNTARY COMPLIANCE with mitigation conditions:

in consideration of the approval of a variance

MANDATORY COMPLIANCE:

regarding lot frontage

IF APPLYING FOR:

- | | |
|---|---|
| <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Site Development Permit |
| <input type="checkbox"/> Zoning Amendment Application | <input type="checkbox"/> Sign Permit |
| <input type="checkbox"/> Subdivision Approval | <input type="checkbox"/> Alcoholic Beverage Permit |
| <input type="checkbox"/> Building Permit | <input type="checkbox"/> Food Establishment Permit |
| | <input type="checkbox"/> On-Site Sewage Facility Permit |

By applying for a **Conditional Use Permit, Zoning Amendment Application, Subdivision Approval, or Building Permit** for a major addition, all existing outdoor lighting shall be brought into conformance with the City of Dripping Spring's Lighting Ordinance (see Ch. 24, Sec 1, 24.06.005 in CODS Code of Ord.) before: final inspection, issuance of a certificate of occupancy, or final plot recordation.

Applicants receiving a permit for: **Site Development, Sign Permit** for externally or internally-illuminated outdoor sign, initial **Alcoholic Beverage Permit**, initial **Food Establishment Permit**, and **On-Site Sewage Facility Permit** shall have a maximum of 90 days from permit issuance to conform with the City of Dripping Spring's Lighting Ordinance (see Ch. 24, Sec 1, 24.06.005 in CODS Code of Ord.).

*-If existing lighting is nonconforming, plans for bringing the lighting into conformance are **required** to be attached to this agreement.*

*-If existing lighting is already in conformity with the lighting ordinance, photos of all on-site lighting are **required** to be attached to this agreement for verification.*

By signing below, I acknowledge that I have read and agreed to these terms and conditions and accept responsibility for conforming to the above stated ordinance specifications:

Signature

03/15/21
Date



Planning and Zoning Commission

Planning Department Staff Report

Item 9.

Planning and Zoning Commission Meeting: April 27, 2021
Project No: SUB2021-0021
Project Planner: Amanda Padilla, Senior Planner

Item Details

Project Name: Bannockburn Replat
Property Location: 245, 264 American Way and 200 S Canyon Wood Dr, Dripping Springs Texas 78620
Legal Description: Caliche Hill Section 1, Lot 1B, 1C, and 1D
Applicant: Joel Bock, Sunland Group
Property Owner: Rob McClelland, Bannockburn Baptist Church
Request: Replat Caliche Hill Section 1 Lots 1B-1D to 2 lots
Staff recommendation: Approval of the replat



Location Map

*SUB2021-0021
Lots 1B, 1C, and 1D
Caliche Hill Sec. 1 Subdivision*

- Site
- Roads
- Parcel Lines
- Dripping Springs ETJ



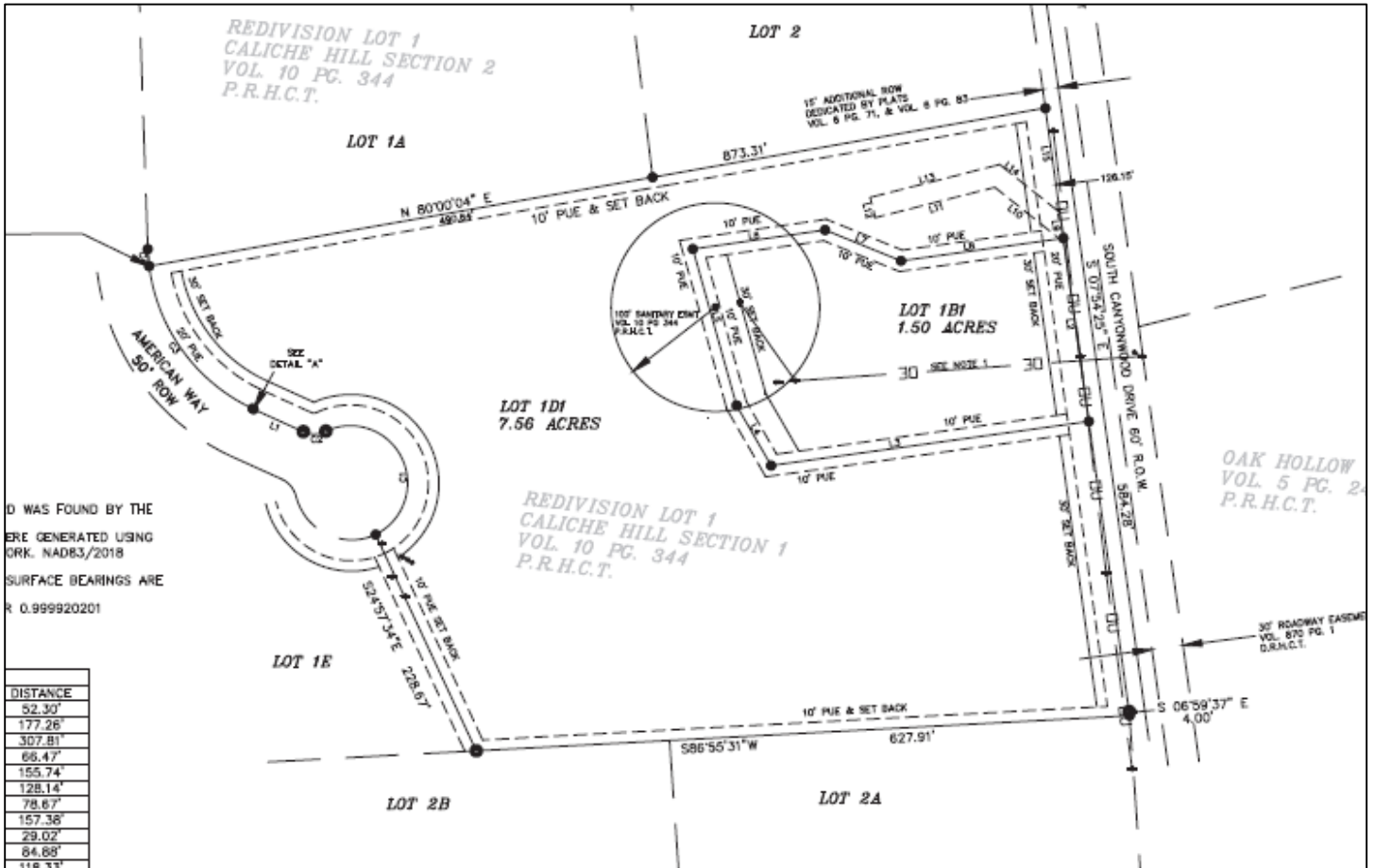
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Planning Department Staff Report

Overview

The applicant is requesting to Replat Caliche Hill Section 1 Lots 1B, 1C, and 1D. The Caliche Hill section 1 Subdivision is a five (5) lot subdivision, within the City of Dripping Springs Extraterritorial Jurisdiction (ETJ). The 9.05-acre Replat consists of a total of three (3) lots. The lots are owned by the Bannockburn Baptist Church. The replat would take lots 1B, 1C, and 1D and subdivide it into 2 lots, 1D1 and 1B1.

The existing Lot 1D and 1C is developed with a parking lot, one metal building, one portable building, and paved walkways. On Lot 1B, there is an asphalt drive extending from S Canyonwood to the Church's parking lot as well as building with decking and parking. A partial demolition of this asphalt driveway will occur under the current site development project on Lot 1D. There are currently two entrances from American Way into the Church parking and an entrance from S Canyonwood drive that will not have access to the proposed Lot 1D1 after current project is completed. No new driveways or streets are being proposed under this replat.



Caliche Hills Section 1 Replat utility providers are listed below:

- Water: West Travis County Public Utility Agency (WTCPUA)
- Wastewater: OSSF
- Electric: Pedernales Electric Cooperative

Recommendation:

The proposed plat meets and complies with the development standards set forth in the City Ordinances. Staff is recommending *Approval of the Replat*.

Outstanding Comments:

None.

Public Notification

Property Owner Notification were sent out to property owners within 300ft; signs were posted on the site; notice was placed on the City Website. There was an issue with noticing, but once staff discovered the issue new property owner letters were submitted.

Attachments

Exhibit 1 – Subdivision Application

Exhibit 2 – Approved subdivision plat

Exhibit 3 – Proposed Replat

Recommended Action	Approve the Plat
Alternatives/Options	N/A
Budget/Financial impact	N/A
Public comments	None received at this time
Enforcement Issues	N/A
Comprehensive Plan Element	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

Item 9.

SUBDIVISION APPLICATION

Case Number (staff use only): _____ - _____

MEETINGS REQUIRED

(AS APPLICABLE PER SITE DEVELOPMENT ORDINANCE)

INFORMAL CONSULTATION DATE: _____	PRE-APPLICATION CONFERENCE DATE: 02/25/2021 _____
<input checked="" type="checkbox"/> NOT SCHEDULED	<input type="checkbox"/> NOT SCHEDULED

PLAT TYPE

- Amending Plat
- Minor Plat
- Replat
- Final Plat
- Plat Vacation
- Other: _____

CONTACT INFORMATION

APPLICANT NAME JOEL BOCK

COMPANY SUNLAND GROUP

STREET ADDRESS 1812 CENTRE CREEK DRIVE, STE 350

CITY AUSTIN **STATE** TEXAS **ZIP CODE** 78754

PHONE 512.590.7963 **EMAIL** JBOCK@SUNLANDGRP.COM

OWNER NAME ROB MCCLELLAND

COMPANY BANNOCKBURN BAPIST CHURCH

STREET ADDRESS 7100 BRODIE LANE

CITY AUSTIN **STATE** TEXAAS **ZIP CODE** 78745


PHONE 512.892.2703 **EMAIL** ROBM@BBCFAMILY.COM

PROPERTY INFORMATION	
PROPERTY OWNER NAME	BANNOCKBURN BAPTIST CHURCH
PROPERTY ADDRESS	264 AMERICAN WAY, DRIPPING SPRINGS, TEXAS 78620
CURRENT LEGAL DESCRIPTION	CALICHE HILL SEC 1, LOT 1B, ACRES 2.60 CALICHE HILL SEC 1, LOT 1C, ACRES 4.40 CALICHE HILL SEC 1, LOT 1D, ACRES 2.05
TAX ID #	
LOCATED IN	<input type="checkbox"/> City Limits <input checked="" type="checkbox"/> Extraterritorial Jurisdiction
CURRENT LAND ACREAGE	9.06 (ALL 3 LOTS)
SCHOOL DISTRICT	DRIPPING SPRINGS ISD
ESD DISTRICT(S)	1 & 6
ZONING/PDD/OVERLAY	N/A
EXISTING ROAD FRONTAGE	<input type="checkbox"/> Private Name: _____ <input type="checkbox"/> State Name: _____ <input checked="" type="checkbox"/> City/County (public) Name: <u>AMERICAN WAY/ S CANYONWOOD DR.</u>
DEVELOPMENT AGREEMENT? (If so, please attach agreement)	<input type="checkbox"/> Yes (see attached) <input checked="" type="checkbox"/> Not Applicable Development Agreement Name: _____

ENVIRONMENTAL INFORMATION	
IS PROPERTY OVER THE EDWARDS AQUIFER RECHARGE ZONE?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
IS PROPERTY OVER THE BARTON SPRINGS CONTRIBUTING ZONE TO THE EDWARDS AQUIFER?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
IS PROPERTY WITHIN A FEMA FLOODPLAIN AS DEFINED BY THE MOST CURRENT FIRM?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

PROJECT INFORMATION	
PROPOSED SUBDIVISION NAME	REPLAT OF LOTS 1B THRU 1D OF THE REDIVISION OF LOT 1 CALICHE HILL SECTION 1
TOTAL ACREAGE OF DEVELOPMENT	9.06
TOTAL NUMBER OF LOTS	2
AVERAGE SIZE OF LOTS	4.53
INTENDED USE OF LOTS	<input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> INDUSTRIAL/OTHER: _____
# OF LOTS PER USE	RESIDENTIAL: _____ COMMERCIAL: <u>2</u> INDUSTRIAL: _____
ACREAGE PER USE	RESIDENTIAL: _____ COMMERCIAL: <u>9.06</u> INDUSTRIAL: _____
LINEAR FEET (ADDED) OF PROPOSED ROADS	PUBLIC: <u>0</u> PRIVATE: <u>0</u>
ANTICIPATED WASTEWATER SYSTEM	<input checked="" type="checkbox"/> CONVENTIONAL SEPTIC SYSTEM <input type="checkbox"/> CLASS I (AEROBIC) PERMITTED SYSTEM <input type="checkbox"/> PUBLIC SEWER
WATER SOURCES	SURFACE WATER <input checked="" type="checkbox"/> PUBLIC WATER SUPPLY <input type="checkbox"/> RAIN WATER GROUND WATER* <input type="checkbox"/> PUBLIC WELL <input type="checkbox"/> SHARED WELL <input checked="" type="checkbox"/> PUBLIC WATER SUPPLY
<p>*IF DOING GROUND WATER PROVISION FOR THE DEVELOPMENT USING GROUNDWATER RESOURCES, THE HAYS-TRINITY GROUNDWATER CONSERVATION DISTRICT MUST BE NOTIFIED:</p> <p>HAYS-TRINITY GCD NOTIFIED? <input type="checkbox"/> YES <input type="checkbox"/> NO</p>	

COMMENTS: _____

TITLE: PROJECT MANAGER SIGNATURE: 

PUBLIC UTILITY CHECKLIST

ELECTRIC PROVIDER NAME (if applicable): PEDERNALES ELECTRIC COOPERATIVE

VERIFICATION LETTER ATTACHED NOT APPLICABLE
Signed verification from County application

COMMUNICATIONS PROVIDER NAME (if applicable): CHARTER COMMUNICATIONS

VERIFICATION LETTER ATTACHED NOT APPLICABLE

WATER PROVIDER NAME (if applicable): WEST TRAVIS COUNTY PUA

VERIFICATION LETTER ATTACHED NOT APPLICABLE
Signed verification from County application

WASTEWATER PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

GAS PROVIDER NAME (if applicable): _____

VERIFICATION LETTER ATTACHED NOT APPLICABLE

PARKLAND DEDICATION?	AGRICULTURE FACILITIES (FINAL PLAT)?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT APPLICABLE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NOT APPLICABLE

COMPLIANCE WITH OUTDOOR LIGHTING ORDINANCE?*

(See attached agreement)

*If proposed subdivision is in the City Limits, compliance with the Lighting Ordinance is **mandatory**. If proposed subdivision is in the ETJ, compliance is **mandatory** when required by a Development Agreement, or as a condition of an Alternative Standard/Special Exception/Variance/Waiver.

Voluntary compliance is strongly encouraged by those not required by above criteria (see Outdoor Lighting tab on the city’s website at www.cityofdrippingsprings.com and online Lighting Ordinance under the Code of Ordinances tab for more information).

YES (REQUIRED) YES (VOLUNTARY*) NO

APPLICANT'S SIGNATURE

*Note: An additional signature is required on page 7 of the application verifying completeness. Applications should be submitted **only** when all required information is included in the submittal.*

The above information is true to the best of my knowledge. I attest that the real property described is owned by me and all others as signed below. If the below signed applicant is not the owner of said property, the signature of the property owner must be included below, or consent must be attached (If a corporation, please list title, and name of corporation.)

Joel Bock

Applicant Name

Joel Bock

3-5-2021

Applicant Signature

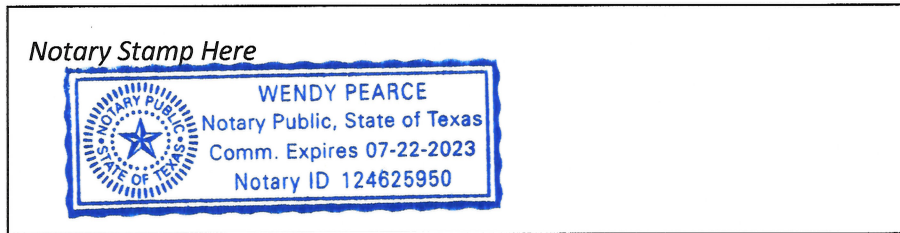
Wendy Pearce

Date

3/5/2021

Notary

Date



Property Owner Name

SIGNATURE AUTHORITY ATTACHED

Property Owner Signature

Date

APPLICANT'S SIGNATURE

The undersigned, hereby confirms that he/she/it is the owner of the above described real property and further, that Joel Bock, PE is authorized to act as my agent and representative with respect to this Application and the City's zoning amendment process.

(As recorded in the Hays County Property Deed Records, Vol. _____, Pg. _____.) Instrument # 18010754)

Rob McClelland

Name

Director of Operations, Bannockburn Baptist Church

Title

STATE OF TEXAS §

§

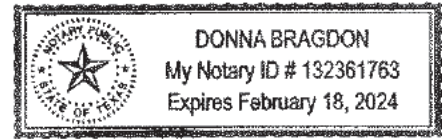
COUNTY OF HAYS §


This instrument was acknowledged before me on the 17 day of September

2020 by Rob McClelland


Notary Public, State of Texas


My Commission Expires: 02/18/2024




Name of Applicant

Rob McClelland

All required items and information (including all applicable below listed exhibits and fees) must be received by the City for an application and request to be considered complete. Incomplete submissions will not be deemed filed and complete. By signing below, I acknowledge that I have read through and met all requirements for a complete submittal:

Applicants Signature:  Date: 03/05/2021

FINAL, REPLAT, MINOR, AND AMENDING PLAT CHECKLIST		
Subdivision Ordinance, Section 5		
STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed application form – including all required notarized signatures
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application fee (refer to Fee Schedule)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Digital Copies/PDF of all submitted items – please provide a coversheet outlining what digital contents are included on the CD/USB drive.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	County Application Submittal – proof of online submission (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	\$240 Fee for ESD No. 6 Application (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contract Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Engineer’s Summary Report
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drainage Report – if not included in the Engineer’s summary
<input type="checkbox"/>	<input checked="" type="checkbox"/>	OSSF Facility Planning Report or approved OSSF permit (if applicable)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Final Plats (11 x 17 to scale)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copy of Current Configuration of Plat (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Copy of Preliminary Plat (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Proof of final acceptance of all public infrastructure by the jurisdiction that will own and maintain it; or posting of fiscal for public infrastructure.
<input type="checkbox"/>	<input type="checkbox"/>	Digital Data (GIS) of Subdivision
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tax Certificates – verifying that property taxes are current
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Copy of Notice Letter to the School District – notifying of preliminary submittal
<input type="checkbox"/>	<input type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement

<input type="checkbox"/>	<input type="checkbox"/>	Development Agreement/PDD (If applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Cost estimate of public infrastructure improvements (all public infrastructure improvements including water, wastewater, roads, drainage, curbs, sidewalks, etc.) (if applicable). *A Final Plat application will not be accepted if staff has not already approved this.
<input type="checkbox"/>	<input type="checkbox"/>	Documentation showing approval of driveway locations (TxDOT, County)
<input type="checkbox"/>	<input type="checkbox"/>	Documentation showing Hays County 911 Addressing approval (If applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Parkland Dedication fee (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	\$25 Public Notice Sign Fee
<input type="checkbox"/>	<input type="checkbox"/>	Ag Facility Fees - \$35 per residential LUE (if applicable)
<input type="checkbox"/>	<input type="checkbox"/>	Proof of Utility Service (Water & Wastewater) or permit to serve
<input type="checkbox"/>	<input type="checkbox"/>	Preliminary Conference Form signed by City Staff

FINAL PLAT INFORMATION REQUIREMENTS		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	A vicinity, or location, map that shows the location of the proposed Plat within the City (or within its ETJ) and in relationship to existing roadways.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Boundary lines, abstract/survey lines, corporate and other jurisdictional boundaries, existing or proposed highways and street right-of-way, bearings and distances sufficient to locate the exact area proposed for the subdivision, and all survey monuments including any required concrete monuments (per the City Engineer); the length and bearing of all straight lines, radii, arc lengths, tangent lengths and central angles of all curves shall be indicated along the lines of each lot or Unit (curve and line data may be placed in a table format); accurate reference ties via courses and distances to at least one recognized abstract or survey corner or existing subdivision corner shall be shown.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The name, location and recording information of all adjacent subdivisions (or property owners of adjacent unplatted property), including those located on the other sides of roads or creeks, shall be drawn to the same scale and shown in dotted lines adjacent to the tract proposed for subdivision in sufficient detail to show accurately the existing streets, alleys, building setbacks, lot and block numbering, easements, and other features that may influence the layout of development of the proposed subdivision; adjacent unplatted land shall show property lines, the names of owners of record, and the recording information.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	The location, widths and names of all street right-of-way and easements (it shall be the applicant’s responsibility to coordinate with appropriate utility entities for placement of necessary utility easements and for location of all streets and median openings on highways or arterial roadways), existing or proposed, within the subdivision limits and adjacent to the subdivision; a list of proposed street names shall be submitted (in the form of a letter or memo along with the application form) for all new street names (street name approval is required at the time the Plat is approved)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The location of all existing property lines, existing lot and block numbers and date recorded, easements of record (with recording information),
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proposed arrangement and square footage of lots or Units (including lot and block numbers or Unit numbers).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	All sheets shall have a title block which shows the title or name under which the proposed subdivision is to be recorded; the name, address and phone number of the property owner(s); the name, address and phone number of the licensed engineer or registered professional land surveyor who prepared the plat/plans; the scale of the plat/plans; the date the plat/plan was prepared; and the location of the property according to the abstract or survey records of Hays County, Texas.
<input type="checkbox"/>	<input type="checkbox"/>	Sites, if any, to be reserved or dedicated for parks, schools, playgrounds, other public uses or for private facilities or amenities
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Scale (including a graphic scale), date, north arrow oriented to the top or left side of the sheet, and other pertinent informational data
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>All physical features of the property to be subdivided shall be shown, including:</p> <ul style="list-style-type: none"> - The location and size of all watercourses; and - 100-year floodplain according to Federal Emergency Management Agency (FEMA) information; and - Water Quality Buffer Zones as required by [WQO 22.05.017] - Drainage ways and drainage easements. Drainage easements are required for bypass of any offsite flows and for concentrated flows conveyed across lots. Drainage easements shall be large enough to contain the 100-yr storm [Sub. Ord. 12.2.2]. - U.S. Army Corps of Engineers flowage easement requirements; and - All critical environmental features (CEFs) such as karsts, springs, sinkholes,

		<p>caves, etc., to be located and documentation to be signed and certified by a geologist. All CEF to have a minimum setback of 150'. All designated wetlands to be certified as such by an accredited wetland biologist relying the presence of wetlands plant species.</p> <p>- Drainage area in acres or area draining into subdivisions (to be included in drainage report and construction plans); and</p>
<input type="checkbox"/>	<input type="checkbox"/>	Existing zoning of the subject property and all adjacent properties if within the city limits.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Provide notes identifying the following:</p> <ul style="list-style-type: none"> • Owner responsible for operation and maintenance of stormwater facilities. • Owner/operator of water and wastewater utilities. • Owner/operator of roadway facilities
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Certificates and other language shall be included on the plat, pursuant to the following Subsections: A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant.</p> <ul style="list-style-type: none"> - A statement signed by the property owner(s) and acknowledged before a Notary Public that the subdivided area is legally owned by the applicant. - An accurate legal, such as by metes and bounds, description by bearings and distances (including necessary curve and line data), accurate to the nearest one hundredth of a foot, for all boundary, block and lot lines, with descriptions correlated to a permanent survey monument. - The registered professional land surveyor's certificate, with a place for his or her signature and notarization of his or her signature. - A place for plat approval signature of the Chair or Vice Chair, in the Chair's absence) of the Planning and Zoning Commission, a place for the City Secretary to attest such signature, and the approval dates by Planning and Zoning Commission. - Appendices to this Chapter contain certificates and languages to be used on the plat to accommodate the above requirements:

NARRATIVE OF COMPLIANCE

A written narrative describing how all portions of the subdivision meets all requirements of this code and other codes, including landscaping, lighting, parkland dedication, site development, water quality protection, and zoning, as may be relevant.

<p>Outdoor Lighting, Article 24.06</p>	<p>N/A</p>
<p>Parkland Dedication, Article 28.03</p>	<p>N/A</p>
<p>Landscaping and Tree Preservation, Article 28.06</p>	<p>N/A</p>

Subdivision, 28.02, Exhibit A	This section shall also include, depending on what type of plat is being filed, how public or private improvements will meet City standards, including water quality, drainage, stormwater, and fire (if applicable). N/A
Zoning, Article 30.02, Exhibit A	N/A

C1	C2	C3	C4
Δ = 04°55'57"	Δ = 00°47'36"	Δ = 04°08'21"	Δ = 81°02'00"
R = 5809.80'	R = 5809.60'	R = 5809.80'	R = 35.00'
L = 500.14'	L = 80.44'	L = 419.70'	L = 49.50'
CB = N 78°54'03" E	CB = N 80°58'13" E	CB = N 78°30'15" E	CB = N 40°03'25" E
C = 499.99'	CB = 80.44'	C = 419.61'	C = 45.48'

ELEVATION NOTE
 Elevations established from Flood Insurance Rate Map For Hays County, Texas and Incorporated Areas, Map Number 48209C0065 E, dated February 18, 1998.
 RM-190, Elevation 1241.52'
 Elevation for Hays County Control Monument HO 57, 1254.62'
 Elevation established on said monument 1254.36'

- LEGEND**
- 1/2" IRON ROD FOUND
 - 5/8" IRON ROD SET
 - X- WIRE FENCE
 - - - CHAIN LINK FENCE
 - ⊙ WELL
 - - - OVERHEAD UTILITY WIRE
 - UTILITY POLE
 - - - GUY WIRE
 - - - EDGE OF CONCRETE
 - - - EDGE OF PAVEMENT
 - BL BUILDING SETBACK LINE
 - VL VOL. 6, PGS. 71-72, PRHCT - SECTION 1
 - VL VOL. 6, PG. 83, PRHCT - SECTION 2
 - PUE PUBLIC UTILITY EASEMENT
 - VL VOL. 6, PGS. 71-72, PRHCT - SECTION 1
 - VL VOL. 6, PG. 83, PRHCT - SECTION 2
 - DE DRAINAGE EASEMENT



E.T.J. NOTE
 This subdivision lies within the boundaries of the extra territorial jurisdiction of the City of Dripping Springs.

EDWARDS AQUIFER NOTE
 No portion of this subdivision lies within the Edwards Aquifer Recharge Zone. This subdivision does lie within the boundaries of the Contributing Zone of the Barton Springs Segment of the Edwards Aquifer.

PLAT INFORMATION
 This subdivision is intended to be a commercial subdivision.
 Total Area: 17.59 Acres
 Area in 50 foot right of way: 1.11 Acres
 Length of 50 foot right of way: 816.27 feet

Total Number of Lots: 5	Number of Lots Over 10 Acres: 0
Number of Residential Lots: 0	Number of Lots 5-10 Acres: 1
Number of Commercial Lots: 5	Number of Lots 2-5 Acres: 4
	Number of Lots 1-2 Acres: 0
	Number of Lots Less than 1 Acres: 0

UTILITY INFORMATION
 Water: Individual water wells
 Sewer: Individual on-site sewage facilities
 Electricity: Pedernales Electric Cooperative, Inc.
 Telephone: Verizon

COMMERCIAL WASTEWATER NOTE
 On-site Sewage Facilities discharge is limited to 350 gallons per day per acre.

SCHOOL DISTRICT
 This subdivision lies within the Dripping Springs Independent School District.

FLOOD PLAIN NOTE
 This tract is not within an identified Special Flood Hazard Area inundated by 100-Year Flood as identified by the Federal Emergency Management Agency, Flood Insurance Rate Map for Hays County, Texas, and Incorporated Areas, Map Number 48209C0065 E, dated February 18, 1998.

DRIVEWAY PERMIT NOTE
 "In order to promote safe use of roadways and preserve the conditions of public roadways, no driveway constructed on any lot within this subdivision shall be permitted to access onto a publicly dedicated roadway unless (a) a Driveway Permit has been issued by the Road Department of Hays County and (b) the driveway satisfies the minimum spacing requirement for driveways set forth in Section 7.4 and 7.5 of the Hays County Subdivision Regulations."
 Lot 1A - Restricted to American Way, no direct access from U.S. Hwy. 290 permitted.

ROAD NOTE
 The street "American Way" is a "country-lane standard" road.



30.73 Acres
 Look Title, Ltd.
 Vol. 263, Pg. 713, DRR-HCT

C5	C6	C7	C8	C9
Δ = 05°18'04"	Δ = 58°04'02"	Δ = 51°19'04"	Δ = 115°08'27"	Δ = 66°31'05"
R = 175.00'	R = 175.00'	R = 25.00'	R = 55.00'	R = 55.00'
L = 16.19'	L = 177.36'	L = 22.39'	L = 110.53'	L = 63.85'
CB = S 03°06'37" E	CB = S 41°30'34" E	CB = S 89°29'14" E	CB = S 57°34'32" E	CB = S 33°15'14" W
C = 16.19'	C = 217.08'	C = 21.65'	C = 92.85'	C = 60.33'

C10	C11	C12
Δ = 100°58'37"	Δ = 51°19'04"	Δ = 63°22'07"
R = 55.00'	R = 25.00'	R = 225.00'
L = 96.93'	L = 22.39'	L = 248.85'
CB = N 62°58'56" W	CB = N 38°10'10" W	CB = N 32°08'38" W
C = 84.86'	C = 21.55'	C = 236.36'

OWNER/DEVELOPER
 Steve Carter
 P.O. Box 220
 Dripping Springs, Tx 78620

STAUDT SURVEYING
 Thomas E. Staudt
 RPLS # 3984
 P.O. Box 1273
 Dripping Springs, Texas 78620
 (512)858-2236

PLAT SHOWING REDIVISION OF

LOT 1 - CALICHE HILL, SECTION 1
 &
LOT 1 - CALICHE HILL, SECTION 2
 HAYS COUNTY, TEXAS

Rev	Date: MAY, 2002
Dr. By: TES	Job #: S02054
	DWG #: S02054b

STATE OF TEXAS
COUNTY OF HAYS

KNOW ALL MEN BY THESE PRESENTS, That we, Steve Carter and Kay M. Carter, owners of Lot 1, Caliche Hill, Section 1, a subdivision of record in Volume 6, Pages 71-72, of the Plat Records of Hays County, Texas, and Lot 1, Caliche Hill, Section 2, a subdivision of record in Volume 6, Page 83, of the Plat Records of Hays County, Texas, as conveyed to us by deed dated March 19, 2001, and recorded in Volume 1785, Page 399, of the Official Public Records of Hays County, Texas, DO HEREBY REDIVIDE said Lot 1, Caliche Hill, Section 1, and Lot 1, Caliche Hill, Section 2, to be known as REDIVISION OF LOT 1, CALICHE HILL, SECTION ONE, AND LOT 1, CALICHE HILL, SECTION 2, in accordance with the plat shown hereon, subject to any and all easements or restrictions heretofore granted, and does hereby dedicate to the public the use of the streets and easements shown hereon.

WITNESS MY HAND, this the 3rd day of October, A.D., 2002.

Steve Carter
Steve Carter
P.O. Box 220
Dripping Springs, Texas 78620

Kay Carter
Kay Carter
P.O. Box 220
Dripping Springs, Texas 78620

STATE OF TEXAS
COUNTY OF HAYS

BEFORE ME, the undersigned authority, on this day personally appeared Steve Carter and Kay M. Carter, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and consideration therein granted.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 3rd day of October, A.D., 2002.

Chen Fought
Notary Public in and for Hays County, Texas



SEWAGE DISPOSAL/INDIVIDUAL WATER SUPPLY CERTIFICATION, TO WIT:

No structure in this subdivision shall be occupied until connected to an individual water supply or a state-approved community water system. Due to declining water supplies and diminishing water quality, prospective property owners are cautioned by Hays County to question the seller concerning ground water availability. Rain water collection is encouraged and in some areas may offer the best renewable water resource.

No structure in this subdivision shall be occupied until connected to a public sewer system or to an on-site wastewater system which has been approved and permitted by Hays County Environmental Health.

No construction or other development within this subdivision may begin until all Hays County Development Permit requirements have been met.

Allen G. Walther
Allen G. Walther, Director
Hays County Environmental Health
Hays County Floodplain Administrator

10-17-02
Date

STATE OF TEXAS
COUNTY OF HAYS

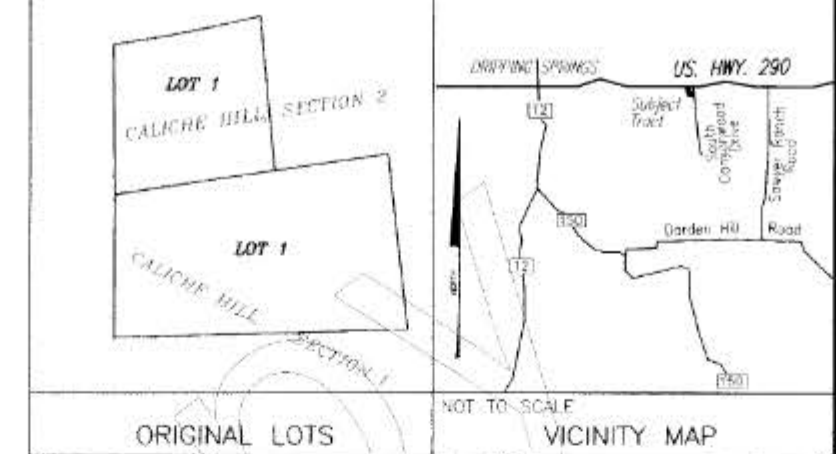
I, Lee Carlisle, County Clerk of Hays County, Texas, do hereby certify that on the 16th day of October, A.D., 2002, the Commissioner's Court of Hays County, Texas, passed an order authorizing the filing for record of this plat, and said order has been duly entered in the minutes of the said court Book 5 Page 582.

WITNESS MY HAND AND SEAL OF OFFICE this the 16th day of October, A.D., 2002.

Jim Powers
County Judge
Hays County, Texas



Lee Carlisle
County Clerk
Hays County, Texas



STATE OF TEXAS
COUNTY OF HAYS

I, Lee Carlisle, County Clerk of Hays County, Texas, do hereby certify that the foregoing instrument of writing with its certificate of authentication was filed for record in my office on the 16th day of October, A.D., 2002, at 2:45 o'clock P.m., in the Plat Records of Hays County, Texas, in Book 10 Page 344-345.

WITNESS MY HAND AND SEAL OF OFFICE this the 16th day of October, A.D., 2002.

Lee Carlisle
Lee Carlisle
County Clerk
Hays County, Texas



STATE OF TEXAS
CITY OF DRIPPING SPRINGS
HAYS COUNTY, TEXAS

This Plat, REDIVISION OF LOT 1, CALICHE HILL, SECTION 1 AND LOT 1, CALICHE HILL, SECTION 2, has been submitted to and considered by the City Council of Dripping Springs, Texas and is hereby approved.

Approved, this the 30th day of September, A.D., 2002, by the City Council.

Chen Fought
City Secretary

Jeff Russell
Mayor

STATE OF TEXAS
COUNTY OF HAYS

KNOW ALL MEN BY THESE PRESENTS, that I, Thomas E. Staudt, a REGISTERED PROFESSIONAL LAND SURVEYOR in the State of Texas, do hereby certify that this plat complies with the survey related requirements of the Hays County Subdivision Specifications, and with the survey related requirements of the City of Dripping Springs, Subdivision Ordinance, and further certify that this plat is prepared from an actual survey of the property made under my supervision on the ground and that the corner monuments were properly placed under my supervision.

Thomas E. Staudt
Thomas E. Staudt
Registered Professional Land Surveyor No. 3984

7/31/02
Date



STAUDT SURVEYING
Thomas E. Staudt
RPLS # 3984
P.O. Box 1273
Dripping Springs, Texas 78620
(512)858-2236

PLAT SHOWING REDIVISION OF
LOT 1 - CALICHE HILL, SECTION 1
&
LOT 1 - CALICHE HILL, SECTION 2
HAYS COUNTY, TEXAS

Rev. _____ Date: MAY, 2002
Dr. By: TES Job #: S02054 DWG #: S02054b



Planning and Zoning Commission Planning Department Staff Report

Planning and Zoning Commission Meeting: April 27, 2021
Project No: ZA2021-0002
Project Planner: Amanda Padilla, Senior Planner

Item Details

Project Name: Hardy Tract
Property Location: 2901 W US Highway 290, Dripping Springs, Texas 78620 (R15103)
Legal Description: Approximately 79.61 acres, situated in the Benjamin F. Hanna Survey No. 28, Abstract No. 222
Applicant: Steve Harren c/o Brian Estes, P.E.
Property Owners: P& H Family Limited Partnership No. 1
Request: Rezoning request from AG, Agricultural, to SF-2, Moderate Density Residential and Multiple-Family Residential District (MF)
Staff Recommendation: Staff is recommending approval of the SF-2 Zoning district and denial of the MF zoning with a conditional use overlay district.

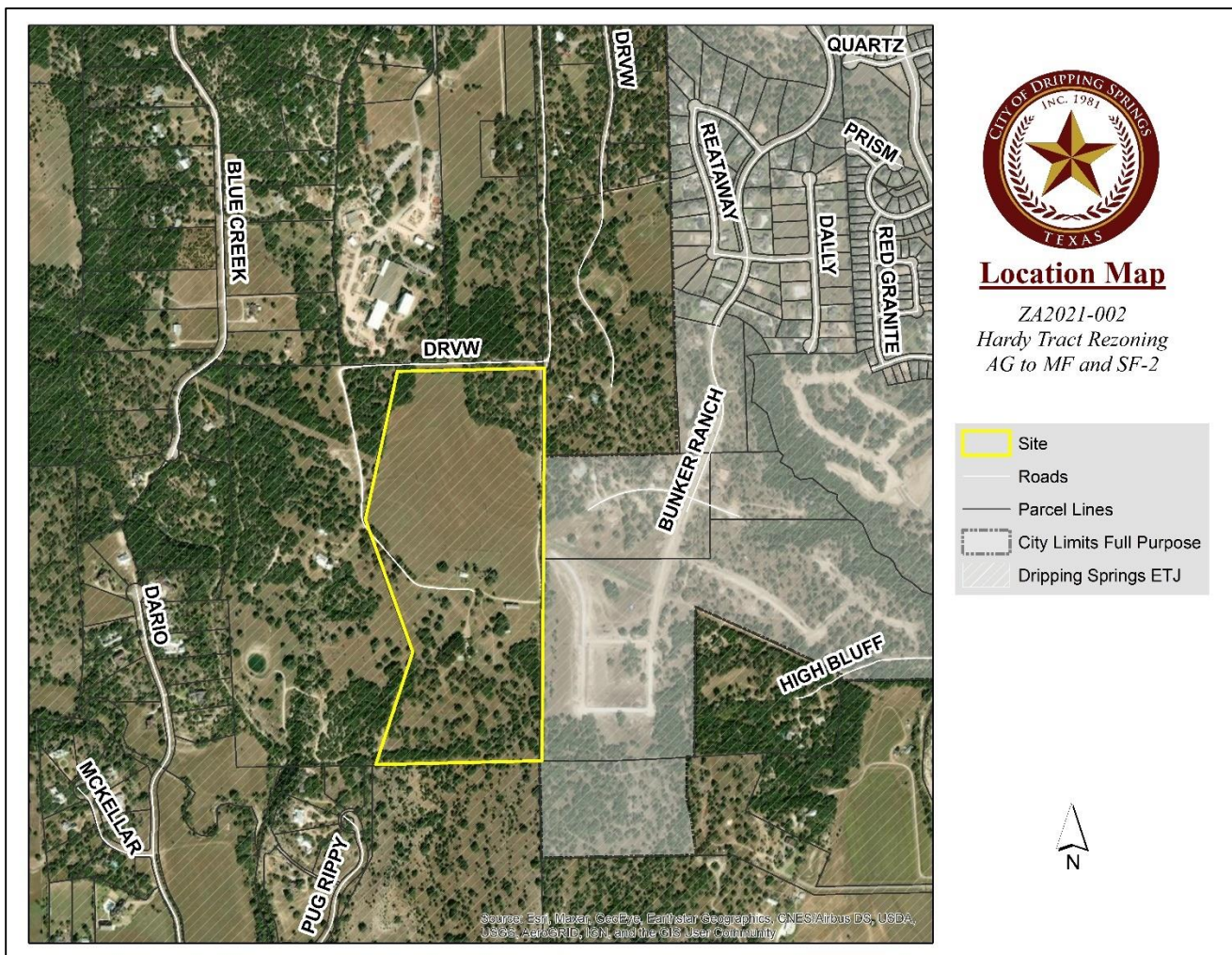


Figure 1. Location Map

Overview

The applicant submitted a petition for voluntary annexation of the approximately 78.021 acres, therefore should the annexation be approved by City Council, the applicant would like to request the zoning designation of SF-2, Moderate Density Residential and Multiple-Family Residential District (MF) with a Conditional Use Overlay.

This property today has a residential home that will be removed for development and the approximately 78.021 acres is proposed to be a component of the Bunker Ranch Subdivision.

The applicant is proposing that 50.779 acres (north on the Hardy Tract) be developed under the SF-2 Zoning regulations, the applicant stated that this portion would look similar to the development to the east in Bunker Ranch similarly zoned.

The 27.242 acres (south on the Hardy Tract) is proposed to be developed to Multi-family regulations with a conditional use overlay. The Conditional Use Overlay (CO) would restrict the development to a density of 4 units per acre and restrict traditional apartments. The intention of the rezoning is to have multiple units on one lot. It is intended to be built under a condominium declaration, which would allow for the property to be subdivided by units on the property. The City treats condominium developments as multi-family because it allows for the property to be developed with multiple dwelling units on one property. Although the applicant has submitted a proposed concept plan with detached single-family dwellings, the applicant would be able to develop the site with any of the proposed uses that are allowed by right on the zoning use chart for Multi-Family (as attached). With the conditional use overlay being placed on the property it would ensure a less dense development than what is allowed by MF zoning (24 units per acre) and restrict development of a traditional apartment building. The image to the left is a concept plan submitted.



Figure 2. Overall Concept Plan

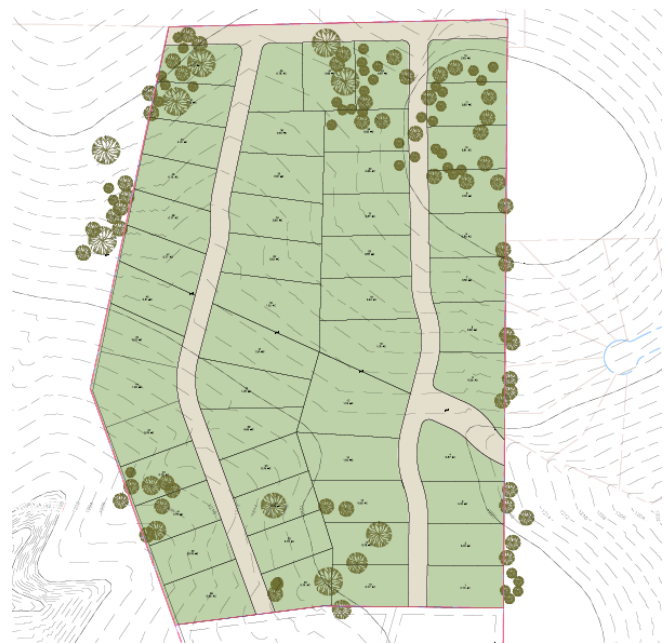


Figure 3. North portion to be rezoned to SF-2

Furthermore, under Section 3.8.6(h), Special Requirements, single-family units are allowed to be constructed in the MF district and “shall conform to the regulations that correlate with the appropriate residential category that is proposed to be used on the property.” The applicant stated that this portion of the development would be a similar build to the condominium regime located within Bunker Ranch development located along US Highway 290. Based on the applicant’s request, this applicant would follow the development standards associated with SF-3 as an allowed use in MF.



Figure 4. South portion to be rezoned to MF

Surrounding Properties

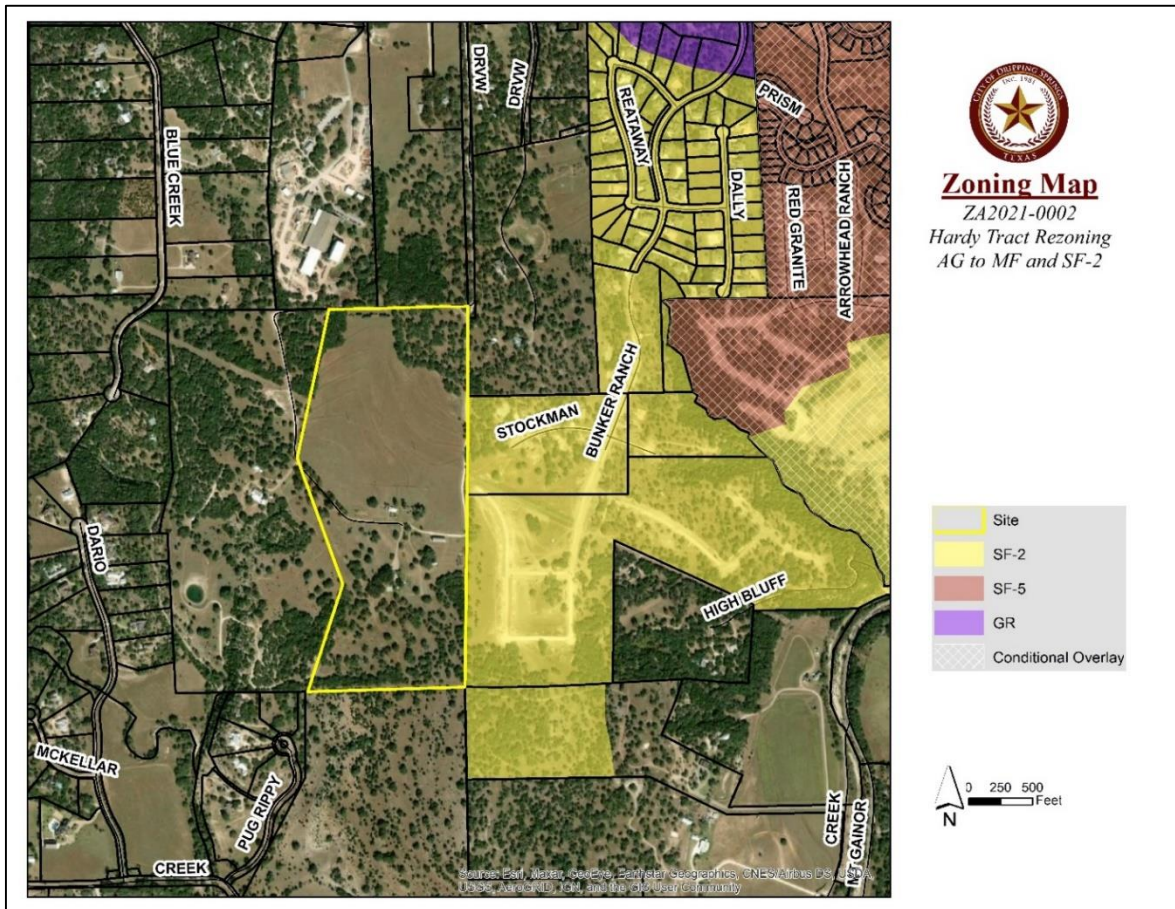


Figure 5. Zoning Map

The current zoning and existing uses of the adjacent properties to the north, south, east, and west are outlined in the table below:

Direction	Zoning District	Existing Use	Comprehensive Plan
North	ETJ	Residential	None of these properties are called out in the comprehensive plan
East	SF-2, Moderate Density Residential	Residential (Bunker Ranch Subdivision)	
South	ETJ	Residential	
West	ETJ	Residential	

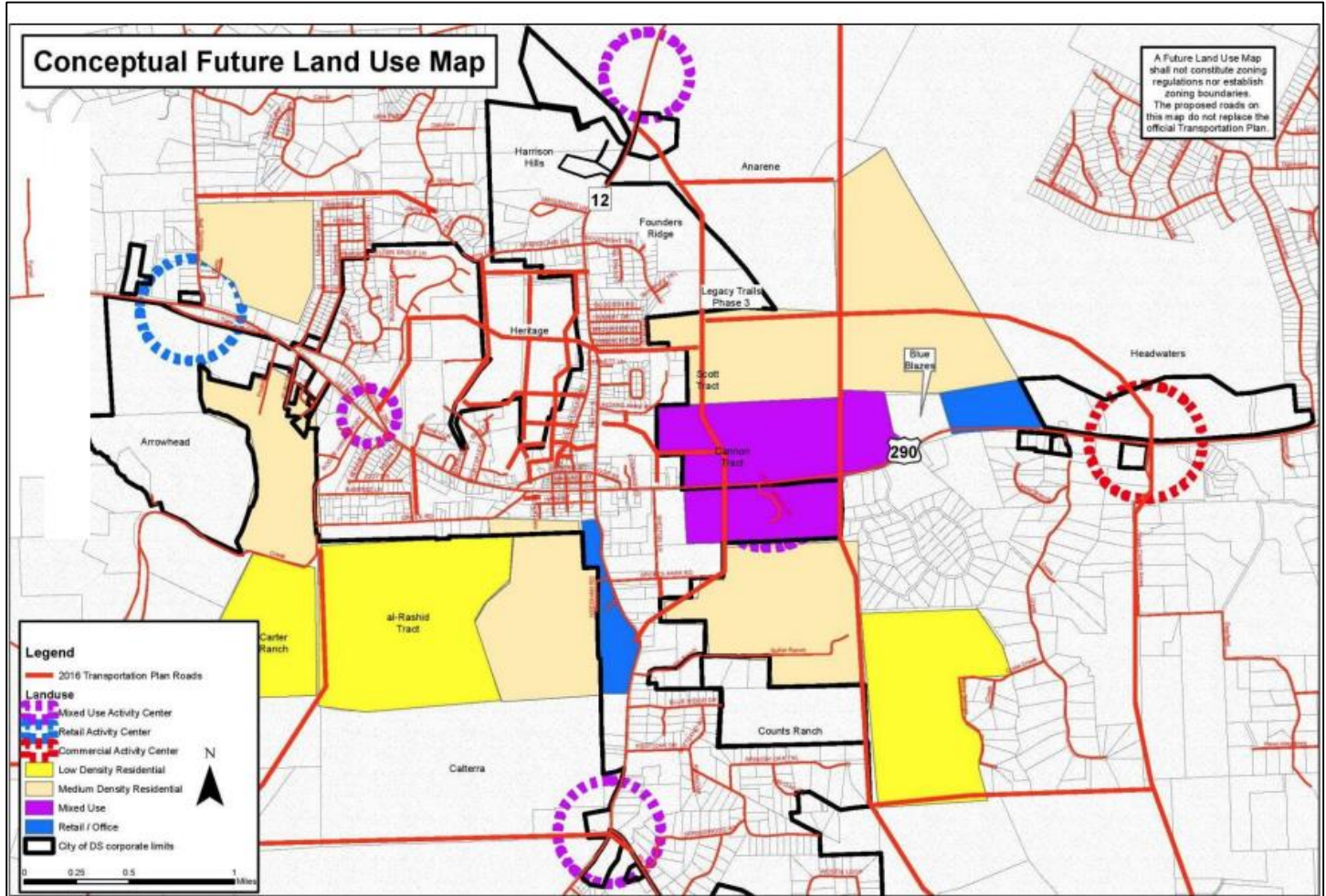


Figure 6. Conceptual Future Land Use Map

Development Standards

Development Standards for SF-2	
Size of Lots	
Minimum Lot area	1/2 acre
Setback Requirements	
Minimum Front Yard	25'
Minimum Side Yard	15'
Minimum Rear Yard	25'
Height Regulations	

Main Building	2 ½ stories, or 40', whichever is less, for the main buildings
Accessory Building	25'
Other Development Standards	
Impervious Cover	40% total, including main buildings and accessory buildings

Development Standards for Multi-family	
Size of Lots	
Minimum Lot area	1,815 square ft./dwelling unit
Minimum Lot Width	60'
Minimum Lot Depth	150'
Setback Requirements	
Minimum Front Yard	30'
Minimum Side Yard	15', 45' when building is in excess of one story in height and adjacent to single-family zoning district.
Minimum Rear Yard	25', 45' when the building is in excess of one story and adjacent to SF zoning district.
Height Regulations	
Main Building	2 stories, or 40', whichever is less, for the main buildings
Accessory Building	25'
Other Development Standards	
Impervious Cover	60% total, including main buildings and accessory buildings
Min. Building Separation	20' for buildings with or without openings

As previously mentioned, while the site is proposed to be zoned to MF with a CO because of the condominium form of development, the property would follow the zoning regulations for the SF-3 District (if constructing units similar to those located along 290 in the bunker Ranch Subdivision), as allowed by the City's Code. Those regulations are as follows:

Development Standards for SF-3	
Size of Lots	
Minimum Lot area	3,500 sq. ft.
Minimum Lot Width	35'
Minimum Lot Depth	150'
Setback Requirements	
Minimum Front Yard	10'
Minimum Side Yard	5'; corner lots – 7.5 from street ROW
Minimum Rear Yard	10'
Minimum Setback for Garage Door from Alley	10'
Minimum Setback for Garage Door from Front Curb or sidewalk	25'
Height Regulations	
Main Building	2 ½ stories, or 40', whichever is less, for the main structures

Accessory Building	15'
Other Development Standards	
Impervious Cover	65% total, including main buildings and accessory buildings
Min. Building Separation	20' for buildings with or without openings
Min. Width of Residential Building	25'
Max. Height Fence within Street Yard	3'
Max. Height of Fence outside of Street Yard	6'

Summary

2.28.2 In making a determination regarding a requested zoning change, the P&Z and the City Council shall consider the following factors:

Factors	Staff Comments
1. Whether the proposed change will be appropriate in the immediate area concerned;	<p>The applicant is proposing two zoning districts SF-2 and MF with a CO, the SF-2 Zoning district is consistent with the area, and due to the proximity to the ETJ and the surrounding properties, it would serve as a transition to more rural parts of the city's ETJ.</p> <p>As for the MF with a CO zoning district, this zoning category is not appropriate for the location and the surrounding properties. The 27.242 acres is proposed to develop at 4 units per acre, where the majority of lots surrounding it are averaging 0.75 acres a lot. This density is much higher than the surrounding lots.</p>
2. Their relationship to the general area and the City as a whole;	<p>The SF-2 zoning uses proposed will fit in with the general areas zoning districts and will be compatible with the ETJ properties.</p> <p>The MF with a CO zoning district is not located in an appropriate area for density. Though this property is not within the City's Conceptual Future Land Use Map, the current map shows low density and moderate density on the outer edges of the City Limits, which shows that low density should occur away from the City center, as seen in the above image labeled figure 6.</p>
3. Whether the proposed change is in accord with any existing or proposed plans for providing public schools, streets, water supply, sanitary sewers, and other utilities to the area;	<p>This property is not shown on any existing or proposed plans for public schools, streets, water supply, sanitary sewers, and other utilities to the area.</p>
4. The amount of undeveloped land currently classified for similar development in the vicinity and elsewhere in the City, and any special circumstances which may make a substantial part of such undeveloped land unavailable for	<p>The City is seeing an increase in residential development and the rezoning of the property to SF-2 is appropriate. The City has not seen any issues with undeveloped land for properties rezoned to SF-2. There are multiple properties within the City Limits</p>

development;	zoned MF that have been undeveloped for some time.
5. The recent rate at which land is being developed in the same zoning classification, particularly in the vicinity of the proposed change;	The rate of land being developed in this area has increased within the last few years. SF-2 zoning is an appropriate zoning category for the vicinity. As stated, above MF is developing at a slower rate than single-family.
6. How other areas designated for similar development will be, or are unlikely to be, affected if the proposed amendment is approved;	Based on the area, the proposed rezone to SF-2 will not affect the surrounding area and will complement the adjacent lots. The proposed rezoning to MF with a CO could affect the future development of adjacent lots.
7. Whether the proposed change treats the subject parcel of land in a manner which is significantly different from decisions made involving other, similarly situated parcels; and	This property is being treated similarly to other Zoning changes.
8. Any other factors which will substantially affect the public health, safety, morals, or general welfare.	Staff does not see this Zoning Change affecting the public health, safety, morals, or general welfare.

Public Notification

A legal notice advertising the public hearing was placed in the Dripping Springs Century-News, signs were posted on the site, notice was placed on the City Website, and all property owners within a 300-foot radius of the site were notified of the request.

Attachments

- Exhibit 1: Rezoning Application
- Exhibit 2: Zoning Use Chart
- Exhibit 3: Concept Plan
- Exhibit 4: Survey for the SF-2 and MF

Recommended Action:	Staff is recommending approval of the SF-2 Zoning district and denial of the Multi-family zoning with a Conditional Use Overlay district.
Alternatives/Options:	Recommend denial of the rezoning application.
Budget/Financial Impact:	None calculated at this time.
Public Comments:	No public comment was received for this request.
Enforcement Issues:	N/A



CITY OF DRIPPING SPRINGS

PHYSICAL: 511 Mercer Street • MAILING: PO Box 384

Dripping Springs, TX 78620

• 512.858.4725 • www.cityofdrippingsprings.com

ZONING/PDD AMENDMENT APPLICATION

Case Number (staff use only): _____ - _____

CONTACT INFORMATION

PROPERTY OWNER NAME P & H Family Limited Partnership No. 1

STREET ADDRESS P O BOX 1696

CITY Dripping Springs STATE TX ZIP CODE 78620

PHONE _____ EMAIL _____

APPLICANT NAME Cristina Cordoba/ Brian Estes

COMPANY Civil and Environmental Consultants Inc.

STREET ADDRESS 3711 S. Mo Pac Expy Suite 550

CITY Austin STATE Texas ZIP CODE 78746

PHONE 512-439-0400 EMAIL ccordoba@cecinc.com

REASONS FOR AMENDMENT

TO CORRECT ANY ERROR IN THE REGULATION OR MAP

TO RECOGNIZE CHANGES IN TECHNOLOGY, STYLE OF LIVING, OR MANNER OF CONDUCTING BUSINESS

TO RECOGNIZE CHANGED CONDITIONS OR CIRCUMSTANCES IN A PARTICULAR LOCALITY

TO MAKE CHANGES IN ORDER TO IMPLEMENT POLICIES REFLECTED WITHIN THE COMPREHENSIVE PLAN

PROPERTY & ZONING INFORMATION	
PROPERTY OWNER NAME	P & H Family Family Limited Partnership No. 1
PROPERTY ADDRESS	2901 W US 290, DRIPPING SPRINGS, TX 78620
CURRENT LEGAL DESCRIPTION	A0222 BENJAMIN F HANNA SURVEY, ACRES 77
TAX ID#	R15103
LOCATED IN	<input type="checkbox"/> CITY LIMITS <input type="checkbox"/> EXTRATERRITORIAL JURISDICTION
CURRENT ZONING	AG
REQUESTED ZONING/AMENDMENT TO PDD	SF-2 and MF-CO
REASON FOR REQUEST <i>(Attach extra sheet if necessary)</i>	Annex into full purpose city limits
INFORMATION ABOUT PROPOSED USES <i>(Attach extra sheet if necessary)</i>	Mixture of single-family home lots and multi-family lots with garden home villages

COMPLIANCE WITH OUTDOOR LIGHTING ORDINANCE? *

(See attached agreement).

YES (REQUIRED)* YES (VOLUNTARY)* NO*

* If proposed subdivision is in the City Limits, compliance with Lighting Ordinance is **mandatory**. If proposed subdivision is in the ETJ, compliance is **mandatory** when required by a Development Agreement or as a condition of an Alternative Standard/Special Exception/Variance/Waiver.

Voluntary compliance is strongly encouraged by those not required by above criteria (*see Outdoor Lighting tab on the CODS webpage and online Lighting Ordinance under Code of Ordinances tab for more information*).

APPLICANT'S SIGNATURE

The undersigned, hereby confirms that he/she/it is the owner of the above described real property and further, that Brian Estes (Civil & Environmental Consultants, Inc.) is authorized to act as my agent and representative with respect to this Application and the City's zoning amendment process.
(As recorded in the Hays County Property Deed Records, Vol. _____, Pg. _____.)

[Signature]
Name

PRINCIPAL
Title

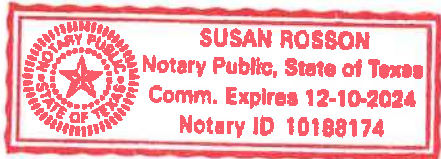
STATE OF TEXAS §
 §
COUNTY OF HAYS §

This instrument was acknowledged before me on the 5th day of March,
2021 by Hardy E. Thompson, III.

[Signature]
Notary Public, State of Texas Susan Rosson

My Commission Expires: 12-10-2024

Hardy E. Thompson, III
Name of Applicant



ZONING AMENDMENT SUBMITTAL

All required items and information (including all applicable above listed exhibits and fees) must be received by the City for an application and request to be considered complete. **Incomplete submissions will not be accepted.** By signing below, I acknowledge that I have read through and met the above requirements for a complete submittal:



3/12/2021

Applicant Signature

Date

CHECKLIST

STAFF	APPLICANT	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Completed Application Form - including all required signatures and notarized
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Application Fee-Zoning Amendment or PDD Amendment (<i>refer to Fee Schedule</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	PDF/Digital Copies of all submitted Documents When submitting digital files, a cover sheet must be included outlining what digital contents are included.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Billing Contact Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	GIS Data
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outdoor Lighting Ordinance Compliance Agreement - signed with attached photos/drawings (<i>required if marked "Yes (Required)" on above Lighting Ordinance Section of application</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Legal Description
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Concept Plan
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plans
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Maps
<input type="checkbox"/>	<input type="checkbox"/>	Architectural Elevation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Explanation for request (<i>attach extra sheets if necessary</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Information about proposed uses (<i>attach extra sheets if necessary</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Public Notice Sign (<i>refer to Fee Schedule</i>)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Proof of Ownership-Tax Certificate or Deed
<input type="checkbox"/>	<input type="checkbox"/> n/a	Copy of Planned Development District (<i>if applicable</i>)
<input type="checkbox"/>	<input type="checkbox"/> n/a	Digital Copy of the Proposed Zoning or Planned Development District Amendment

Project Number: _____ - _____
Only filled out by staff

Date, initials



BILLING CONTACT FORM

Project Name: Bunker Ranch Phase 6 (Hardy Tract 79.61 Acres)
Project Address: 2901 W US 290, Dripping Springs, TX 78620
Project Applicant Name: Cristina Cordoba / Brian Estes

Billing Contact Information

Name: Steve Harren
Mailing Address: 317 Grace Lane #240
Austin, Texas 78746
Email: steveharren@aol.com Phone Number: (512)644-6800

Type of Project/Application (check all that apply):

- | | |
|---|---|
| <input type="checkbox"/> Alternative Standard | <input type="checkbox"/> Special Exception |
| <input type="checkbox"/> Certificate of Appropriateness | <input type="checkbox"/> Street Closure Permit |
| <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Subdivision |
| <input type="checkbox"/> Development Agreement | <input type="checkbox"/> Waiver |
| <input type="checkbox"/> Exterior Design | <input type="checkbox"/> Wastewater Service |
| <input type="checkbox"/> Landscape Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Lighting Plan | <input checked="" type="checkbox"/> Zoning |
| <input type="checkbox"/> Site Development Permit | <input checked="" type="checkbox"/> Other _____ |

*Applicants are required to pay all associated costs associated with a project's application for a permit, plan, certificate, special exception, waiver, variance, alternative standard, or agreement, regardless of City approval. Associated costs may include, but are not limited to, public notices and outside professional services provided to the City by engineers, attorneys, surveyors, inspectors, landscape consultants, lighting consultants, architects, historic preservation consultants, and others, as required. Associated costs will be billed at cost plus 20% to cover the City's additional administrative costs. **Please see the online Master Fee Schedule for more details.** By signing below, I am acknowledging that the above listed party is financially accountable for the payment and responsibility of these fees.*



Signature of Applicant

3/12/2021

Date

APPENDIX E: ZONING USE REGULATIONS (CHARTS)

Use Chart

Adopted February 17, 2015

Permitted Uses “P”

Conditional Uses “C”

	Residential Uses						Nonresidential Uses								
AGRICULTURE	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	PP
Bulk Grain and/or Feed Storage	P										X	P			
Farms, General (Crops), Commercial	P	C	C								X				
Greenhouse (Non-Retail)	P	P	P	P							P				
Livestock Sales	P										X				
Orchard/Crop Propagation	P	P	C	C	C	C	C	C	C	C	P	C			
Plant Nursery (Commercial)	P								P	P	X	C			
Small Scale Farm	P	C	C			C	C	C	C	C	P				
Stable, Commercial	P	C									X				
Stables (Private, accessory use)	P	C	C								P				
Stables (Private, principal use)	P	C									X				
Garden (Non-Retail)	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Farm Animals (Exempt - FFA, 4H)	P	C	C	C	C	C	C	C	C	C	P	C			
Farm Animals (Non-Exempt)	P	C	C	C	C	C	C	C	C	C	P	C			

(Ordinance 1220.99 adopted 2/17/15)

	Residential Uses						Nonresidential Uses								
RESIDENTIAL	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	PP
Accessory Bldg/Structure (Nonresidential)							P	P	P	P	P	P			
Accessory Bldg/Structure (Residential)	P	P	P	P	P	P					P				

Accessory Dwelling	P	C	C								P		P	Item 10.
Caretaker's/Guard Residence	P	P	P								P			
Community or Group Home	C	C	C	C	C						P			
Duplex/Two-Family				P	P	P	P	P	P		P			
Garage Residential Conversion	P	P	C	C							P			
Garden Home/Townhome					P	P	P	P	P		P			
Home Occupation	P	P	P	P	P	P	P	P	P		P			
HUD-Code Manufactured Home	C			C	C	C					X			
Living Quarters on Site with a Business							P	P	P	P	P			
Multiple-Family Dwelling						P	P	P	P		P			
Residential Loft							P	P	P		P			
Rooming/Boarding House						P		P			P			
Single-Family Dwelling, Detached	P	P	P	P	P	P					P			
Single-Family Industrialized Housing	P	P	P	P	P	P					P			
Swimming Pool, Private	P	P	P	P	P	P	P	P	P		P			

(Ordinance 1220.99 adopted 2/17/15; Ordinance 2019-44 adopted 12/10/19)

OFFICE	Residential Uses						Nonresidential Uses								
	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	PP
Armed Services Recruiting Center							P	P	P	P	P				
Bank										C	X				
Check Cashing Service								P	P	P	X				
Credit Agency							P	P	P	P	X				
Insurance Agency Offices							P	P	P	P	P				
Offices, General/Professional							P	P	P	P	P				
Office, Brokerage							P	P	P	P	P				

Recycling Center										C	X	P				Item 10.
Restaurant (No Drive-Through Service)								P	P	P	P					
Restaurant (With Drive-Through)									P	P	X					
Security Systems Installation Company									C	P	X					
Sexually Oriented Business										C	X	C				
Shoe Repair								P	P	P	P					
Studio, Tattoo or Body Piercing								C	C	C	P					
Tailor Shop								P	P	P	P					
Tool & Machinery Rental (Indoor Storage)								P	P	P	X					
Tool & Machinery Rental (Outdoor Storage)										P	X					
Travel Agency							P	P	P	P	P					
Temporary Outdoor Sales/Promotion							C	P	P	P	P					
Upholstery Shop									P	P	P					
Used Merchandise/Furniture								P	P	P	P					
Vacuum Cleaner Sales & Repair								P	P	P	X					
Veterinarian Clinic (Indoor Kennels)								P	P	P	P					
Woodworking Shop (Ornamental, Handmade)								P	P	P	P					

* Permitted in HO District per requirements of [Chapter 30, Article 30.05](#): Mobile Food Vendors.

(Ordinance 1220.99 adopted 2/17/15; Ordinance 1220.149 adopted 11/14/17; Ordinance 2018-09 adopted 4/10/18)

	Residential Uses						Nonresidential Uses									
TRANSPORTATION & AUTO SERVICES	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	PP	
Antique Vehicle Restoration										P	X					
Auto Body Repair										P	X					
Auto Financing &								P	P	P	X					

Bowling Center									P	P	P				Item 10.
Broadcast Station (With Tower)											X	P			
Country Club (Private)									P		X				
Dance Hall									P	P	P			P	
Day Camp for Children	C	C					C		P	P					
Civic/Conference Center											P		P		
Dinner Theater									P	P	P				
Driving Range														P	
Fairgrounds/Exhibition Area	C													P	
Gaming Club (private)								C	C	C					
Golf Course (Miniature)									P	P				P	
Golf Course (Public, Private)	C								P	P				P	
Health Club							C	P	P	P	P			P	
Motion-Picture Studio, Commercial										P		P			
Motion-Picture Theater									P	P	P				
Museum								P	P	P	P				
Park accessory uses															P
Park and/or Playground	P	P	P	P	P	P	P	P	P	P	P				P
Psychic Reading Services								P	P	P	P				
Rodeo Grounds	C									C		C			
Skating Rink										P				P	
Tennis Court	P	P	P	P	P	P					P			P	
Theater (Stage)									P	P	P			P	
Video Rentals/Sales								P	P	P	P				

(Ordinance 1220.99 adopted 2/17/15; Ordinance 2020-01 adopted 1/14/20)

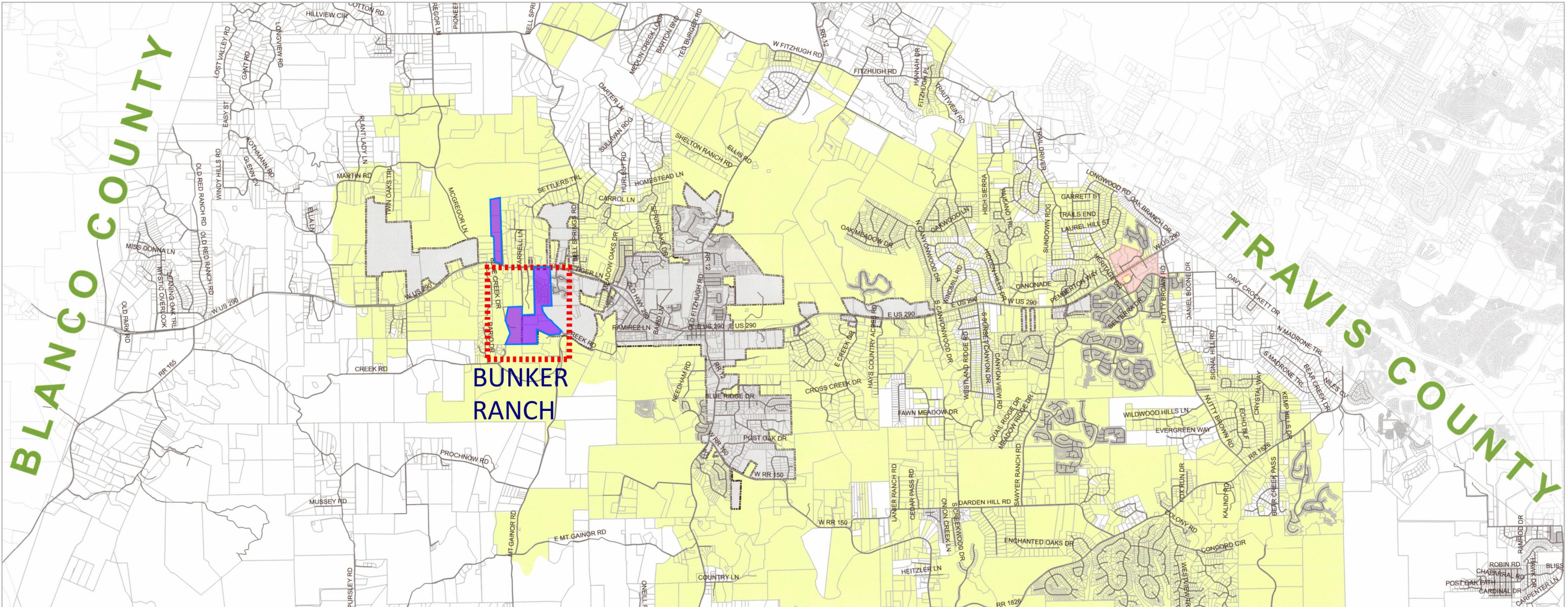
	Residential Uses						Nonresidential Uses								
INSTITUTIONAL/ GOVERNMENT	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	475

Assisted Living Facility						C		C	C	C	P						Item 10.
Broadcast Tower (Commercial)												C					
Cemetery or Mausoleum	C												P				
Child Day-Care Facility	C	C	C	C	C	C	C	P	P	P	P						
Church, Religious Assembly	P	P	P	P	P	P	P	P	P	P	P		P				
Civic Club								P	P	P	P	P					
Community Center (Municipal)												P		P			
Electrical Generating Plant													P	P			
Electrical Substation													P	P			
Emergency Care Clinic										P	P						
Fire Station	P	P	P	P	P	P	P	P	P	P	P			P			
Fraternal Lodge or Union								P	P	P	P	P					
Government Building (Mun, St, Fed)											P	P		P			
Group Day-Care Home	C	C	C	C	C	C	C	P	P	P							
Medical Clinic or Office								P	P	P	P	P					
Wireless Communications Tower	C	C	C			C	C	C	C	C			C				
Heliport													P				
Home for the Aged, Residential	C	C	C	C	C	C	C	C	P	P	P						
Hospice								C	P	P	P						
Hospital (Acute Care, General)								C	C	P	P						
Library								P	P	P	P	P		P			
Maternity Home								C	C	P	P	P					
Nursing/Convalescent Home								C	C	P	P						
Orphanage						C	C	C	P	P	P						
Philanthropic Organization								P	P	P	P	P					

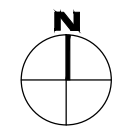
Post Office	P	P	P	P	P	P	P	P	P	P	P		P	Item 10.
Radio, Television, Microwave Tower									C	C		C		
School, K Through 12 (public or private)	P	P	P	P	P	P	P	P	P	P	P		P	
Sewage Pumping Station	C	C	C	C	C	C	C	C	C	C	P	P	P	
Telephone Switching/ Exchange Bldg.							C	C	C	P	P		P	
Wastewater Treatment Plant	C	C	C	C	C	C	C	C	C	C		C	P	
Water Supply (Elevated Storage Tank)	C	C	C	C	C	C	C	C	C	C	P	C	P	
Water Supply Facility (Private)	P	P	P	P	P	P		C	C	C		C	P	

	Residential Uses						Nonresidential Uses								
COMM. & WHOLESALE TRADE	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	PP
Book Bindery										P	P				
Feed & Grain Store									P	P					
Furniture Manufacture												P			
Heating & Air-Conditioning Sales/Service									P	P					
Pawnshop									C	C					
Propane Sales (Retail)										P					
Taxidermist										P					
Transfer Station/Refuse Pickup												P			
Veterinarian (Outdoor Kennels or Pens)	C									P					
Warehouse/Office										C		P			
Welding Shop										C		P			

	Residential Uses						Nonresidential Uses								
LIGHT	AG	SF-1	SF-2	SF-4	SF-5	MF-1	O	LR	GR	CS	HO	I	GUI	PR	477



OVERALL LOCATION MAP
 SCALE: 1" = 200,000'



L. M. Holder III, FAIA
 Architecture Planning Energy Consulting

**BUNKER RANCH PHASE 6
 HARDY TRACT**

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



LARGE LOTS

GARDEN VILLAS

PROPOSED SITE KEYPLAN

SCALE: 1"=800'



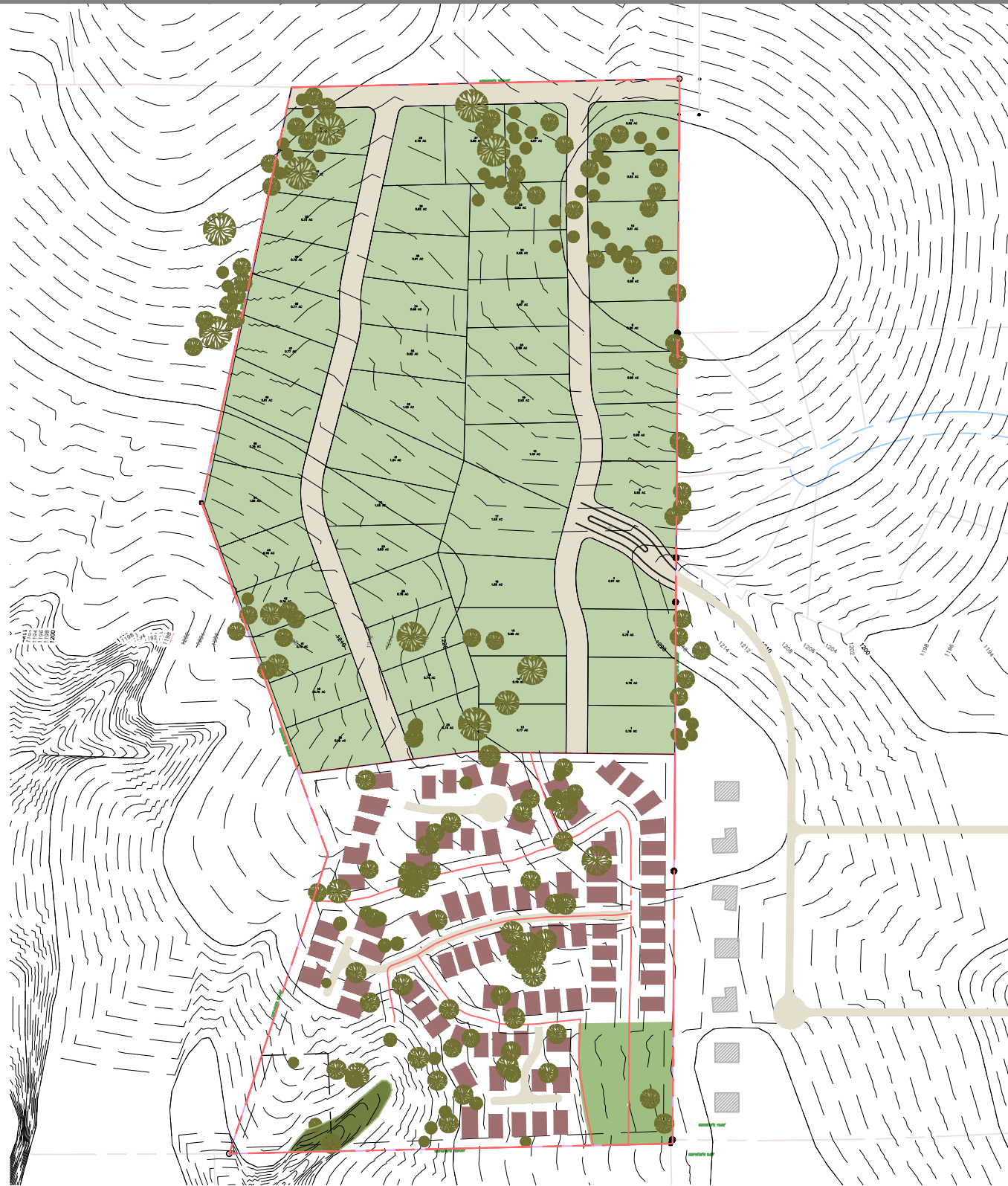
L. M. Holder III, FAIA
 Architecture Planning Energy Consulting

BUNKER RANCH PHASE 6

HARDY TRACT

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



SITE PLAN- HARDY TRACT
 SCALE: 1"=400'

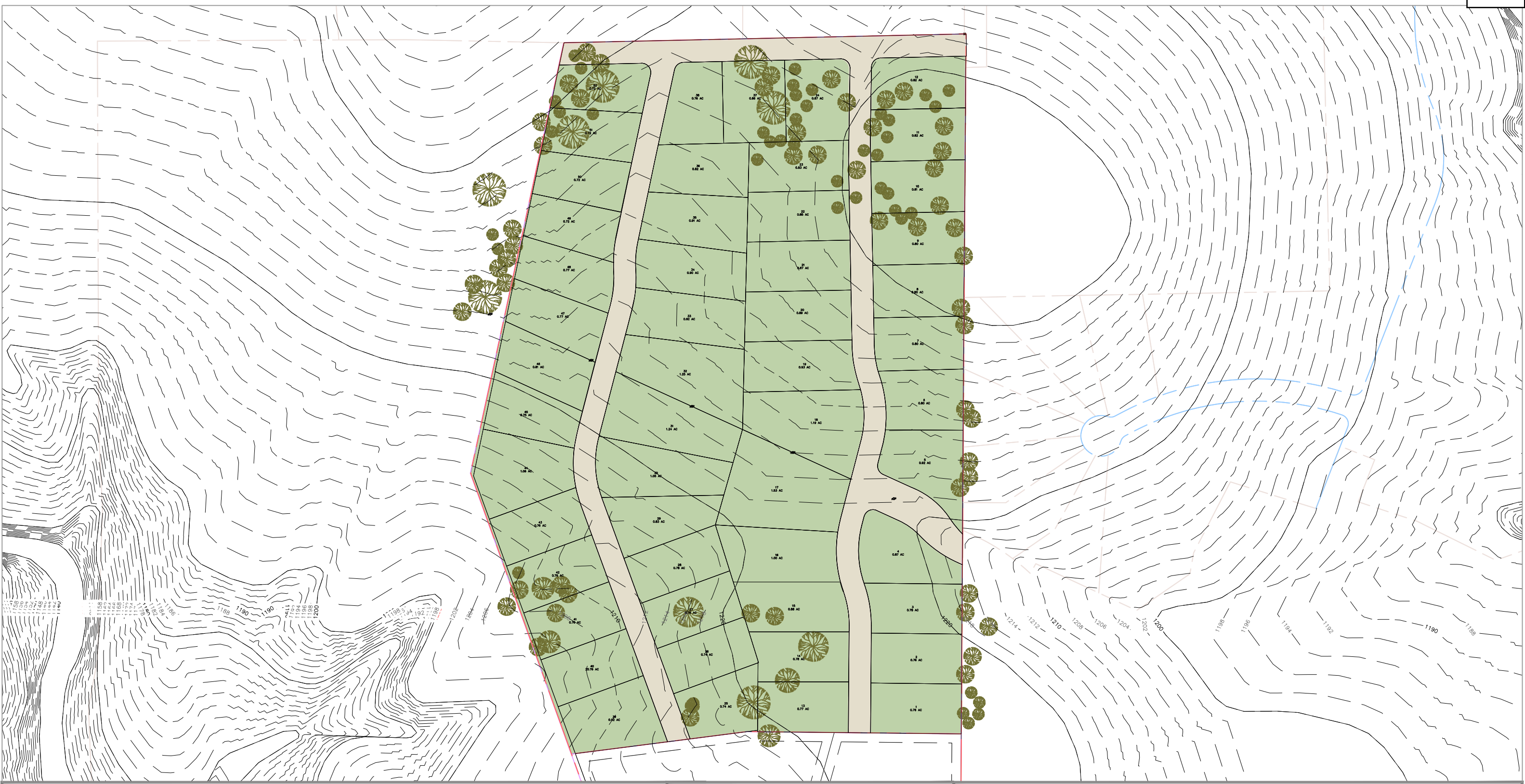


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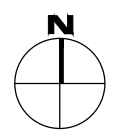
**BUNKER RANCH PHASE 6
 HARDY TRACT**

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



PROPOSED LARGE LOTS
 SCALE: 1"=250'



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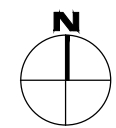
BUNKER RANCH PHASE 6
HARDY TRACT

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



PROPOSED GARDEN VILLAS
 SCALE: 1"=150'



L. M. Holder III, FAIA
 Architecture Planning Energy Consulting

**BUNKER RANCH PHASE 6
 HARDY TRACT**

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION



STYLES OVERVIEW



L. M. Holder III, FAIA
Architecture Planning Energy Consulting

**BUNKER RANCH PHASE 6
HARDY TRACT**

DATE: 02/05/2021

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION

LEGAL DESCRIPTION

BEING A 27.242 ACRE TRACT OF LAND (INCLUDING A 60 SQUARE FOOT AREA IN CONFLICT) OUT OF THE BENJAMIN F. HANNA SURVEY NO. 28, ABSTRACT NO. 222, SITUATED IN HAYS COUNTY, TEXAS, BEING A PORTION OF A CALLED 79.61 ACRE TRACT CONVEYED TO P & H FAMILY LIMITED PARTNERSHIP NO. 1 AS TRACT A BY DEED OF RECORD IN VOLUME 1733, PAGE 755, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS (O.P.R.H.C.T.); SAID 27.242 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING, at a ½ inch iron rod found in the easterly line of a 50.779 acre portion of said 79.61 acre tract, at the westerly common corner of Bunker Ranch Phase 2, a subdivision of record in Document No. 20017197, O.P.R.H.C.T. and of Bunker Ranch Phase 3, a subdivision of record in Document No. 21009701, O.P.R.H.C.T.;

THENCE, along the common line of said 50.779 acre tract and of said Bunker Ranch Phase 3, S00°21'25"W, a distance of 550.67 feet to a ½ inch iron rod with "CEC" cap set for the easterly common corner of said 27.242 acre tract and of said 50.779 acre tract, for the **POINT OF BEGINNING**, hereof.

THENCE, along the common line of said 27.242 acre tract and of said Bunker Ranch Phase 3, S00°21'25"W, a distance of 1,080.18 feet to a ½ inch iron rod found at the westerly common corner of said Bunker Ranch Phase 3 and of a called 18.250 acre tract conveyed to The Overlook at Bunker Ranch, LLC by deed of record in Document No. 20061246, O.P.R.H.C.T.;

THENCE, bounding the area of conflict, the following two (2) courses and distances:

1. S05°53'31"E, a distance of 10.82 feet to a found ½ inch iron rod;
2. S86°15'32"W, a distance of 5.94 feet to an 8 inch cedar fence post found at the northerly common corner of said 18.250 acre tract and of a called 603.70 acre tract conveyed to Anna Marie Widen Speir, et al, by deed of record in Volume 1734, Page 427, O.P.R.H.C.T.;

THENCE, along the common line of said 27.242 acre tract and of said 603.70 acre tract, S88°42'30"W, a distance of 1,237.34 feet to a ½ inch iron rod with "CEC" cap set at the southerly common corner of said 27.242 acre tract and of a called 79.39 acre tract conveyed to P & H Family Limited Partnership No. 2 by deed of record in Volume 1733, Page 748, O.P.R.H.C.T.;

THENCE, along the common line of said 27.242 acre tract and of said 79.39 acre tract, the following two (2) courses and distances:

1. N18°14'48"E, a distance of 881.92 feet to a found ½ inch iron rod;
2. N19°44'58"W, a distance of 241.11 feet to a ½ inch iron rod with "CEC" cap set at the westerly common corner of said 27.242 acre tract and of said 50.779 acre tract;

THENCE, along the common line of said 27.242 acre tract and of said 50.779 acre tract, the following two (2) courses and distances:

1. N82°42'05"E, a distance of 479.09 feet to a set ½ inch iron rod with "CEC" cap;

27.242 ACRES
BUNKER RANCH
DRIPPING SPRINGS, TX

Item 10.

PROJECT NO.: 304-065
APRIL 1, 2021

2. S89°23'27"E, a distance of 578.73 feet to the **POINT OF BEGINNING**, and containing 27.242 acres (1,186,657 square feet) of land, more or less.

THE BASIS OF BEARING OF THIS SURVEY IS TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NSRS 2011(2012A), UTILIZING THE LEICA SMARTNET CONTINUALLY OPERATING REFERENCE NETWORK.

Witness my hand and seal this 1st day of April, 2021.



Frank William Funk, R.P.L.S. 6803
Civil & Environmental Consultants, Inc.
3711 S. MoPac Expressway, Building 1, Suite 550
Austin, TX 78746
Texas Registered Surveying Firm No. 10194419



P:\300-000\304-065\Survey\304-065-SV01 P AND H EXHIBIT SOUTH HALF.dwg EXHIBIT SHEET 1 OF 2 | LS:(04/01/2021 - funk) - LP: 4/1/2021 3:30 PM



P&H FAMILY
LIMITED PARTNERSHIP NO. 1
50.779 ACRE PORTION OF A
CALLED 79.61 ACRE TRACT
VOL. 1733, PG. 755 O.P.R.H.C.T.

P&H FAMILY
LIMITED PARTNERSHIP
NO. 2
CALLED 79.39 ACRES
VOL. 1734, PG. 427
O.P.R.H.C.T.

27.242 ACRES
(1,186,657 SQUARE FEET)

P&H FAMILY
LIMITED PARTNERSHIP NO. 1
A PORTION OF A CALLED
79.61 ACRE TRACT
VOL. 1733, PG. 755
O.P.R.H.C.T.



SEE DETAIL "A"
SHEET 2

POINT OF
COMMENCING

POINT OF
BEGINNING

LOT 17
BUNKER
PHASE 2
DOC. NO. 20017197
O.P.R.H.C.T. Item 10.

LOT 1

LOT 2

LOT 3
BUNKER RANCH
PHASE 3
DOC. NO. 21009701
O.P.R.H.C.T.

LOT 4

LOT 5

LOT 6

LOT 7

LOT 8

LOT 9

LOT 10

500'21'25"W 1080.18'

500'21'25"W 550.67'

BLOCK 3

N82°42'05"E 479.09'

S89°23'27"E 578.73'

N19°44'58"W 241.11'

N18°14'48"E 881.92'

S88°42'30"W 1237.34'

THE OVERLOOK AT
BUNKER RANCH, LLC
CALLED 18.250 ACRES
DOC. NO. 20061246
O.P.R.H.C.T.

ANNA MARIE WIDEN SPEIR, ET AL
CALLED 603.70 ACRES
VOL. 1734, PG. 427
O.P.R.H.C.T.

NOTES:

1. THE BASIS OF BEARINGS SHOWN
HEREON IS THE TEXAS COORDINATE
SYSTEM, NAD 83(2012A), SOUTH
CENTRAL ZONE, UTILIZING THE LEICA
SMARTNET CONTINUALLY OPERATING
REFERENCE NETWORK.



Civil & Environmental Consultants, Inc.

3711 South MoPac Expressway - Building 1, Suite 550 - Austin, TX 78746

Texas Registered
Surveying Firm 10194419

Ph: 512.439.0400 · Fax: 512.329.0096

www.cecinc.com

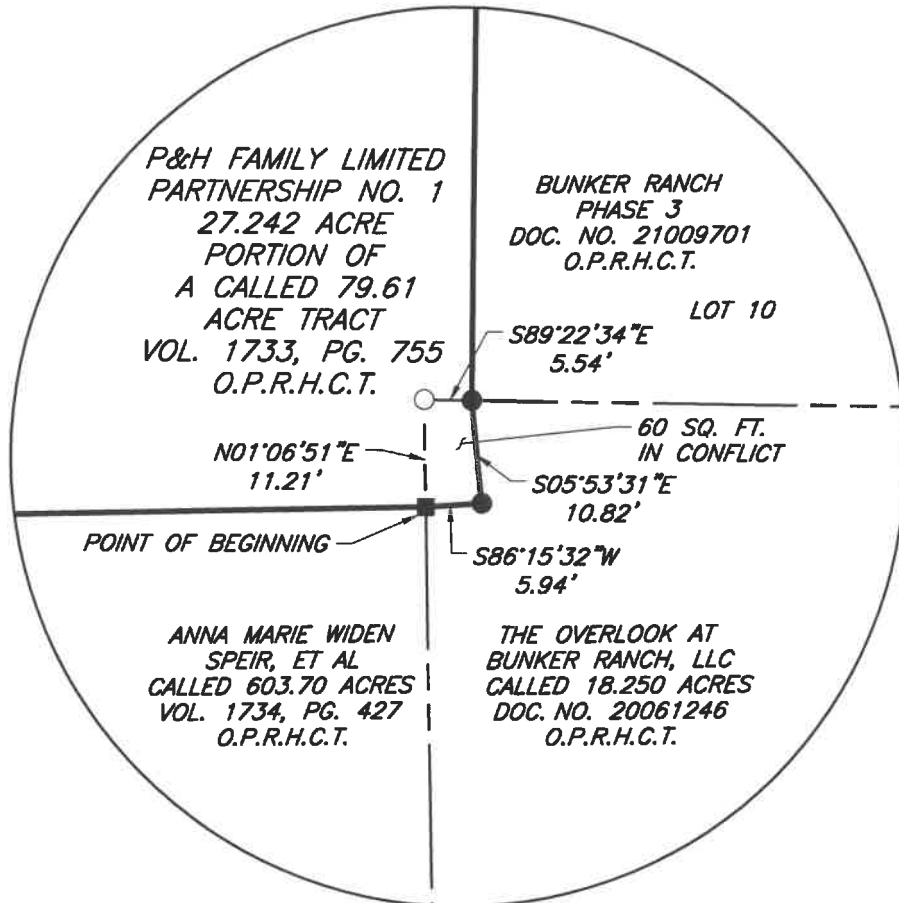
Texas Registered
Engineering Firm F-38

STEVE HARREN

CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

P & H TRACT
ZONING EXHIBIT (MF-CO)

DRAWN BY:	ESH	CHECKED BY:	FWF	APPROVED BY:	FWF	SHEET NO.:	487
DATE:	APRIL, 2021	DWG SCALE:	1"=250'	PROJECT NO.:	304-065	1 OF 2	



DETAIL "A"
SCALE 1" = 20'

LEGEND:

- 1/2" IRON ROD FOUND
- FENCE POST FOUND
- 1/2" IRON ROD SET W/ "CEC" CAP
- SUBJECT PROPERTY LINE
- - - - - ADJACENT PROPERTY LINE
- O.P.R.H.C.T. OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS
- DOC. NO. DOCUMENT NUMBER
- VOL. VOLUME
- PG. PAGE



Civil & Environmental Consultants, Inc.

3711 South MoPac Expressway · Building 1, Suite 550 · Austin, TX 78746

Ph: 512.439.0400 · Fax: 512.329.0096

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Surveying Firm 10194419

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Texas Registered
Engineering Firm F-38

STEVE HARREN

CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

P & H TRACT
ZONING EXHIBIT (MF-CO)

DRAWN BY:	ESH	CHECKED BY:	FWF	APPROVED BY:	FWF	SHEET NO.:	2 OF 2
DATE:	APRIL, 2021	DWG SCALE:	1"=250'	PROJECT NO:	304-065	488	

LEGAL DESCRIPTION

BEING A 50.779 ACRE TRACT OUT OF THE BENJAMIN F. HANNA SURVEY NO. 28, ABSTRACT NO. 222, SITUATED IN HAYS COUNTY, TEXAS, BEING A PORTION OF A CALLED 79.61 ACRE TRACT CONVEYED TO P & H FAMILY LIMITED PARTNERSHIP NO. 1 AS TRACT A BY DEED OF RECORD IN VOLUME 1733, PAGE 755, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS (O.P.R.H.C.T.); SAID 50.779 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING, at a ½ inch iron rod with “CEC” cap set at the northeast corner of the remainder of said 79.61 acre tract, being an interior “ell” corner of a called 4.25 acre tract described in Exhibit C of said deed recorded in Volume 1733, Page 755, O.P.R.H.C.T.;

THENCE, along the common line of said remainder of 79.61 acre tract and of said 4.25 acre tract, S00°25'57”W, a distance of 60.03 feet to a ½ inch iron rod with “CEC” cap set for the easterly common corner of said 78.021 acre tract and of said remainder of 79.61 acre tract and the **POINT OF BEGINNING**, hereof;

THENCE, along the common line of said 50.779 acre tract and partially of said 4.25 acre tract and then partially of a called 44.123 acre tract conveyed to the Elry and Barbara Hudson Living Trust by deed of record in Volume 2851, Page 80, O.P.R.H.C.T., S00°25'57”W, passing at distance of 39.91 feet, a ½ inch iron rod found at the westerly common corner of said 4.25 acre tract and of said 44.123 acre tract, continuing for a total distance of 652.82 feet to a ½ inch iron rod found at the westerly common corner of said 44.123 acre tract and of Bunker Ranch Phase 2, a subdivision of record in Document No. 20017197, O.P.R.H.C.T.;

THENCE, along the common line of said 50.779 acre tract and partially of said Bunker Ranch Phase 2 and then partially of Bunker Ranch Phase 3, a subdivision of record in Document No. 21009701, O.P.R.H.C.T., S00°21'25”W, passing at 629.14 feet, a ½ inch iron rod with “CEC” cap set at the westerly common corner of said Bunker Ranch Phase 2 and said Bunker Ranch Phase 3, continuing for a total distance of 1,179.81 feet to a ½ inch iron rod with “CEC” cap set at the easterly common corner of said 50.779 acre tract and of a 24.242 acre tract being a portion of the said 79.61 acre tract;

THENCE, along the common line of said 50.779 acre tract and of said 24.242 acre tract, the following two (2) courses and distances:

1. N89°23'27”W, a distance of 578.73 feet to a set ½ inch iron rod with “CEC” cap;
2. S82°42'05”W, a distance of 479.09 feet to a ½ inch iron rod with “CEC” cap set in the easterly line of a called 79.39 acre tract conveyed to P & H Family Limited Partnership No. 2 by deed of record in Volume 1733, Page 748, O.P.R.H.C.T., at the westerly common corner of said 50.779 acre tract and of said 24.242 acre tract;

THENCE, along the common line of said 50.779 acre tract and of said 79.39 acre tract, the following two (2) courses and distances:

1. N19°44'58”W, a distance of 807.25 feet to a found 8 inch cedar fence post;
2. N12°13'46”E, a distance of 1,128.80 feet to a ½ inch iron rod set at the westerly common corner of said 50.779 acre tract and said remainder of 79.61 acre tract;

50.779 ACRES
BUNKER RANCH
DRIPPING SPRINGS, TX

Item 10.

PROJECT NO.: 304-065
APRIL 1, 2021

THENCE, along the common line of said 50.779 acre tract and of said remainder of 79.61 acre tract, N88°43'55"E, 1,100.12 feet to the **POINT OF BEGINNING**, and containing 50.779 acres (2,211,955 square feet) of land, more or less.

THE BASIS OF BEARING OF THIS SURVEY IS TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NSRS 2011(2012A), UTILIZING THE LEICA SMARTNET CONTINUALLY OPERATING REFERENCE NETWORK.

Witness my hand and seal this 1st day of April, 2021.



Frank William Funk, R.P.L.S. 6803
Civil & Environmental Consultants, Inc.
3711 S. MoPac Expressway, Building 1, Suite 550
Austin, TX 78746
Texas Registered Surveying Firm No. 10194419



PATRIOT ERECTORS, LLC
 CALLED 36.802 ACRES
 DOC. NO. 18016400
 O.P.R.H.C.T.

MIGUEL SILVA AND ANGELICA SILVA
 CALLED 49.98 ACRES
 DOC. NO. 15020907
 O.P.R.H.C.T.

P&H F
 LIMI
 Item 10.
 PARTNERSHIP
 NO. 1 & NO. 2
 CALLED 4.25 ACRE
 VOL. 1733,
 PG. 748
 VOL. 1733,
 PG. 755
 O.P.R.H.C.T.

P&H FAMILY
 LIMITED PARTNERSHIP NO. 1
 REMAINDER OF A
 CALLED 79.61
 ACRE TRACT
 VOL. 1733, PG. 755
 O.P.R.H.C.T.

P&H FAMILY
 LIMITED
 PARTNERSHIP
 NO. 2
 CALLED 79.39
 ACRES
 VOL. 1733,
 PG. 748
 O.P.R.H.C.T.

50.779 ACRES
 (2,211,955 SQUARE FEET)

P&H FAMILY
 LIMITED PARTNERSHIP NO. 1
 A PORTION OF A CALLED
 79.61 ACRE TRACT
 VOL. 1733, PG. 755
 O.P.R.H.C.T.

ELRY AND BARBARA
 HUDSON LIVING TRUST
 CALLED 44.123 ACRES
 VOL. 2851, PG. 80
 O.P.R.H.C.T.



NORTH

SCALE IN FEET



MATCH LINE SEE SHEET 2

THE BASIS OF BEARINGS SHOWN HEREON IS THE
 TEXAS COORDINATE SYSTEM, NSRS 2011(2012A),
 SOUTH CENTRAL ZONE, UTILIZING THE LEICA SMARTNET
 CONTINUALLY OPERATING REFERENCE NETWORK.

N88°43'55"E 1100.12'

POINT OF BEGINNING

39.91'

S00°25'57"W 60.03'

N12°13'46"E 1128.80'

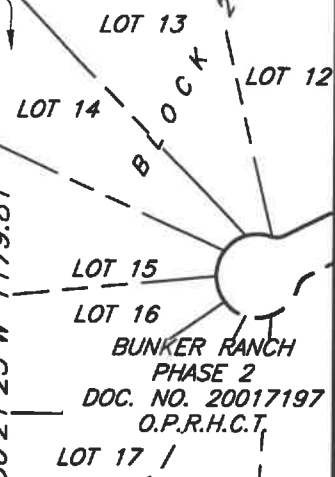
N19°44'58"W 807.25'

612.91'

629.14'

S00°21'25"W 1179.81'

550.67'



P:\300-000\304-065\Survey\Draw\304-065-SY01 P AND H EXHIBIT NORTH HALF.dwg EXHIBIT SHEET 1 OF 2 LS:(04/01/2021 - funk) - LP: 4/1/2021 3:23 PM



Civil & Environmental Consultants, Inc.

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STEVE HARREN

CITY OF DRIPPING SPRINGS,
 HAYS COUNTY, TEXAS

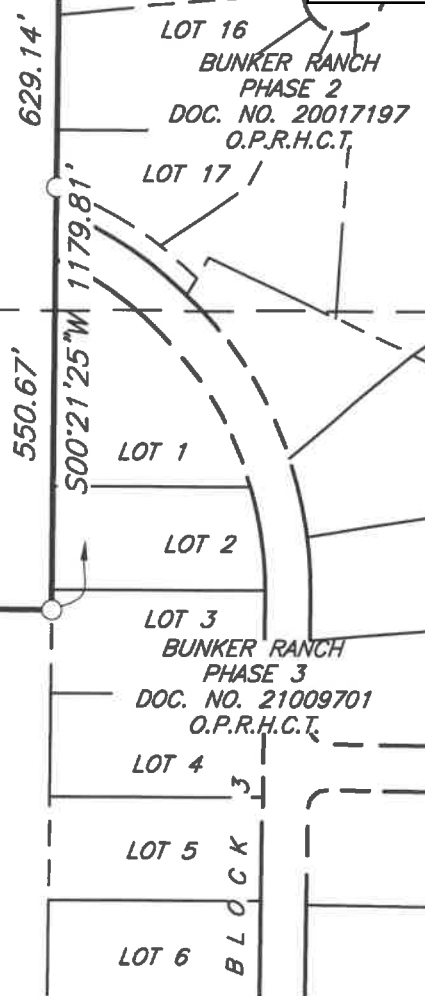
P & H TRACT
 ZONING EXHIBIT (SF-2)

DRAWN BY:	ESH	CHECKED BY:	FWF	APPROVED BY:	FWF	SHEET NO.:	1 OF 2
DATE:	APRIL, 2021	DWG SCALE:	1"=250'	PROJECT NO:	304-065	491	

50.779 ACRES
(2,211,955 SQUARE FEET)

TRACT 1
P&H FAMILY
LIMITED PARTNERSHIP NO. 1
A PORTION OF A CALLED
79.61 ACRE TRACT
VOL. 1733, PG. 755
O.P.R.H.C.T.

MATCH LINE SEE SHEET 1



P&H FAMILY
LIMITED PARTNERSHIP
NO. 2
CALLED 79.39 ACRES
VOL. 1733, PG. 748
O.P.R.H.C.T.

P&H FAMILY
LIMITED PARTNERSHIP NO. 1
27.242 ACRE PORTION OF A
CALLED 79.61 ACRE TRACT
VOL. 1733, PG. 755 O.P.R.H.C.T.



NORTH

SCALE IN FEET



LEGEND:

- 1/2" IRON ROD FOUND
- FENCE POST FOUND
- 1/2" IRON ROD SET W/ "CEC" CAP

————— SUBJECT PROPERTY LINE

- - - - - ADJACENT PROPERTY LINE

O.P.R.H.C.T. OFFICIAL PUBLIC RECORDS, HAYS COUNTY, TEXAS

DOC. NO. DOCUMENT NUMBER

VOL. VOLUME

PG. PAGE

THE BASIS OF BEARINGS SHOWN
HEREON IS THE TEXAS COORDINATE
SYSTEM, NSRS 2011(2012A), SOUTH
CENTRAL ZONE, UTILIZING THE LEICA
SMARTNET CONTINUALLY OPERATING
REFERENCE NETWORK.



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Engineering Firm F-38

STEVE HARREN

CITY OF DRIPPING SPRINGS,
HAYS COUNTY, TEXAS

P & H TRACT
ZONING EXHIBIT (SF-2)

DRAWN BY:	ESH	CHECKED BY:	FWF	APPROVED BY:	FWF	SHEET NO.:	2 OF 2
DATE:	APRIL, 2021	DWG SCALE:	1"=250'	PROJECT NO.:	304-065	492	

P:\300-000\304-065\Survey\Drawings\304-065-SV01 P AND H EXHIBIT NORTH HALF.dwg EXHIBIT SHEET 2 OF 2 LS:(04/01/2021 - ffunk) - LP: 4/1/2021 3:23 PM



STAFF REPORT
City of Dripping Springs
 PO Box 384
 511 Mercer Street
 Dripping Springs, TX 78620

Submitted By: Laura Mueller, City Attorney

Planning & Zoning Commission Meeting Date: April 27, 2021

Agenda Item Wording: **Discuss and consider recommendations on amendments for the Certificate of Appropriateness Process and Mobile Food Vendors in the Mercer Street Historic District.**

Agenda Item Requestor: Planning & Zoning Commission

Summary/Background: HPC asked Staff to work on the Certificate of Appropriateness (COA) process for Mobile Food Vendors in the Historic District. We created a committee to discuss the possible options related to process and the substance of the Mobile Food Vendor ordinance as it applies to the Historic Districts and COAs generally. The first step in amending the ordinance was for the P&Z Commission initiate the zoning amendment process pursuant to 2.29 of the Zoning Ordinance (Chapter 30, Exhibit A). They initiated that process on March 23, 2021. The newspaper notice for possible amendments was sent to the Newspaper on March 26, 2021. Flyers were created for Mercer Street businesses and were mailed and hand delivered where possible. The flyers contained the meeting dates for HPC, P&Z, and City Council as well as the public notice. A banner was also placed on the City's website advertising these meetings/public hearings.

HPC voted for the procedural option of city council being the body that would handle appeals from HPC denials of COAs. HPC further recommended that if a COA was denied unanimously by the HPC that the city council would need a super majority to reverse that decision. For the substantive option they voted to allow the Mobile Food Vendors but with approved screening by the HPC in order to get the COA. Drafts of all of the different options have been uploaded to the agenda.

Options for Consideration:

1. Procedural (*Chapter 30, Exhibit A Zoning Ordinance, Section 4.2.15 Application for certificate of appropriateness; application for alternative exterior design standards; review procedure; appeals*):
 - a. No change.

- b. Limit appeal process for Certificates of Appropriateness to direct to City Council review. This would mean an individual can appeal a Historic Preservation Commission COA denial to City Council. City Council makes the final decision.
 - c. Limit City Council review by requiring supermajority if denial by HPC is unanimous.
2. Substantive (*Chapter 30, Sections 30.05.032 & 30.05.037; Chapter 30, Exhibit A Zoning Ordinance, Section 4; Division 2: Historic Preservation*):
- a. Make no change while the overall rewrite is underway. The Planning Department is rewriting the entire Zoning Code and can include these types of changes to its overall analysis.
 - b. Prohibit all permanent mobile food vendors from Mercer Street.
 - c. Prohibit all permanent mobile food vendors from 100 feet of Mercer Street.
 - d. Require all Mobile Food Vendors to be screened from the right-of-way.
 - e. Remove requirement of Certificate of Appropriateness from the review of Mobile Food Vendors in Mercer Street and Hays Street Historic Districts but require approval of Historic Preservation Officer when reviewing the Conditional Use Permit.

Any other options proposed by P&Z could also be considered.

Keenan Smith also had recommendations as the consultant advising the Historic Preservation Commission and as the individual who reviews COA applications.

- **COA Procedural** (COA Procedural draft.docx):
 - Recommended.
 - This is a needed “fix” to COA Appeal process.
- **MFV Prohibition** (MFV.Prohibition.Ord.docx):
 - Recommended.
 - This alternative is most clear and enforceable, but most draconian.
- **MFV Prohibition (100 ft. zone)** (MFV.Prohibition.100 ft.Ord.docx):
 - Recommended.
 - This alternative (compromise) is also clear and enforceable, but creates “winners and losers.”
 - This handling is similar to Downtown Parking- some properties have the potential to have a Mobile Food Vendor while others would not.
- **MFV Screening** (MFV.Screening.Ord.Draft.docx):
 - Not Recommended.
 - Administrative and Staff Case Review Difficult
 - “What’s Acceptable Screening?” (purely subjective)

- “Every New MFV = New Screening Problem” w/new Review and COA
- "Perpetuates the Problem" ... reopens the issue of proper screening and placement each time.
- “Cure Worse Than The Disease” (ugly, obtrusive screening solutions could likely be worse than MFVs)
- "Prohibitively Expensive" (costs to the MFV or Property Owner)
- "Invisible MFVs" will not be successful and contribute to Mercer (the idea of Mobile Food Vendors is to attract diners which would not happen if they are hidden)
- In light of all the above, constitutes a "De Facto Prohibition" but with a longer, more arduous review.

Commission Recommendations: HPC and P&Z recommended looking into the ordinances related to Mobile Food Vendors in the Historic District and the COA process.

Recommended Commission Actions: Make recommendations on Procedural and Substantive Changes to City Council.

Attachments: Staff Report; Current Ordinance Provisions, Historic Preservation Officer-Keenan Smith Presentation.

Next Steps/Schedule: Proposed: Newspaper Publication on April 1, 2021.
 Planning and Zoning Commission on April 27, 2021.
 City Council on May 11, 2021.



Mobile Food Vendors on Mercer Street

Certificate of Appropriateness Appeal Process

Current Process

COA is denied by Historic Preservation Commission

Applicant Appeals



P&Z denies COA

Applicant Appeals



City Council makes final determination.

Proposed Process

COA is denied by Historic Preservation Commission

Applicant Appeals



City Council makes final determination.

Certificate of Appropriateness Appeal Process-Proposed

- ▶ Appeals go straight to City Council
- ▶ Unanimous Denial by HPC would require supermajority of City Council to overrule denial

“Unanimously Denied by Commission: If commission unanimously recommends denial, approval by the city council shall require an affirmative vote by a two-thirds majority of those present and voting.”

Mobile Food Vendors on Mercer Street-Current Ordinance

- ▶ Historic Preservation Commission Reviews Certificate of Appropriateness for Mobile Food Vendor
 - ▶ “complementary extension, or outlet, of a brick-and-mortar restaurant or business”
 - ▶ Meets other historic district requirements for Certificate of Appropriateness
 - ▶ Can only operate during hours of main business operation
 - ▶ Requires Conditional Use Permit

**HISTORIC PRESERVATION MANUAL
CERTIFICATE OF APPROPRIATENESS REVIEW**

Date: Month, Day, Year

Project: **EXAMPLE PROJECT**
Street Address
Dripping Springs, TX 78620

Applicant: (Applicant)

Historic District: (Mercer Street / Old Fitzhugh Road / Hays Street)

Base Zoning: SF-1 / SF-4 / SF-5 / LR / CS / GUI

Proposed Use: (Shops, Restaurant, Offices, Residential, etc)

Submittals: Current Photograph Concept Site Plan Exterior Elevations
 Color & Materials Samples
 Sign Permit Application (if applicable)
 Building Permit Application (if applicable)
 Alternative Design Standards (if applicable)

The following review has been conducted for the City of Dripping Springs to determine compliance and consistency with the City of Dripping Springs CODE OF ORDINANCES, Title 2 BUILDING AND DEVELOPMENT REGULATIONS, Chapter 24, BUILDING REGULATIONS, Article 24.07: HISTORIC PRESERVATION, Section 24.07.014: “CRITERIA FOR ISSUANCE OF CERTIFICATE OF APPROPRIATENESS.”

Project Type & Description:

Preservation Rehabilitation Restoration Reconstruction Protection & Stabilization

Mobile Food Vendors on Mercer Street-Options

- ▶ No change while the overall rewrite is underway. The Planning Department is rewriting the entire Zoning Code and can include these types of changes to its overall analysis.
- ▶ Prohibit all permanent mobile food vendors from Mercer Street.
- ▶ Prohibit all permanent mobile food vendors from 100 feet of Mercer Street.
- ▶ Require all Mobile Food Vendors to be screened from the right-of-way.
- ▶ Remove requirement of Certificate of Appropriateness from the review of Mobile Food Vendors in Mercer Street but require approval of Historic Preservation Officer when reviewing the Conditional Use Permit.



Preserve
Dripping Springs
Development Code Update

Check out
Preserve Dripping Springs!

Preserve Dripping Springs is the process to review and update the current Zoning Code with the goal to preserve and enhance the character and charm of Dripping Springs!

Click [here](#) for more details and to see how you can give input through our Development Code Survey!

Mobile Food Vendors on Mercer Street-No Change

- ▶ No change while the overall rewrite is underway. The Planning Department is rewriting the entire Zoning Code and can include any changes to its overall analysis.



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Mobile Food Vendors on Mercer Street- Prohibit All Food Vendors on Mercer Street

- ▶ Prohibit all permanent mobile food vendors from Mercer Street.



Mobile Food Vendors on Mercer Street- Prohibit All Food Vendors on Mercer Street within 100 feet

- ▶ Prohibit all permanent mobile food vendors from 100 feet of Mercer Street.

**Mercer Street Historic District:
Proposed Mobile Food Vendor Prohibition Zone:**



100' from Mercer Street Frontage ROW

Mobile Food Vendors on Mercer Street- Require Screening for Food Vendors on Mercer Street

- ▶ Require all Mobile Food Vendors to be screened from the right-of-way.
 - Less visible
 - Screening: masonry or wood with landscaping elements, 6 to 8 ft
 - match the current distinguishing original qualities or character of the adjacent building or structure
 - distinguishing original qualities or character of a building, structure, object, or site and its environment shall not be destroyed by the placement of a mobile food vendor
 - alternative exterior design standards
 - Hays Street and Old Fitzhugh remain unchanged



Mobile Food Vendors on Mercer – Remove COA requirements from MFV on Mercer Street

Remove requirement of Certificate of Appropriateness from the review of Mobile Food Vendors in Mercer Street but require approval of Historic Preservation Officer when reviewing the Conditional Use Permit.

- No COA would be required for a Mobile Food Vendor on Mercer Street as a temporary addition to a business
- CUP would still be required



Historic Preservation Commission Recommendation

- ▶ recommend an amendment the COA procedural process to limit the appeal process to go directly to City Council and to require a super majority from City Council if unanimously denied by Historic Preservation Commission.
- ▶ recommend an amendment to the COA substantive process to require all Mobile Food Vendors to be screened from the right-of-way of Mercer Street.

Staff Recommendation-Procedural

- ▶ Approve Procedural changes:
 - ▶ Appeals go straight to City Council
 - ▶ Unanimous Denial by HPC would require supermajority of City Council to overrule denial



Staff Recommendation- Substantive

- ▶ Wait to make change in the Zoning Rewrite
- ▶ In the alternative:
 - ▶ approve removal of COA requirement because mobile food vendors are temporary additions and do not affect the structure of the buildings





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Questions?

Certificate of Appropriateness Ordinance Drafts-Procedural

1. (f) Appeal to ~~planning and zoning commission~~ city council. An applicant for a certificate of appropriateness dissatisfied with the action of the commission relating to the issuance or denial of a certificate of appropriateness shall have the right to appeal to the city council ~~planning and zoning commission~~ within thirty (30) days after receipt of notification of such action. The ~~planning and zoning commission~~ city council shall conduct a hearing within thirty (30) days of receipt of a written letter of appeal. The city council ~~planning and zoning commission~~ shall give notice to the applicant by mail. The ~~planning and zoning commission~~ city council shall make its decision within thirty (30) days of the hearing.

~~(g) — Appeal to city council. An applicant for a certificate of appropriateness dissatisfied with the action of the planning and zoning commission relating to the issuance or denial of a certificate of appropriateness shall have the right to appeal to the city council within thirty (30) days after receipt of notification of such action. The city council shall conduct a hearing within thirty (30) days of receipt of a written letter of appeal. The city council shall give notice to the applicant by mail. The city council shall make its decision within thirty (30) days of the hearing.~~

2. (f) Appeal to ~~planning and zoning commission~~ city council. An applicant for a certificate of appropriateness dissatisfied with the action of the commission relating to the issuance or denial of a certificate of appropriateness shall have the right to appeal to the city council ~~planning and zoning commission~~ within thirty (30) days after receipt of notification of such action. The ~~planning and zoning commission~~ city council shall conduct a hearing within thirty (30) days of receipt of a written letter of appeal. The city council ~~planning and zoning commission~~ shall give notice to the applicant by mail. The ~~planning and zoning commission~~ city council shall make its decision within thirty (30) days of the hearing.

(g) Unanimously Denied by Commission: If commission unanimously recommends denial, approval by the city council shall require an affirmative vote by a two-thirds majority of those present and voting.

Division 2. Permits, Prohibitions, and Exceptions

Sec. 30.05.032 Permit required

- (a) It is an offense for a person to operate a mobile food establishment in the city limits without a mobile food vendor permit.
- (b) It is an offense for a person to conduct sales at a mobile food establishment in the city limits without a mobile food vendor permit.
- (c) It is an offense for a person to erect, install or park a mobile food establishment in the city limits without a mobile food vendor permit.
- (d) (1) It is an offense for a person to erect, install, or park a mobile food establishment within the boundaries of the Mercer Street ~~or Hays Street~~ historic districts, as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances, unless (4) ~~the~~ location or operation of the mobile food establishment is for a special event or city-sponsored event, for which the mobile food vendor is included in the permit application for which the event organizer must obtain a permit (see Code of Ordinances [section 6.02.071](#)).; ~~or~~

~~(2) — The mobile food vendor is a complementary extension, or outlet, of a brick and mortar restaurant or business and the applicant of a mobile food vendor applies for and is granted a certificate of appropriateness under the requirements of chapter, 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and applies for and is granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted. The mobile food vendor shall only operate during the operating business hours of the brick and mortar business of which the mobile food vendor is an extension or outlet.~~

(2) It is an offense for a person to erect, install, or park a mobile food establishment within the boundaries of the Hays Street historic district, as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances, unless:

(A) The location or operation of the mobile food establishment is for a special event or city-sponsored event, for which the mobile food vendor is included in the permit application for which the event organizer must obtain a permit (see Code of Ordinances [section 6.02.071](#)).; or

(B) The mobile food vendor is a complementary extension, or outlet, of a brick-and-mortar restaurant or business and the applicant of a mobile food vendor applies for and is granted a certificate of appropriateness under the requirements of chapter, 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and applies for and is granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted. The mobile food vendor shall only operate during the

operating business hours of the brick-and-mortar business of which the mobile food vendor is an extension or outlet.

(e) Applicants of mobile food vendors (longer than 10 days) or mobile food courts wishing to locate in the Old Fitzhugh historic district as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances must apply for and be granted a certificate of appropriateness under the requirements of chapter 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and apply for and be granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted.

Division 2. Permits, Prohibitions, and Exceptions

Sec. 30.05.032 Permit required

- (a) It is an offense for a person to operate a mobile food establishment in the city limits without a mobile food vendor permit.
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- (d) (1) It is an offense for a person to erect, install, or park a mobile food establishment within the boundaries of the Mercer Street ~~or Hays Street~~ historic districts, as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances, unless ~~(1)†~~

(A)~~the location or operation of the mobile food establishment is for a special event or city-sponsored event, for which the mobile food vendor is included in the permit application for which the event organizer must obtain a permit (see Code of Ordinances [section 6.02.071](#)).~~†

(2) The mobile food vendor is a complementary extension, or outlet, of a brick-and-mortar restaurant or business and the applicant of a mobile food vendor applies for and is granted a certificate of appropriateness under the requirements of chapter, 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and applies for and is granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A mobile food vendor under this subsection may not be located within 100 feet of Mercer Street measured from the center line of Mercer Street within the historic district. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted. The mobile food vendor shall only operate during the operating business hours of the brick-and-mortar business of which the mobile food vendor is an extension or outlet.

(2) It is an offense for a person to erect, install, or park a mobile food establishment within the boundaries of the Hays Street historic district, as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances, unless:

(A)The location or operation of the mobile food establishment is for a special event or city-sponsored event, for which the mobile food vendor is included in the permit application for which the event organizer must obtain a permit (see Code of Ordinances section 6.02.071).; or

(B) The mobile food vendor is a complementary extension, or outlet, of a brick-and-mortar restaurant or business and the applicant of a mobile food vendor applies for and is granted a certificate of appropriateness under the requirements of chapter, 24, article 24.07

[chapter 30, exhibit A, section 4, division 2] of the city code and applies for and is granted a conditional use permit under the requirements of chapter 30, exhibit A: zoning, section 3.17 of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted. The mobile food vendor shall only operate during the operating business hours of the brick-and-mortar business of which the mobile food vendor is an extension or outlet.

(e) Applicants of mobile food vendors (longer than 10 days) or mobile food courts wishing to locate in the Old Fitzhugh historic district as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances must apply for and be granted a certificate of appropriateness under the requirements of chapter 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and apply for and be granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted.

Division 2. Historic Preservation

* * *

4.2.14.1 Criteria for issuance of certificate of appropriateness; mobile food vendors; Mercer Street Historic District

(a) In considering an application for a certificate of appropriateness for a mobile food vendor in the Mercer Street Historic District who will be on site ten (10) or more days, the commission shall consider the visibility of the mobile food vendor from Mercer Street. Priority will be given to less visible options for the mobile food vendor either by placement on the lot or through appropriate screening. Screening shall be a solid masonry or wood screening wall of not less than six feet (6'), nor more than eight feet (8'), in height; and shall be erected in conjunction with landscaping elements that match the current distinguishing original qualities or character of the adjacent building or structure. Any screening in the front of any lot shall be a solid masonry or wood screening fence of three feet (3') and shall be erected in conjunction with landscaping elements that match the current distinguishing original qualities or character of the adjacent building or structure.

(b) Every reasonable effort shall be made to adapt the property in a manner which requires minimal alteration of the building, structure, object, or site and its environment.

(c) The distinguishing original qualities or character of a building, structure, object, or site and its environment shall not be destroyed by the placement of a mobile food vendor. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.

(d) An application for a certificate of appropriateness for a mobile food vendor in the Mercer Street Historic District may be for alternative exterior design standards as described in this Article.

(e) Applications for food trucks in the Hays Street Historic District and Old Fitzhugh Historic District are not subject to this section.

Division 2. Permits, Prohibitions, and Exceptions

Sec. 30.05.009 Provisions

- (a) All mobile food vendors shall comply with all city adopted health regulations regarding:
 - (1) Time, temperature, plumbing, operation and maintenance requirements for mobile food establishments;
 - (2) If a mobile food vendor does not have a self-contained kitchen, as determined by the health authority, then the mobile food vendor must have a central preparation facility;
 - (3) All requirements prohibiting alteration, removal, attachments, placement or change in, under, or upon the mobile food establishment that would prevent or otherwise reduce ready mobility of the mobile food establishment unit.
- (b) All mobile food vendors shall acquire a food-handling permit from the city; but rules are more substantial, as deemed appropriate by the city, if vendor is at a same location for at least 10 days out of a month.
- (c) If any mobile food vendor remains at a same location for longer than 10 consecutive days, a conditional use permit is required. If after 10 days, a mobile food vendor wishes to relocate to a different location within the city, the vendor may do so for an additional 5 days. In any given month, a vendor may not locate within the city limits for more than 15 days without a CUP per the requirements in this section.
- (d) All mobile food vendor courts with multiple vendors set up shall provide city-approved portable restrooms for customers.
- (e) The city shall require a mobile food vendor to come, on an annual basis, to a location designated by the health authority for an inspection.
- (f) The city may require that mobile food vendors found to violate this section shall come for a reinspection at a location designated by the city.
- (g) All mobile food vendors are required to store all food and supplies within the mobile unit.
- (h) All mobile food vendors are required to have displayed on the mobile unit the proper city-issued permits and licenses in order to operate within the city.
- (i) All mobile food vendors are permitted to operate only in office, GUI, industrial, public recreation, public park and reserve, and commercial and retail zoning districts.
- (j) All mobile food vendors are prohibited from operating between the hours of 11:00 p.m. and 6:00 a.m.

(k) All mobile food vendors are prohibited from being located within 150 feet of a restaurant as defined in [chapter 30, exhibit A, section 1.6](#) of the city's code, measured from property line of the mobile food vendor to the property line of the restaurant, unless granted permission from all said restaurants. The noise level of mechanical equipment or outside sound equipment used in association with any mobile food vendor may not exceed 70 decibels when measured at the property line.

(l) A drive-in service is not permitted for any mobile food vendor.

(m) All mobile food vendor lighting shall comply with the city's lighting ordinance. Any additional lighting for any of the mobile food vendor's signs shall comply with the city's lighting ordinance.

(n) All mobile food vendors are limited to signs attached to the exterior of the mobile vendor. The signs shall:

- (1) Be secured and mounted flat against the mobile unit;
- (2) Not project more than six inches from the exterior of the mobile unit; and
- (3) Not exceed 50% of the side of the surface area of the vehicle, trailer, etc., to which it is affixed.

(o) All mobile food vendors shall comply with the federal Americans with Disabilities Act.

(p) All mobile food vendors shall be located in areas where they shall have allowed access to three parking spaces, including off-street and on-street parking, or the reasonable equivalent, each. Parking spaces that are required for another business shall not be counted towards the required spaces for the mobile food vendor unless authorized by the business and approved by the city. Parking spaces shall comply with the city's parking standards found in the Code of Ordinances, chapter 30, exhibit A: zoning ordinance, section 5.3, including ADA standards. Mobile food vendors located in the Mercer Street historic district ~~under the requirements of [section 30.05.032\(d\)](#) of this article~~ are exempt from this provision.

(q) A mobile food vendor (longer than 10 days) or a mobile food court may request to have amplified sound/music as part of the CUP application. Staff will review the appropriateness of the request on a case-by-case basis and determine conditions in the CUP.

* * *

Sec. 30.05.032 Permit required

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(c) It is an offense for a person to erect, install or park a mobile food establishment in the city limits without a mobile food vendor permit.

(d) It is an offense for a person to erect, install, or park a mobile food establishment within the boundaries of the ~~Mercer Street~~ or Hays Street historic district, as defined in section 24.07.032 [chapter 30, exhibit A, section 4.3.2] of the Code of Ordinances, unless:

(A) The location or operation of the mobile food establishment is for a special event or city-sponsored event, for which the mobile food vendor is included in the permit application for which the event organizer must obtain a permit (see Code of Ordinances section 6.02.071).; or

(B) The mobile food vendor is a complementary extension, or outlet, of a brick-and-mortar restaurant or business and the applicant of a mobile food vendor applies for and is granted a certificate of appropriateness under the requirements of chapter, 24, article 24.07 [chapter 30, exhibit A, section 4, division 2] of the city code and applies for and is granted a conditional use permit under the requirements of chapter 30, exhibit A: zoning, section 3.17 of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted. The mobile food vendor shall only operate during the operating business hours of the brick-and-mortar business of which the mobile food vendor is an extension or outlet.

(e) Applicants of mobile food vendors (longer than 10 days) or mobile food courts wishing to locate in the Old Fitzhugh historic district as defined in section 24.07.032 [[chapter 30, exhibit A, section 4.3.2](#)] of the Code of Ordinances must apply for and be granted a certificate of appropriateness under the requirements of chapter 24, article 24.07 [[chapter 30, exhibit A, section 4, division 2](#)] of the city code and apply for and be granted a conditional use permit under the requirements of [chapter 30, exhibit A: zoning, section 3.17](#) of the city code. A conditional use permit shall not be granted prior to a certificate of appropriateness being granted.



STAFF REPORT
City of Dripping Springs
PO Box 384
511 Mercer Street
Dripping Springs, TX 78620

Submitted By: Laura Mueller, City Attorney

Council Meeting Date: April 26, 2021

Agenda Item Wording: **Discuss and consider recommendations related to adding an additional monthly meeting for the consideration of plats for a total of two meetings a month.**

Agenda Item Requestor: City Staff

Summary/Background: As an update to process for the City Council and the Planning and Zoning Commission, staff is recommending a change to add a Planning and Zoning Commission meeting. The new platting and site plan requirements established by the Legislature in 2019 (shot clock) is putting a strain on staff and applicants where we only have one Planning and Zoning Commission per month. This problem is exacerbated by the exponential growth in this area including greater numbers of both site plans and plat requests. We are proposing a second meeting to P&Z next month in order to allow for additional plat reviews at the second meeting to assist with these issues. This change will also necessitate that the City Council meetings be spread out by 2 weeks between meetings will assist with this proposed change.

The proposal is to have Planning and Zoning Commission meetings on the 2nd and 4th Tuesdays of the month. The 2nd Tuesday of the month would be for all cases. The 4th Tuesday of the month would solely be for Plats that have the 30 day deadline. These meetings would be shorter and would only be for the objective review of Plats as to whether they meet code and can be approved or does not meet code and will be disapproved.

Commission Recommendations: N/A

Recommended Commission Actions: Approve recommendation of two meetings a month.

Attachments: Staff report. Schedule.

Next Steps/Schedule: P&Z and City Council changes presented at City Council in May. Changes to Submittal Calendar and other related calendars will also need to be updated. The change in dates would likely begin in June.

Planning and Zoning Commission Dates for Plats

Submission for Administrative Completeness - submit by:	Filing Date	Review Date	Property Owner Notice/ Newspaper Submittal Deadline*
4/2/2021	4/12/2021	Tuesday, May 11, 2021	Friday, April 16, 2021
4/16/2021	4/26/2021	Tuesday, May 25, 2021	Friday, April 30, 2021
4/30/2021	5/10/2021	Tuesday, June 8, 2021	Friday, May 14, 2021
5/14/2021	5/24/2021	Tuesday, June 22, 2021	Friday, May 28, 2021
6/4/2021	6/14/2021	Tuesday, July 13, 2021	Friday, June 18, 2021
6/18/2021	6/28/2021	Tuesday, July 27, 2021	Friday, July 2, 2021
7/2/2021	7/12/2021	Tuesday, August 10, 2021	Friday, July 16, 2021
7/16/2021	7/26/2021	Tuesday, August 24, 2021	Friday, July 30, 2021
8/6/2021	8/16/2021	Tuesday, September 14, 2021	Friday, August 20, 2021
8/20/2021	8/30/2021	Tuesday, September 28, 2021	Friday, September 3, 2021
9/3/2021	9/13/2021	Tuesday, October 12, 2021	Friday, September 17, 2021
9/17/2021	9/27/2021	Tuesday, October 26, 2021	Friday, October 1, 2021
10/1/2021	10/11/2021	Tuesday, November 9, 2021	Friday, October 15, 2021
10/15/2021	10/25/2021	Tuesday, November 23, 2021	Friday, October 29, 2021
11/5/2021	11/15/2021	Tuesday, December 14, 2021	Friday, November 19, 2021
11/19/2021	11/29/2021	Tuesday, December 28, 2021	Friday, December 3, 2021

* This deadline is for notices to be sent to the newspaper. It will be posted the next thursday, which will be 19 day before the hearing.

City Council Meeting Dates

Item 12.

Meeting	City Council Meeting
1st	Tuesday, June 1, 2021
3rd	Tuesday, June 15, 2021
1st	Tuesday, July 6, 2021
3rd	Tuesday, July 20, 2021
1st	Tuesday, August 3, 2021
3rd	Tuesday, August 17, 2021
1st	Tuesday, September 7, 2021
3rd	Tuesday, September 21, 2021
1st	Tuesday, October 5, 2021
3rd	Tuesday, October 19, 2021
1st	Tuesday, November 2, 2021
3rd	Tuesday, November 16, 2021
1st	Tuesday, December 7, 2021
3rd	Tuesday, December 21, 2021

Planning and Zoning City Council Meeting Dates for Plats and All Cases

Item 12.

Submission for Administrative Completeness - submit by:	Filing Date	Meeting	Planning and Zoning	Type Of Meeting	Meeting	City Council
5/11/2021	5/11/2021	2nd	Tuesday, May 11, 2021	All Cases	1st	Tuesday, June 1, 2021
5/25/2021	5/25/2021	4th	Tuesday, May 25, 2021	Plats		
6/8/2021	6/8/2021	2nd	Tuesday, June 8, 2021	All Cases	1st	Tuesday, July 6, 2021
6/22/2021	6/22/2021	4th	Tuesday, June 22, 2021	Plats		
7/13/2021	7/13/2021	2nd	Tuesday, July 13, 2021	All Cases	1st	Tuesday, August 3, 2021
7/27/2021	7/27/2021	4th	Tuesday, July 27, 2021	Plats		
8/10/2021	8/10/2021	2nd	Tuesday, August 10, 2021	All Cases	1st	Tuesday, September 7, 2021
8/24/2021	8/24/2021	4th	Tuesday, August 24, 2021	Plats		
9/14/2021	9/14/2021	2nd	Tuesday, September 14, 2021	All Cases	1st	Tuesday, October 5, 2021
9/28/2021	9/28/2021	4th	Tuesday, September 28, 2021	Plats		
10/12/2021	10/12/2021	2nd	Tuesday, October 12, 2021	All Cases	1st	Tuesday, November 2, 2021
10/26/2021	10/26/2021	4th	Tuesday, October 26, 2021	Plats		
11/9/2021	11/9/2021	2nd	Tuesday, November 9, 2021	All Cases	1st	Tuesday, December 7, 2021
11/23/2021	11/23/2021	4th	Tuesday, November 23, 2021	Plats		
12/14/2021	12/14/2021	2nd	Tuesday, December 14, 2021	All Cases	1st	Tuesday, January 4, 2022
12/28/2021	12/28/2021	4th	Tuesday, December 28, 2021	Plats		

Items moving to City Council Will only be heard on the 1st City Council Meeting of the month

Subdivision Project Name	City Limits / ETJ	Location	Description	Status
Driftwood Phase 3	ETJ	17901 RM 1826	1 lot subdivision	Waiting on the County
SUB2018-0038_Caliterra Ph 4 Sec 11_FP	ETJ	RR12 & FM 150	Subdivision of 108 Residential lots	Turned in Plat amendment adding additional ROW, Comments have been issued.
SUB2018-0061 Headwaters at Barton Creek_AP	ETJ	2401 E Hwy 290	Edits to metes and bounds error	Waiting on resubmittal/ everyone approved as of 6/25/2019
SUB2019-0017 Parten Ranch Amenity Center MP	ETJ	NW Corner of Two Creeks Lane and Parten Ranch Pkwy	1 Lot for amenity center	Waiting on the County
SUB2019-0023 Driftwood Golf & Ranch Club Phase. 1 CP	ETJ	10450 FM 967 N Side	42 Lot Subdivision on 59.14 acres	Gathering Signatures
SUB2019-0041 Headwaters Ph. 4 Sec. 6 CP	ETJ	Intersection of Headwaters Blvd and Hazy Hills Loop	4 Lot subdivision	Waiting on the County
SUB2019-0044 Caliterra Ph/2 Sec 7 Block F Lot 9 AP	ETJ	Peakside Circle	amended plat	waiting on resubmittal
SUB2019-0050 Driftwood Golf and Ranch Club Ph. 2 FP	ETJ	Thurman Roberts Way	57 SF lots, 3 Open Space, 4 Golf Course Lots, 8 ROW lots	Under Review
SUB2019-0062 Big Sky Ranch Phase 2 CP & FP	CL	Lone Peak Way	188 Single Family, Drainage, and Open Space lots	construction plans are being revised and are under review, waiting on resubmittal for the final plat
SUB2018-0055 Quik Trip #4133 Addition Minor Plat	CL	16460 Sawyer Ranch Rd	remaining portion of tract A of the Sawyer Springs Subdivision P.R.	waiting on resubmittal
SUB2020-0020 Polo Business Park East MP	etj	13550 US 290	1 lot subdivision to create a legal lot	Under Review
SUB2020-0027 Sawyer Ranch 33	CL	unaddressed, R95789	3 lot subdivision near 290 and Sawyer ranch	Under Review
SUB2020-0031 Heritage Construction Plans	CL	Sportsplex Drive (Heritage Development)	Construction Plans for the Heritage development	Waiting on Resubmittal
SUB2020-0047 Driftwood WW Extension	ETJ	Thurman Roberts Way	Propose two low pressure force mains, a raw wastewater line, wet well and valve vault	Waiting on Resubmittal
SUB2020-0048 611 Butler Ranch Road MP	ETJ	611 Butler Ranch Road	Subdividing 13.03 acres into 2 lots.	Approved with conditions
SUB2021-0002 Roger Hanks Parkway Extension	CL	Roger Hanks Parkway	3120 LF of Collector Roadway. The infrastructure includes all associated streets, grading, and water quality improvements.	Waiting on Resubmittal
SUB2021-0004 Driftwood phase 3 Minor revision	ETJ	Thurman Roberts Way	Adjusting Road and removing lots	Approval with conditions
SUB2021-0006 Treaty Oak MP	ETJ		Establish a lot	Under Review
SUB2021-0007 Headwaters phase 3-5 PP Minor revision	ETJ		Adjusting lots	Approved with conditions
SUB2021-0008 Driftwood Greeter House Road Widening	ETJ	Thurman Roberts Way	Widening the road near the greeter house	Waiting on Resubmittal
SUB2021-0009 Glass Business Park CP	CL	2650 W Hwy 290	Construction Plans for Glass Business Park	Waiting on Resubmittal
SUB2021-0016 Driftwood Club Core Phase 3 SP and CP	ETJ	Thurman Roberts Way	Project will be developed in a condominium regime with 9 detached residential unites and a parking lot. The site will be accessed via driveway that ties to a driveway that is a part of Driftwood Club Core Phase 2 that ties to Thurman Roberts Way.	Waiting on Resubmittal
SUB2021-0023 Bunker Ranch 3-4 Preliminary Plat Minor Revision	CL	2751 US 290	A revision to the approved Bunker Ranch Phase 3 and 4 Preliminary Plat to create a ROW reserve for the future connection of the Florio Tract and adjust affect	Under Review
SUB2021-0024 Crooked Oaks Amending Plat	ETJ	823 Post Oak Drive	Adjusting lot lines	Under Review
SUB2021-0025 102 Rose Drive Minor Plat	CL	102 Rose Drive	1 lot subdivision to create a legal lot	Under Review
SUB2021-0026 Bunker Ranch Phase 2-4 Construction Plans Minor Revision	CL	2751 US 290	A revision to the approved Buunker Ranch Phase 3 and 4 Construction Plans to follow the corresponding Preliminary Plat Minor Revision	Under Review
SUB2021-0027 Parten Ranch Phase 4 Construction Plans	ETJ	600 Two Creek Lane	Phase 4 consists of 73.84 acres with 87 single family lots, 1 utility lot, 4 drainage/open space lots and right of way.	Under Review

ADMINISTRATIVE APPROVAL PROJECTS				
Site Development Project Name	City Limits / ETJ	Location	Description	Status
SD2019-0006_Dog N Bone	CL	310 Old Fitzhugh Rd	Food Tractor and Site Improvements	Waiting on resubmittal
SD2019-0017 Storserv	ETJ	E Hwy 290	Self Storage facility	Approved w conditions
SD2019-0024 Jasons Deli	CL	165 Hargraves Dr	Restaurant	Waiting on resubmittal
SD2019-0025 Merrit Hill Country Amendment	CL	28725 RR 12	minor amendment	Waiting on resubmittal
SD2019-0036 Hart Lane Homes	ETJ	120 Hart Lane	3 SF homes	Waiting on resubmittal
SD2020-0006 Ghost Hill Ranch Phase 2	ETJ	31430 Ranch Road 12, Dripping Springs, Texas	Two Commercial Buildings	Approved with Conditions
SD2020-0016 100 N Canyonwood Dr	etj	100 N Canyonwood Dr	2 office buildings	Waiting on resubmittal
SD2020-0017 Home Depot TRC	cl	260 E Hwy 290	tool rental center	Under Review
SD2020-0024 421 Sportsplex Correction	cl	421 Sportsplex	adding retaining wall	Waiting on resubmittal
SD2020-0027 Velocity Credit Union	limited purpose district	Lot 1 Block E of Bush Ranch Phase 1 Revised Subdivision	Construction of an assisted living building, parking areas, water service line, on-site sewage facility, and storm water detention pond.	Waiting on resubmittal
SD2020-0029 Headwaters Phase II	CL	Kibo Ridge and Hwy 290	this project includes the construction of four 3-story apartment buildings, associated parking and drives, and utilities	Approved w/ Conditions
SD2020-0030 Howard Ranch Commercial	Cl	FM 150 and RR12	one 5. 110-sf general store/fueling station, two 10,400 sf retail stores, two 6,800-sf retail stores. One 17,600-sf retail store, and a 10,350-sf live/work building to be located on 7.391 acres	Waiting on resubmittal
SD2020-0031 ATX Drainage and Landscaping	ETJ	13400 Nutty Brown Road	construction of a landscape yard, associated 6.055 sqft office/warehouse and parking	Waiting on resubmittal
SD2020-0032 Big Sky Ranch Amenity Center	CL	Lone Peak Way	amenity center for Big Sky Ranch within Phase 2	Waiting on resubmittal
SD2020-0036 Arrowhead Ranch Amenity Center Revision	Cl	Arrowhead Ranch Blvd	Proposed Site Development for future arrowhead ranch amenity Center	Approved w/ conditions
SD2020-0040 Forbes Tract Revision	ETJ	14300 FM 1826	proposed revision would include switching from a bar ditch conveyance system to an underground drainage system	Approved w conditions
SD2020-0042 31300 RR 12 Vet Clinic	ETJ	31300 RR 12	permitting an existing gravel parking lot	Waiting on resubmittal
SD2020-0044 Founder Parking Lot Improvements	CL	419 Founders Park Rd	Install an asphalt parking area consisting on approximately 48 parking spaces within Founders Memorial Park.	Approved w/ Conditions
SD2020-0045 12 South	CL	4500 RR 12	8,000 Sq ft warehouse w associated parking and drainage	Waiting on resubmittal
SD2020-0047 Dripping Springs RV Resort	ETJ	3001 W US 290, Dripping Springs, TX 78620	333 RV lots with associated roadway and drainage. All RV lots to be paved.	Waiting on resubmittal
SD2020-0048 Patriots Hall of Dripping Springs	ETJ	3400 E US 290	New VFW Building with parking infrastructure and water quality	Approved w/ Conditions
SD2020-0049 Bannockburn Youth Building	ETJ	264 American Way	New +/- 7,250 sf building next to church for youth and children ministries and +/- 1,500 sf of paved walkway around the building	Approved w/ Conditions (Can begin Erosion controls)
SD2021-0001 Belterra Active Adult	ETJ	TBD	Multifamily development with associated parkig and utility improvements	Waiting on resubmittal
SD2021-0002 Driftwood Greeter House	ETJ	214 Thurman Roberts Way	2,100 sq-ft guard house adjacent to entrance gate into Driftwood Subdivision, small driveway connecting the northbound and southbound sides of Thurman Roberts Way, and 3 parking spaces.	Waiting on resubmittal
SD2021-0004 AAA Self-Storage Expansion	CL	2300 Hwy 290	Addition of 2 self-storage buildings, 50,000sqft and 20,400 sqft and connecting pavement	Waiting on resubmittal
SD2021-0005 Dripping Springs WWTP Expansion	CL	23127 FM 150 W	Expansion of the Wastewater treatment plant	Under Review
SD2021-0006 Driftwood Lift Station & Interim Phasing Plan	ETJ	11100 RM 967	Proposed 76 lf of 8" gravity wwl and lift station wet well designed with 5,000 gallon capacity as a storage basin for interim pump & haul operations.	Under Review
SD2021-0003 WTCPUA Sawyer Ranch 1340 Conversion	ETJ	Sawyer Rnach	The project includes operationnal modifications and approximately 6,200 linear feet of new 8" DIPwater main to replace an existing, aging line	Under Review

Development Code Review Committee

March 25, 2021

High Density Zoning District

Agenda



01 Survey and Website



02 Demographics



High Density

01 Survey and Website

- Complete by end of March

Preserve Dripping Springs Development Code Rewrite

The Dripping Springs Development Code rewrite is the City's effort to review and update the current Zoning Code to a Unified Development Code, so we created a development process that works for Dripping Springs.

With the update, the City will aim to create developments that better preserve and enhance the character, charm, and existing neighborhoods.

The new Development Code's goals are:

- Reorganize all Planning Code of Ordinances to a Unified Development Code
- Make the Development Code user friendly
- Update zoning districts to support and protect the distinct character of the City
- Modernize and customize the Development Standards
- Streamline the Development process
- Set clear expectations for development

We welcome your participation! [Click here to take our survey!](#)



Frequently Asked Questions

Learn more about the Development Code Rewrite.



Want to know more?

Email us any questions.



Involvement & Events

Take our survey. Check back here for upcoming events.

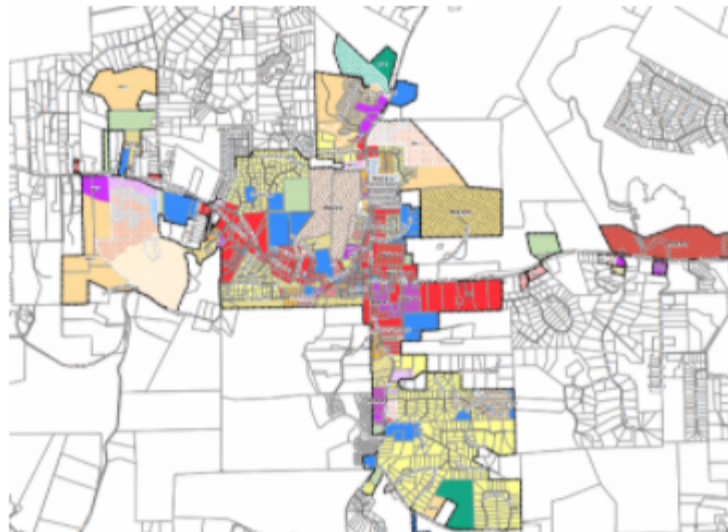


Development Code Timeline



Timeline is subject to change and all benchmark and dates are tentative.

Dripping Springs Current Zoning



- The first Zoning Ordinance that was enacted by the City of Dripping Springs was April 28, 1995.
- This Zoning Ordinance was based on the 1985 Comprehensive Plan.
- The City has done various amendments to the 1985 Zoning Ordinance but never a full rewrite
- Zoning has changed significantly from 1995 to 2020.
 - Such as certain land uses (CBD Shops, Coworking Spaces, microblading, etc.)

To view the current Zoning Map, [click here](#).

1



2



3



4



5

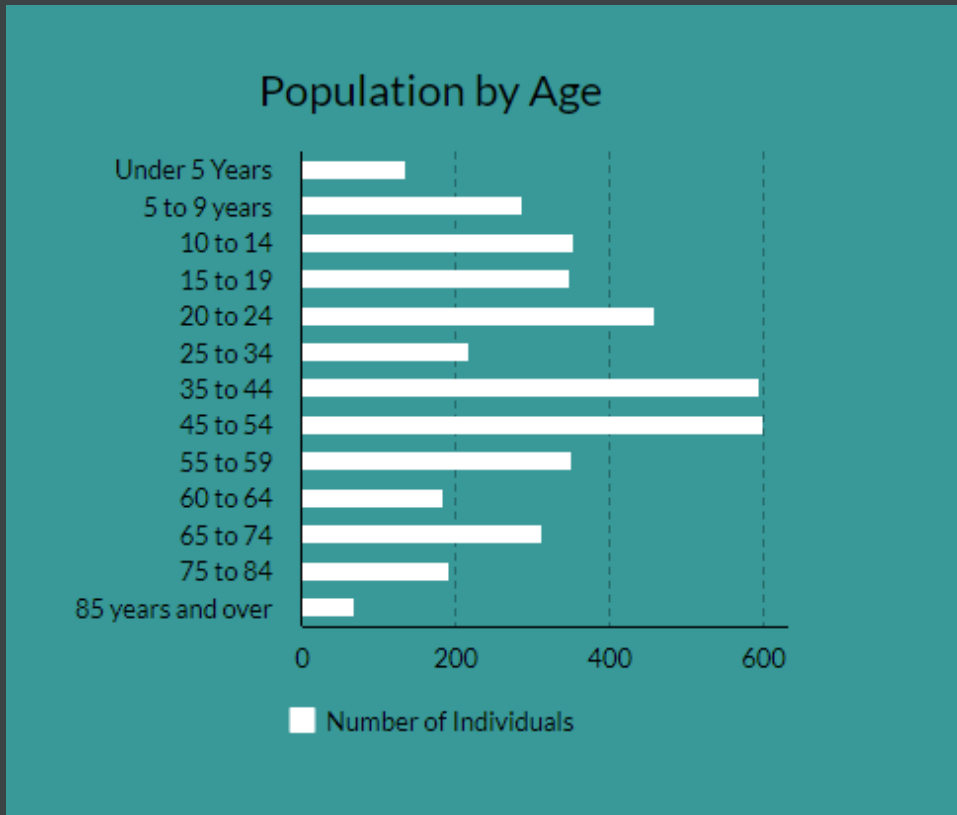


6



02 Demographics estimations 2019

- Population around 4,119
- Median Age = 37.9 yrs.
- Median Age in US = 38.1 yrs.
- Median Home Value = \$389,200
- Percentage of Owner-Occupied Housing = 67.5%
- Median Family Income (Austin-Round Rock, Hays County is a part of this) = \$97,600



According to the US Census Bureau a "housing-cost burden" is 30% of income spent on housing costs. This means with an MFI of \$97,600, a family with that MFI should not be paying more than \$29,280 a year for their mortgage. This is \$2,440 a month.

For example, if you budget for a monthly housing payment of \$2,440 with two percent annually going to taxes and insurance, assuming the current 30-year mortgage rate is 4%, the math "worked backwards" reveals a maximum home purchase price of \$344,111.

The Median Home Value in Dripping Springs is \$389,200 that is \$45,089 difference.

<https://www.census.gov/housing/census/publications/who-can-afford.pdf>

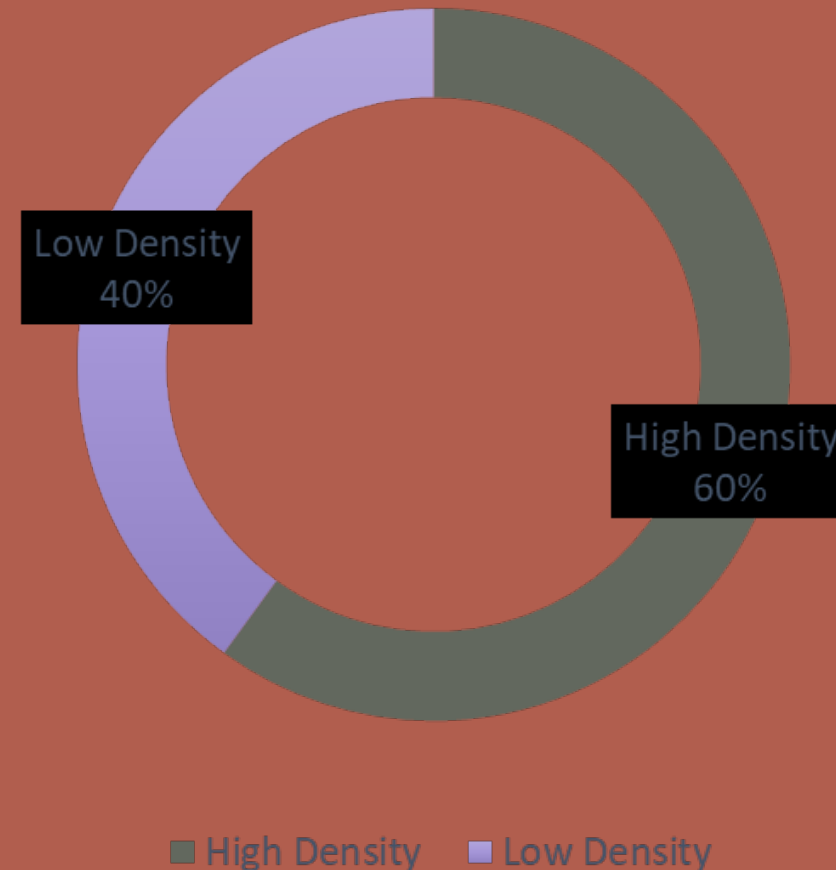
<https://www.huduser.gov/portal/datasets/il/il2020/2020summary.odn>

<https://themortgagereports.com/mortgage-calculator-report?hp=366076&dp=21965<=360&tr=1.81&yi=600&hoa=0&ir=4>

In a study conducted by Smart Growth America and National Association of Realtors 6 in 10 prospective homebuyers, when asked to choose between two communities, chose the neighborhood that offered a shorter commute, sidewalks and amenities like shops, restaurants, libraries, and schools.

Smart Growth America and National Association of Realtors®, 2004
American Community Survey: National Survey on Communities
(Washington, D.C.: Author, October 2004).

Prospective Home Owners



Density

For today, High density simply means new residential at a density that is higher than what is typically found in our existing community

For a city that is accustomed to 1 acre lots, single family houses on 5000 square foot lots is considered higher density

For larger cities townhomes (attached homes) and Apartments are what are considered higher density

Density is the amount of Development within a given area.

Residential Density is usually expressed as Dwelling units per acre (Net or Gross)



High Density



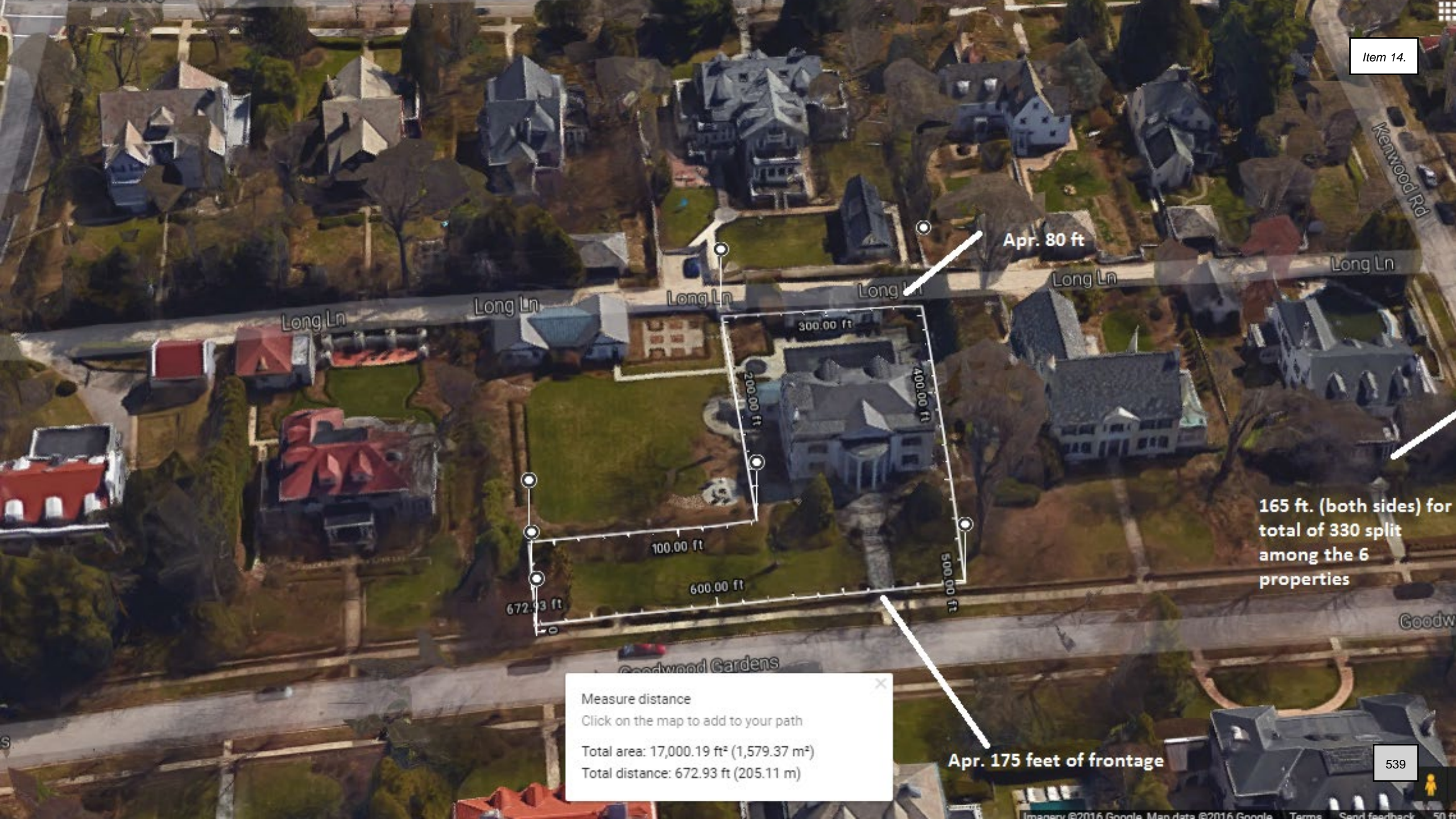
Benefits of Higher Density

- Geographically easier to manage school districts
- Lower Cost to maintain infrastructure
- Lower Density /Urban Sprawl means less tax available to pay for infrastructure construction (and everything else)
- Lower Density means less tax per unit of area, even when property values are high
- Low density properties are served by much greater length/area of infrastructure that must be maintained and occasionally replaced
- More feet of water and sewer pipe and more road space per property
- Higher Density development helps attract new employers
- Higher density development can increase property values
- Decrease urban blight
- Attractive, well designed, and well-maintained higher density development attracts good residents and tenants and fits into existing communities.



<p>Large Lot Luxury Estate - Value/sq. ft.: \$65 (80% is improvement) - Annual Tax receipts: \$62,500 per acre - Annual Tax/ft. of infrastructure: \$88</p>	<p>Middle Income Rowhome - Value/sq. ft.: \$125 (57% is improvement) - Annual Tax receipts: \$125,000 per acre - Annual Tax/ft. of infrastructure: \$108</p>
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Apr. 80 ft

Long Ln

Long Ln

Long Ln

Long Ln

Long Ln

Long Ln

165 ft. (both sides) for total of 330 split among the 6 properties

672.93 ft

100.00 ft

600.00 ft

300.00 ft

200.00 ft

400.00 ft

500.00 ft

Measure distance

Click on the map to add to your path

Total area: 17,000.19 ft² (1,579.37 m²)

Total distance: 672.93 ft (205.11 m)

Apr. 175 feet of frontage



Wine Underground



1,000.00 ft

1,500.00 ft

W Cold Spring Ln

Dewey Ave

500.00 ft

Roland Heights Ave

2,000.00 ft

Measure distance ✕

Click on the map to add to your path

Total area: 214,954.67 ft² (19,969.94 m²)

Total distance: 2,802.26 ft (854.13 m)

CODS Residential High Density

Current Code

Single-Family Residential - Town Center (SF-3)

- The SF-3, Single-Family Residential District is intended to promote stable, quality, detached-occupancy residential development on individual lots at increased densities. Individual ownership of each lot is encouraged. This district provides a “buffer” or transition district between lower density residential areas and multiple-family or nonresidential areas or major thoroughfares.

Proposed

High Density Residential

- High Density residential district is intended to promote stable, quality, detached residences and related accessory structures and provide residential development at urban densities in locations well served by public utilities and roadways. This district should have adequate thoroughfare access and be relatively well connected with community and neighborhood facilities such as schools, parks, and shopping centers.

Current Code

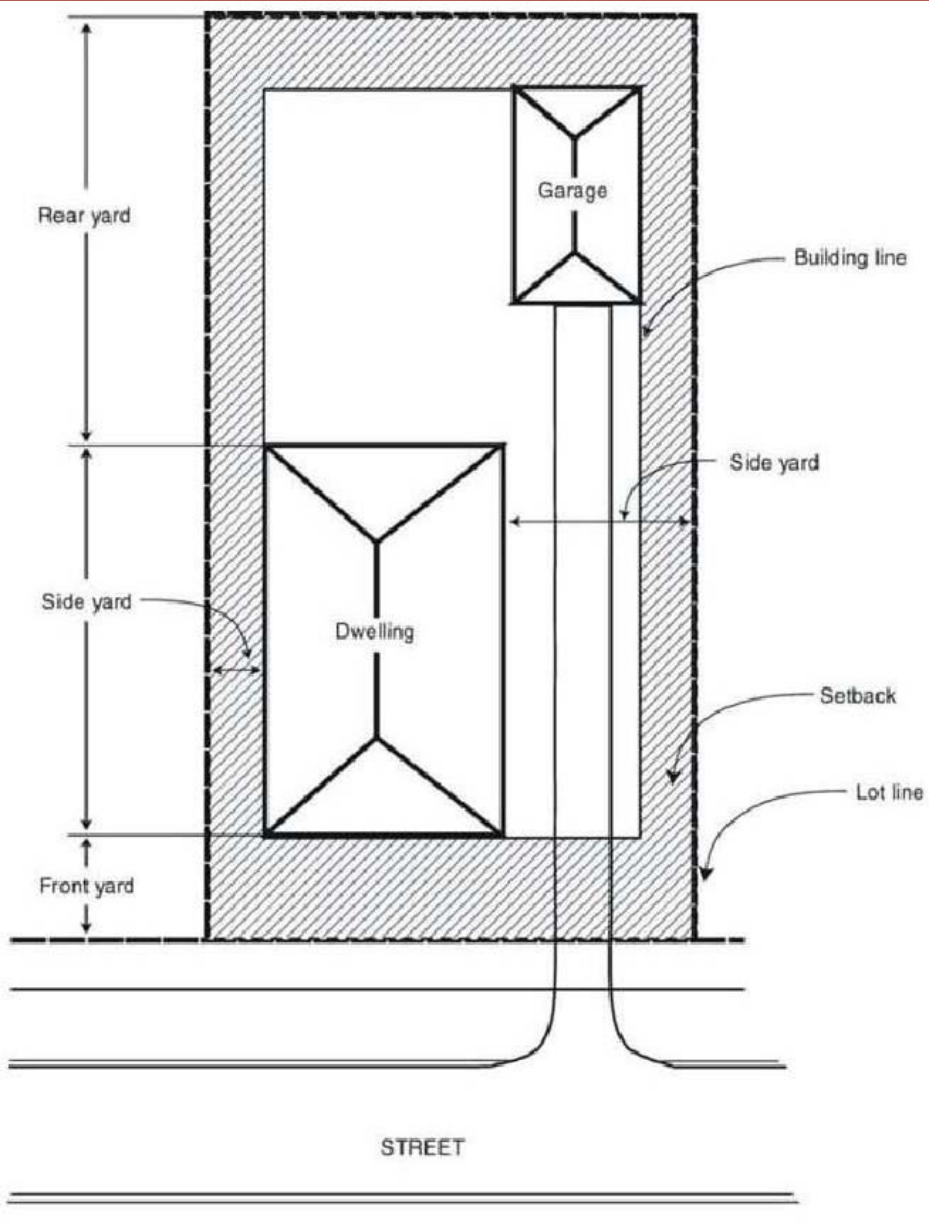
Single-Family Residential - Town Center (SF-3)

- Permitted Uses:
 - Those uses listed in the City's zoning ordinance for the GR District or any less intense residential district.

Proposed

High Density Residential

1. Single-family detached (minimum lot size: 5,500 square feet).
2. Single-family attached (provided that certain requirements are met).
3. Single-family, zero lot line (provided that certain requirements are met).
4. Those residential uses identified in the Use Tables of the Code as allowed in the Residential District.
5. Those non-residential uses identified in the Use Tables in Chapter 5 of this Code as allowed in the RS District.
6. Those accessory uses identified in the Code that may be compatible with the primary uses allowed in the Residential District.



Current Code

Single-Family Residential - Town Center (SF-3)

- Lots Size: 3,500 SF
- Lot Width: 35 ft
- Side Setbacks:
 - Front - 10 ft
 - Interior Side - 5 ft
 - Street Side - 7.5 ft
 - Unloaded Street - don't define
 - Rear - 10 ft
 - Garage - 25 ft

Proposed

High Density Residential

- Lot Size: 5,500SF
- Lot Width: 50 ft
- Side Setbacks:
 - Front - 20 ft
 - Interior side -6 ft
 - Street side - 15 ft
 - Unloaded Street - 20 ft
 - Rear - 10 ft
 - Garage - 25 ft

Current Code

Single-Family Residential - Town Center (SF-3)

- Building Height:
 - Main Building(s) Height: Maximum two and one-half (2-1/2) stories, or forty feet (40') for the main building or house, whichever is less.
 - Accessory Building(s) Height: Maximum fifteen feet (15') for accessory buildings, including a detached garage or accessory dwelling units.
- Impervious Cover: 65%

Proposed

High Density Residential

- Building Height: 35 ft
- Impervious Cover : 50%

Current Code

Single-Family Residential - Town Center (SF-3)

Special Requirements:

- (a) **Separate Utilities:** All utilities shall be provided separately to each unit within the SF-3 district so that each unit is individually metered.
- (b) **Maintenance for Common Areas:** A property owners' association is required for continued maintenance of common land and/or facilities.
- (c) **Garage Space Required:** The elimination of a garage space by enclosing the garage with a stationary building wall is prohibited.
- (d) **On-Site Dwellings:** Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- (e) **Open Storage:** Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- (f) **Swimming pools:** Swimming pools shall be constructed and enclosed in accordance with the City's Building Code.
- (g) **Nonresidential Uses:** Site plan approval shall be required for any nonresidential use, including a school, church, child-care center, group home, or private recreation facility, in the SF-3 District. Any nonresidential land use that may be permitted in this district shall conform to the Local Retail District standards.
- (h) **Temporary Facilities:** There shall be no permanent use of temporary facilities or buildings.
- (i) **Special Purpose Nonresidential Lots:** These lots, including, but not limited to landscape lots and utility lots, are exempt from regulations described in these SF-3 districts (see Plat for use notes).

Proposed

High Density Residential

- **Garage Space Required:** The elimination of a garage space by enclosing the garage with a stationary building wall is prohibited.
- **On-Site Dwellings:** Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- **Open Storage:** Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- **Non-Residential and Accessory Design Standards.**
 1. Non-residential structures shall meet the lot and dimensional standards of the RS District and the applicable Commercial district
 2. Residential accessory structures shall meet the requirements of accessory structures (Later meeting)
 3. Residential accessory structures shall not exceed the height of the principal residential structure.
- **Special Purpose Nonresidential Lots:** These lots that are complementary to residential uses, including, but not limited to landscape lots and utility lots, are exempt from regulations described in these R-5 districts (see Plat for use notes).

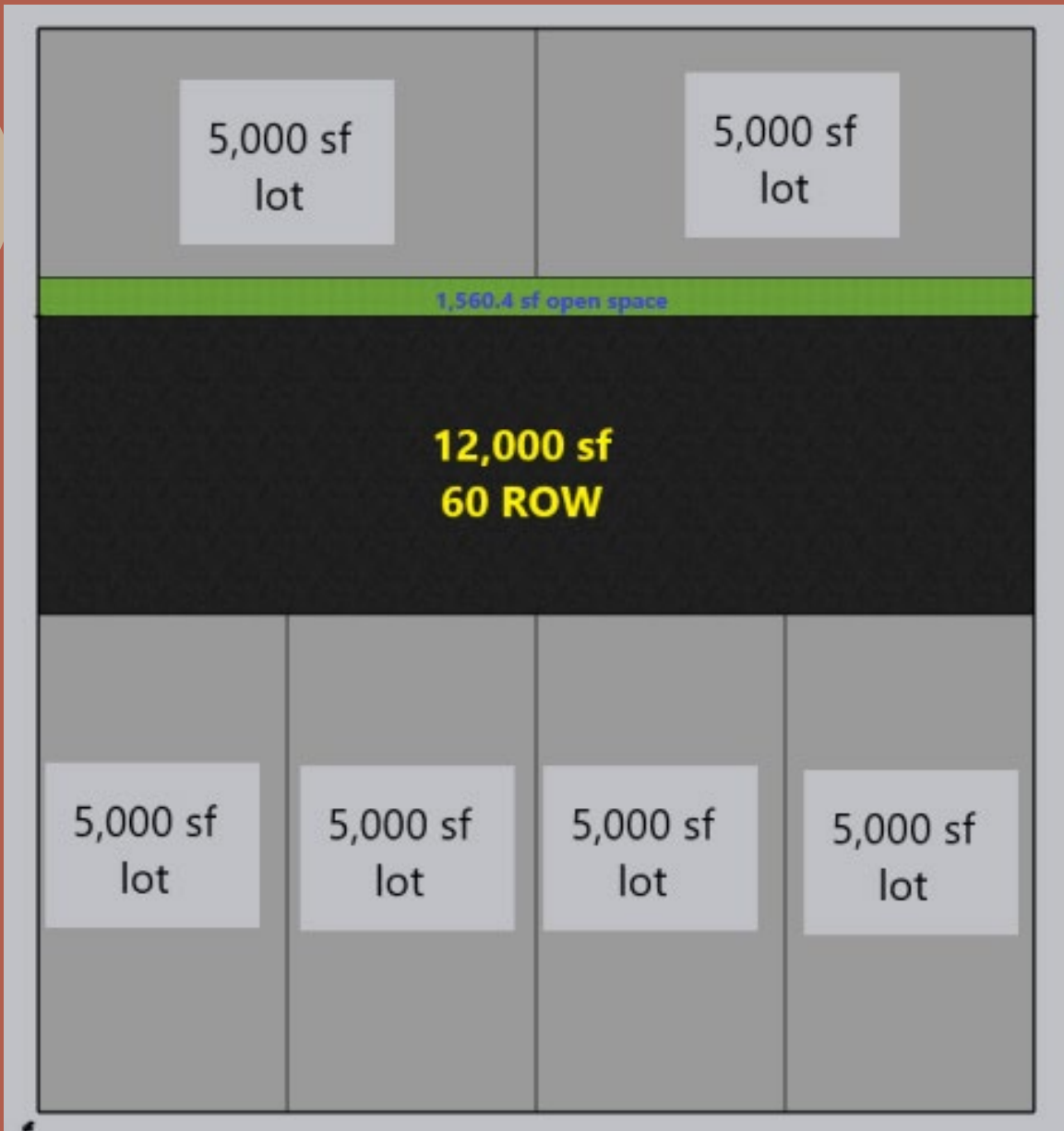
New requirements

- Corner Lot requirements:
 - Lot width - 60 ft
- 1 Primary Unit per lot/unit
- Potential to add density caps
 - Max 6.0 dwelling units per gross acre
 - In the Future, the City may want to implement minimum densities. Minimum densities are already required by some localities and states to support transit investments (important for where the city is moving towards), enable neighborhood retail, expand housing choices, protect open space, and reduce greenhouse gas emissions.

Examples

(1 acre = 43,560 sf)

- 6 du at 5000 sf = 30,000 sf
- Leftover sf (Used for parkland or Open Space) = 13,560 sf
- Open space requirements (if they don't do Fee-in-lieu)
 - 6 du = 8,712 sf (1 acre/ 29 du)
- Leftover sf after parkland = 4,848 sf



Density

Current

Max gross density without cap = 12.44
du/ acre
(SF-3 zoning 3500 SF lots)

Proposed

Max gross density without cap = 8.712
du/acre

Density Cap= 6 du/acre

Gross Density in image = 6 du/ acre
Net Density in image = 6/.69 acres of
residential area = 8.69

Subdivision Design

Density

- Units per acre
- width/length of lots
- setbacks

Landscaping/Tree Preservation

- Required planting criteria
- Not allowing clear cutting
- Street tree criteria

Design Standards

- Require design standards
- Variation in design/elevation

Leander – Grayson Subdivision





Georgetown- Wolf Ranch



Georgetown- Wolf Ranch



Georgetown- Wolf Ranch



Item 14. ✕



554

Item 14.



Round Rock – Teravista



555

Round Rock – Teravista



Round Rock – Teravista



Item 14.



557





Stapleton, Colorado





Stapleton, Colorado



Frisco, Texas



Frisco, Texas





Development Code Review Committee

APRIL 15, 2021

RESIDENTIAL
ZONING
DISTRICT

Agenda



01 Survey and Website

02 Demographics

03 Residential Districts

01 Survey and Website



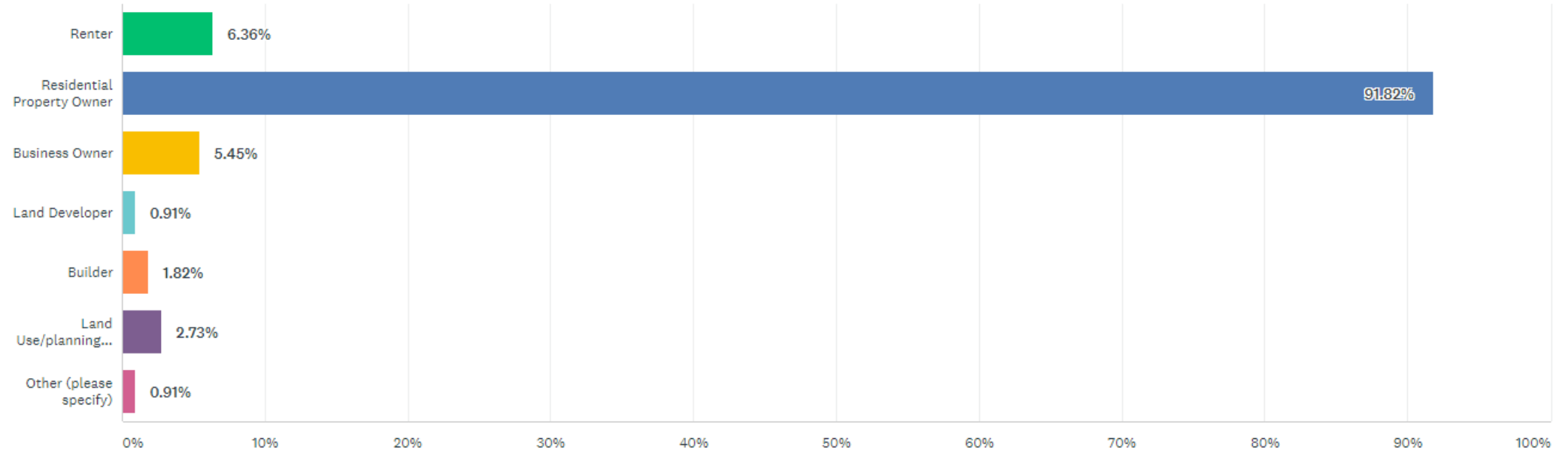
Survey

- Released at the beginning of the month (soft opening)
- Advertised at the beginning of this week
- 110 Responses since 4/14/2021

Tell us about yourself

Tell us about yourself (check all that apply)

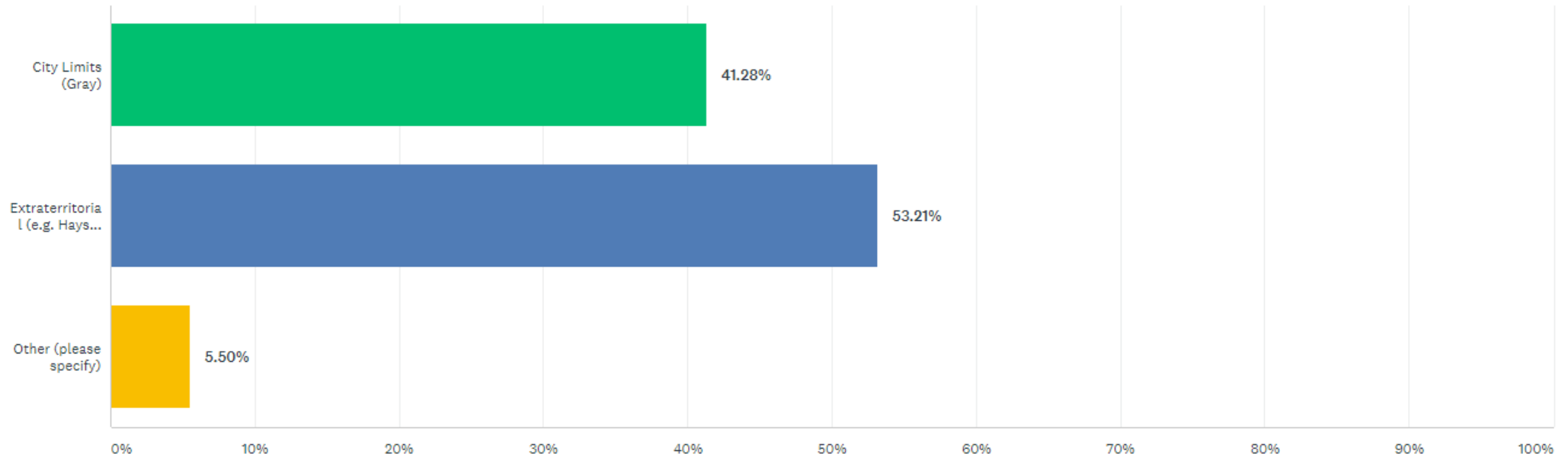
Answered: 110 Skipped: 0



Where they live

Do you live within the City Limits, Extraterritorial Jurisdiction, or neither? (See image below for a reference) ...

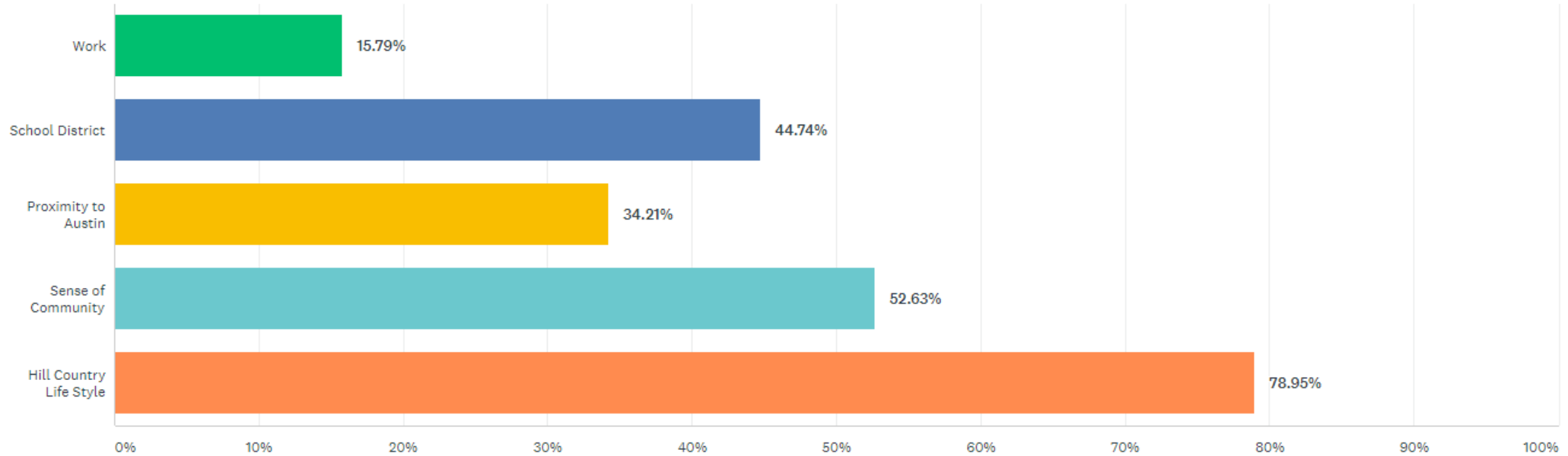
Answered: 109 Skipped: 1



Why people who live in CL chose Dripping Springs

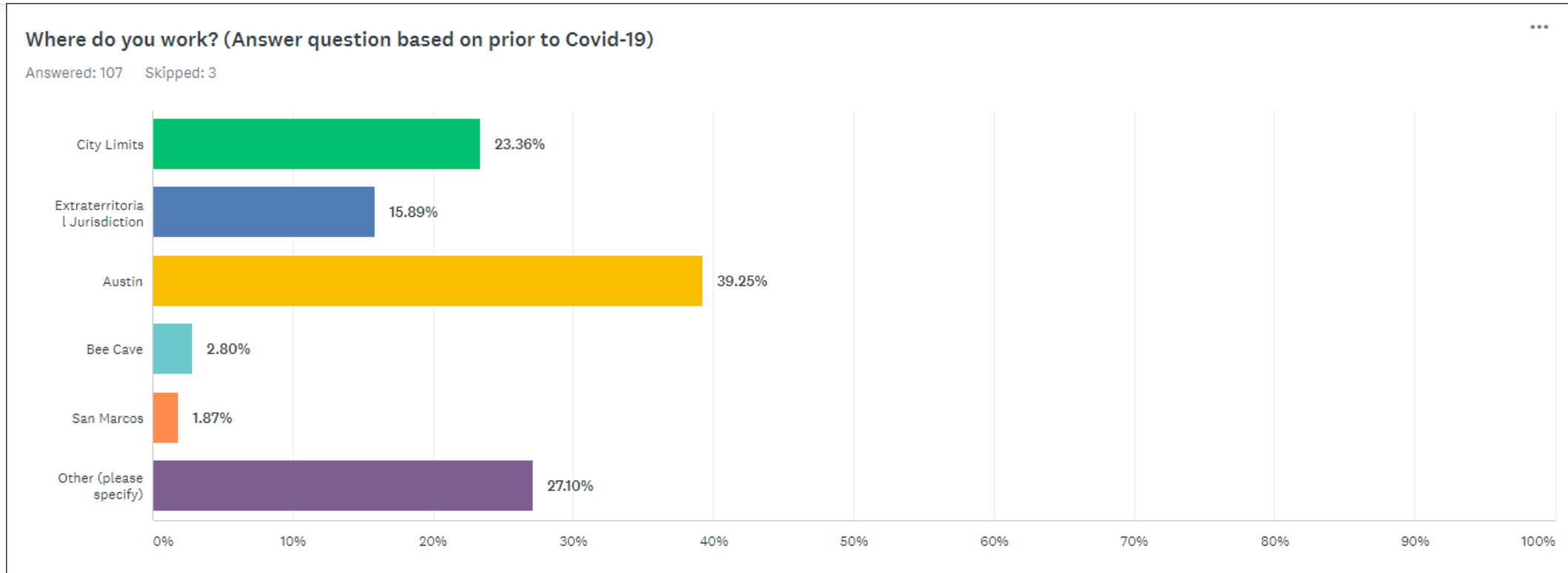
Why did you choose Dripping Springs?

Answered: 38 Skipped: 7



Only City Limits residents

Where they work

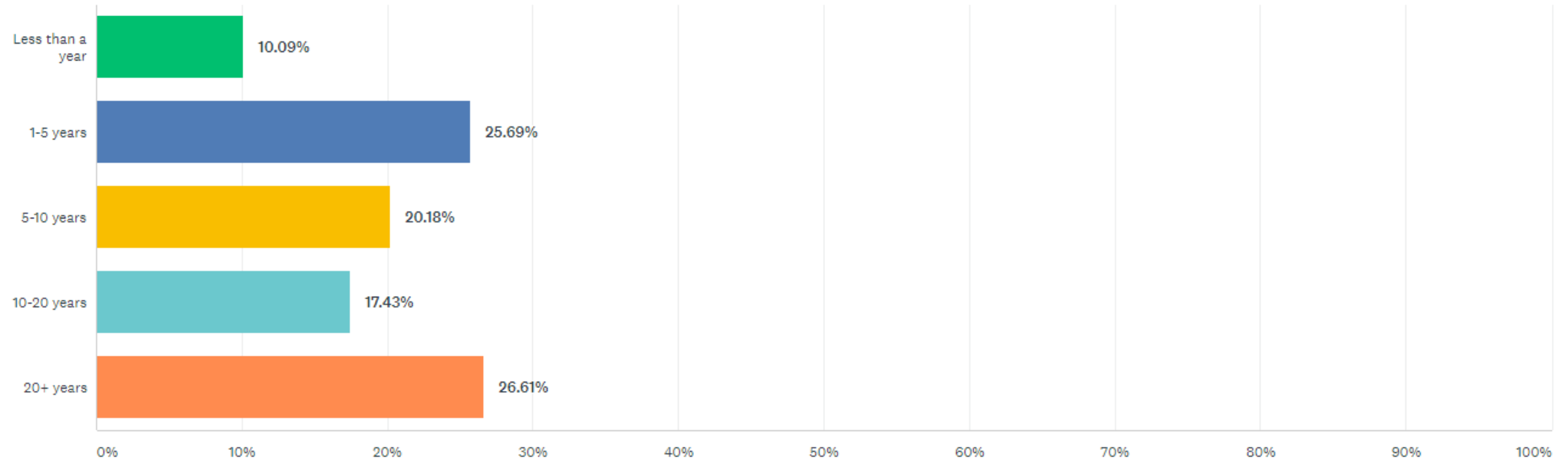


Includes ETJ residents. The others include: WFH, retired, stay at home mom, etc.

How long they've lived in the DS area

How long have you lived/worked in Dripping Springs?

Answered: 109 Skipped: 1



Includes ETJ residents

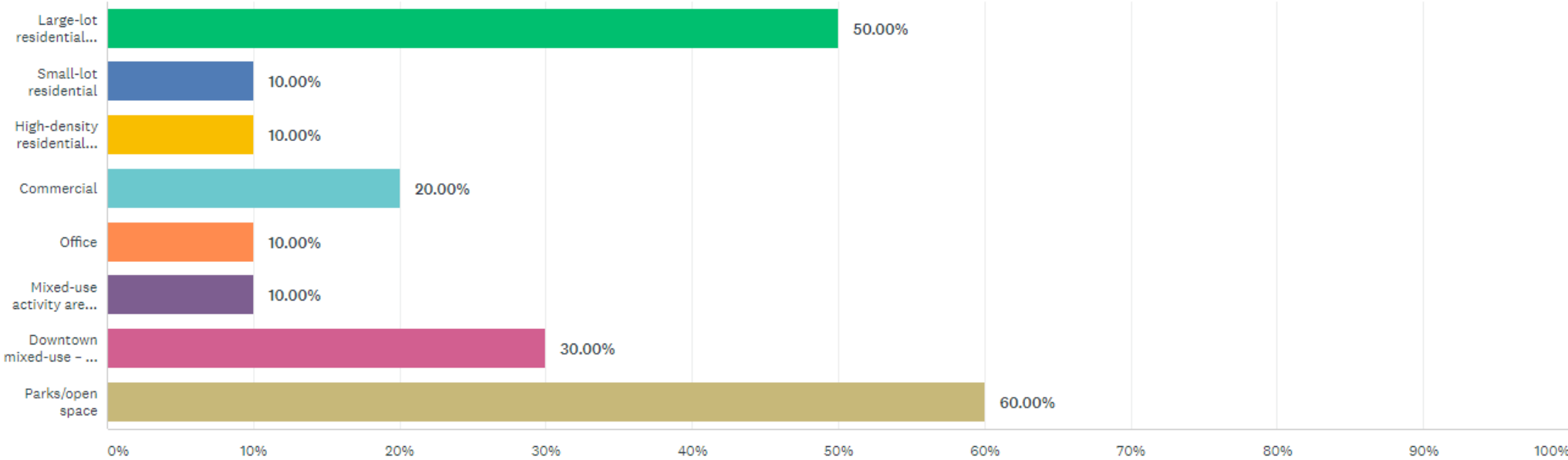
What they see as the biggest challenges facing Dripping Springs?

- Attainable housing
- Preventing DS from turning into North Austin
- Keeping the uniqueness
- Loss of small-town charm, too many cookie cutter homes, too many subdivisions with tiny properties, hill country feel is vanishing because of too much growth, no regard for design to keep small town feel alive
- How to allow reasonable growth without abandoning the ranch and low population density culture.
- Making sure not to over develop it with subdivision and large big box stores. There should be a minimum lot size of .5 acres on some areas and 1 or 2 acres in other areas
- The people that live here, can't' afford to live here anymore. I rent, but there is no way I can afford to purchase a house
- Striking a balance between business development and reasonable restrictions for preservation

What development they want to see

Which type of development would you like to see more of in Dripping Springs?

Answered: 10 Skipped: 35



Only City Limits residents

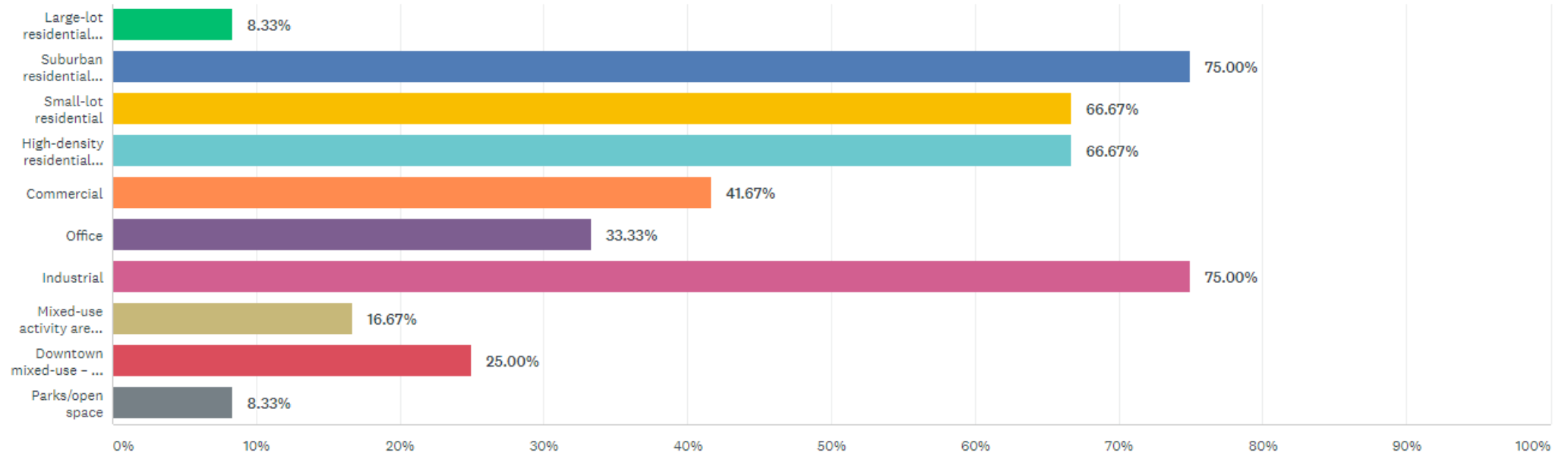
Land uses not allowed in some zones that should be

- The historic overlay is far too restrictive and discourages current zoning uses and increased density
- Encourage more accessory dwelling on existing residential lots capable of supporting such additional dwellings. CUPs for a permanent structure is restrictive. Adopt standards that are specific so that the CUP for ADU's can be done away with.

What development they don't want to see

Which type of development would you like to see less of in Dripping Springs?

Answered: 12 Skipped: 33



Only City Limits residents

Development Standards that they believe are too restrictive, vague, or flexible

- The historical overlay is too restrictive and hard to follow
- Too flexible. We need larger lots, lower buildings, less signage, and outdoor light pollution. Then conserve the environment larger/open private and public spaces through larger lots
- “minimum lot size” is too flexible and seems designed to promote higher density population that the infrastructure and water don’t support
- Too flexible. Seeing too many neighborhoods like Texas Heritage Village coming in with huge homes on tiny lots
- Tree and nature preservation are too flexible. Would be great to see an increase in preservation of the Natural Hill Country. I also think building height is an important standard, the view of the Hill Country is part of Dripping Springs character and even though building up allows a smaller real estate foot print it also takes away the Rural charm
- Building and site design
- Too many variances approved

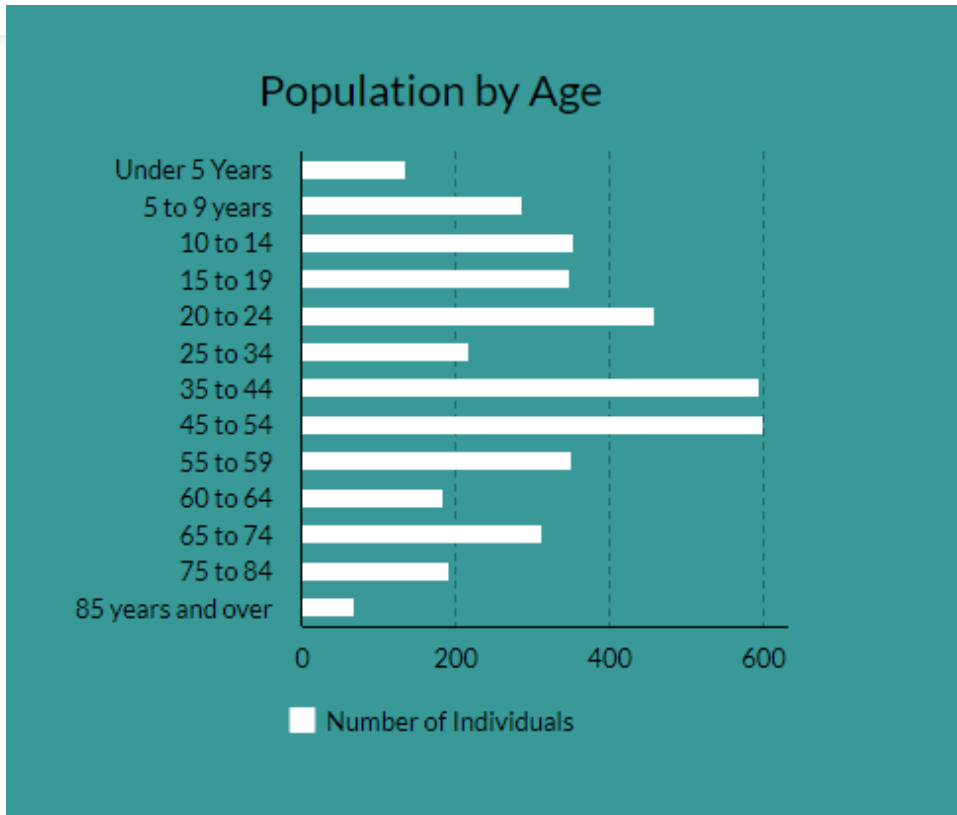
What current zoning standards make it difficult to be a welcoming/accommodating community

- Nothing connects or is walkable
- The historical overlay is too restrictive and discourages investment in downtown
- Lack of sidewalks, more sidewalks and wider sidewalks would be awesome
- There is no affordable housing in Dripping Springs for most of our essential workers.

Other comments and concerns

- We need diversity of businesses, too many gas stations
- Thanks for all y'all do. Please support Dripping in staying a small community. Those who want to be closer to things can move to places like Bee Caves. Please let this stay a country town
- Drip really needs to get a handle on growth. I'm not against growth at all but controlled smart growth is crucial.

02 Demographics estimations 2019



- Population around 4,119
- Median Age = 37.9 yrs.
- Median Age in US = 38.1 yrs.
- Median Home Value = \$389,200
- Percentage of Owner-Occupied Housing = 67.5%
- Median Family Income (Austin-Round Rock, Hays County is a part of this) = \$97,600



03
Residential
Districts

High Density Residential Recap

High Density residential district is intended to promote stable, quality, detached residences and related accessory structures and provides residential development at urban densities in locations well served by public utilities and roadways. This district should have adequate thoroughfare access and be relatively well connected with community and neighborhood facilities such as schools, parks, and shopping centers.

Standards

- Lot Size: 5,500 square feet
- Lot Width: 50 feet
- Corner Lot Width: 60 feet
- Setbacks:
 - Front - 20 feet
 - Interior side - 6 feet
 - Street side - 15 feet
 - Unloaded street - 20 feet
 - Rear- 10 feet
 - Garage- 25 feet
- Building Height: 35 feet
- Impervious Cover: 50%
- 1 Primary Unit per lot/unit
- Density Cap: Max 6.0 dwelling units per gross acre

Residential: High Density

Proposed Uses

- Single-family detached (minimum lot size: 5,500 square feet).
- Single-family attached (provided that certain requirements are met).
- Single-family, zero lot line (provided that certain requirements are met).
- Those residential uses identified in the Use Tables of the Code as allowed in the residential district.
- Those non-residential uses identified in the Use Tables of the Code as allowed in the residential district.
- Those accessory uses identified in the Code that may be compatible with the primary uses allowed in the residential district.

Residential: High Density

Standards

- **Garage Space Required:** The elimination of a garage space by enclosing the garage with a stationary building wall is prohibited.
- **On-Site Dwellings:** Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- **Open Storage:** Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- **Non-Residential and Accessory Design Standards.**
 1. Non-residential structures shall meet the lot and dimensional standards of the RS District and the applicable Commercial district
 2. Residential accessory structures shall meet the requirements of accessory structures (Later meeting)
 3. Residential accessory structures shall not exceed the height of the principal residential structure.
- **Special Purpose Nonresidential Lots:** These lots, including, but not limited to landscape lots and utility lots, are exempt from regulations described in these R-5 districts (see Plat for use notes).

Residential: Medium Density

Description

No Current District

Proposed

- These districts are composed of areas of detached dwellings and open land. The mid-sized lots allow for denser development and are served by public infrastructure. Medium Density Residential lots provide further options for housing and neighborhood development. This district may also be used as a transition from the rural residential zoning districts to less restrictive or denser residential zoning districts.

Residential: Medium Density

Proposed Uses

- Single-family detached (minimum lot size: 10,000 square feet).
- Those residential uses identified in the Use Tables of the Code as allowed in the residential district.
- Those non-residential uses identified in the Use Tables of the Code as allowed in the residential district.
- Those accessory uses identified in the Code that may be compatible with the primary uses allowed in the residential district.

Residential: Medium Density

Standards

- Lots Size: 10,000 SF (0.23 acres)
- Lot Width: 70 feet
- Corner Lot Width: 70 feet
- Setbacks:
 - Front - 20 feet
 - Interior Side - 10 feet
 - Street Side - 15 feet
 - Unloaded Street - 20 feet
 - Rear - 10 feet
 - Garage - 25 feet
- Building Height: 35 ft
- Impervious Cover: 50%
- Density Cap: Max 4 dwelling units per gross acre
- 1 Primary Unit per lot/unit

Residential: Medium Density

Standards

- On-Site Dwellings: Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- Open Storage: Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- Non-Residential and Accessory Design Standards.
 - 1.Non-residential structures shall meet the lot and dimensional standards of the Residential District and the applicable Commercial district
 - 2.Residential accessory structures shall meet the requirements of accessory structures (Later meeting)
 - 3.Residential accessory structures shall not exceed the height of the principal residential structure.
- Special Purpose Nonresidential Lots: These lots, including, but not limited to landscape lots and utility lots, are exempt from regulations described in this district.

Residential: Low Density

Description

SF-2 Current Code

- Single-Family Residential District - Moderate Density (SF-2)
- Description: The SF-2, Single-Family Residential District is intended to provide for development of primarily moderate-density detached, single-family residences on lots of at least one-half (1/2) acre in size.

Proposed district:

This district provides for a low density, large lot single-family detached dwellings, where such topographic conditions and environmental constraints occur. The district is intended to provide the opportunity to develop a large lot subdivision prior to public utilities being available. It is intended to remain rural in character.

Residential: Low Density

Proposed Uses

SF-2 Current Code

- Permitted Uses: Those uses listed for the SF-2 District or any less intense residential district in Appendix C [Appendix E] (Use Charts) as "P" or "C" are authorized uses permitted by right or conditionally permitted uses, respectively.

Proposed district:

- Single-family detached (minimum lot size: 0.5 acres).
- Those residential uses identified in the Use Tables of the Code as allowed in the Residential District.
- Those non-residential uses identified in the Use Tables of the Code as allowed in the Residential District.
- Those accessory uses identified in the Code that may be compatible with the primary uses allowed in the Residential District.

Residential: Low Density

Standards

SF-2 Current Code

- Lots Size: Min 0.5 Acre Lot (21780 SF)
- Lot Width: none
- Setbacks:
 - Front -25 feet
 - Interior Side -15 feet
 - Street Side - none
 - Unloaded Street - don't define
 - Rear - 25 feet from the main building.
 - Garage - 25 feet

Proposed district

- Lots Size: Min 0.5 Acre Lot (21780 SF)
- Lot Width: 90 feet
- Setbacks:
 - Front -45 feet
 - Interior Side -20 feet
 - Street Side - 25 feet
 - Unloaded Street - 25 feet
 - Rear - 50 feet
 - Garage - 45 feet

Residential: Low Density

Standards

SF-2 Current Code

- Building Height:
 - Main Building(s) Height: Maximum two and one-half (2-1/2) stories, or forty feet (40') for the main building or house, whichever is less.
 - Accessory Building(s) Height: Maximum fifteen feet (15') for accessory buildings, including a detached garage or accessory dwelling units.
- Impervious Cover: 40%

Proposed district

- Building Height:
 - Working with Keenan on this
 - Accessory structures will have a separate section
- Impervious Cover: 40%
- Density Cap: Max 1.5 dwelling units per gross acre
- 1 Primary Unit per lot/unit

Residential: Low Density Standards

SF-2 Current Code

- On-Site Dwellings: Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- Open Storage: Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- Side-Entry Garages: Single-family homes with side-entry garages where lot frontage is only to one street (not a corner lot) shall have a minimum of twenty-five feet (25') from the door face of the garage or carport to the side property line for maneuvering.
- Swimming Pools: Swimming pools shall be constructed and enclosed in accordance with the City Building Code.
- Nonresidential Uses: Site plan approval shall be required for any nonresidential use (such as a school, church, child-care center, private recreation facility, etc.) in the SF-2 District. Any nonresidential land use that may be permitted in this district shall conform to the Local Retail District standards.
- Temporary Facilities: There shall be no permanent use of temporary facilities or buildings.
- Other Regulations: Refer to Section 5, Development Standards & Use Regulations.
- OSSFs: On-Site Sewage Facilities (OSSFs) are prohibited in this district on lots of less than three-quarters (3/4) of an acre.

Proposed district

- On-Site Dwellings: Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- Open Storage: Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- Non-Residential and Accessory Design Standards.
 - 1.Non-residential structures shall meet the lot and dimensional standards of the Residential District and the applicable Commercial district
 - 2.Residential accessory structures shall meet the requirements of accessory structures (Later meeting)
 - 3.Residential accessory structures shall not exceed the height of the principal residential structure.
- Special Purpose Nonresidential Lots: These lots, including, but not limited to landscape lots and utility lots, are exempt from regulations described in this district

Legacy Trails Subdivision SF- 2



Harrison Hills Subdivision SF-2



Harrison Hills Subdivision SF-2



Residential: Rural Density

Description

SF-1 Current Code

- Single-Family Residential District - Low Density (SF-1)
- Description: The SF-1, Single-Family Residential District is intended to provide for development of low-density, detached, single-family residences on lots of at least one (1) acre in size.

Proposed district:

- This district is intended for areas of very low density single-family residential use and associated uses. The district has a lot size minimum of one acre to retain a rural character and is appropriate where topography or lack of public utilities and services may necessitate a low density.

Residential: Rural Density

Proposed Uses

SF-1 Current Code

- Permitted Uses: Those uses listed for the SF-1 District or any less intense residential district in Appendix C [Appendix E] (Use Charts) as "P" or "C" are authorized uses permitted by right or conditionally permitted uses, respectively.

Proposed district:

- Single-family detached minimum lot size: One acre.
- Those residential uses identified in the Use Tables in Chapter 5 of this Code as allowed in the RE District.
- Those non-residential uses identified in the Use Tables
- Those accessory uses identified in accessory structure regulations.

Residential: Rural Density

Standards

SF-1 Current Code

- Lots Size: Min 1 acre (43,560 sf)
- Lot Width: none
- Setbacks:
 - Front - 25 feet
 - Interior Side - Total of 40 feet combining both side yards with a minimum of 15 feet on either side
 - Street Side -Unloaded Street - don't define
 - Rear - 25 feet
 - Garage - 25 feet

Proposed district:

- Lots Size: Min 1 acre (43,560 sf)
- Lot Width: 100 feet
- Setbacks:
 - Front - 50 feet
 - Interior Side - 25 feet
 - Street Side - 35 feet
 - Unloaded Street - 50 feet
 - Rear - 75 feet
 - Garage - 50 feet

Residential: Low Density

Standards

SF-1 Current Code

- Building Height:
 - Main Building(s) Height: Maximum two and one-half (2-1/2) stories, or forty feet (40') for the main building or house, whichever is less.
 - Accessory Building(s) Height: Maximum fifteen feet (15') for accessory buildings, including a detached garage or accessory dwelling units.
- Impervious Cover: 30%

Proposed district

- Building Height:
 - Working with Keenan on this
 - Accessory structures will have a separate section
- Impervious Cover: 30%
- Density Cap: none
- 1 Primary Unit per lot/unit

Residential: Low Density

Standards

SF-1 Current Code

- On-Site Dwellings: Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- Open Storage: Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, recreational vehicles, boats and trailers, etc.).
- Side-Entry Garages: Single-family homes with side-entry garages where lot frontage is only to one street (not a corner lot) shall have a minimum of twenty-five feet (25') from the door face of the garage or carport to the side property line for maneuvering.
- Swimming Pools: Swimming pools shall be constructed and enclosed in accordance with the City Building Code.
- Nonresidential Uses: Site plan approval shall be required for any nonresidential use (such as a school, church, child-care center, private recreation facility, etc.) in the SF-1 District. Any nonresidential land use that may be permitted in this district shall conform to the Local Retail District standards.
- Temporary Facilities: There shall be no permanent use of temporary buildings.
- Other Regulations: Refer to Section 5, Development Standards & Use Regulations.

Proposed district

- On-Site Dwellings: Recreational vehicles, manufactured homes, travel trailers or motor homes may not be used for on-site dwelling purposes.
- Open Storage: Open storage is prohibited (except for materials for the resident's personal use or consumption such as firewood, garden materials, etc.).
- Non-Residential and Accessory Design Standards.
 - 1.Non-residential structures shall meet the lot and dimensional standards of the Residential District and the applicable Commercial district
 - 2.Residential accessory structures shall meet the requirements of accessory structures (Later meeting)
 - 3.Residential accessory structures shall not exceed the height of the principal residential structure.
- Special Purpose Nonresidential Lots: These lots, including, but not limited to landscape lots and utility lots, are exempt from regulations described in this district

Hidden Springs Subdivision SF-1

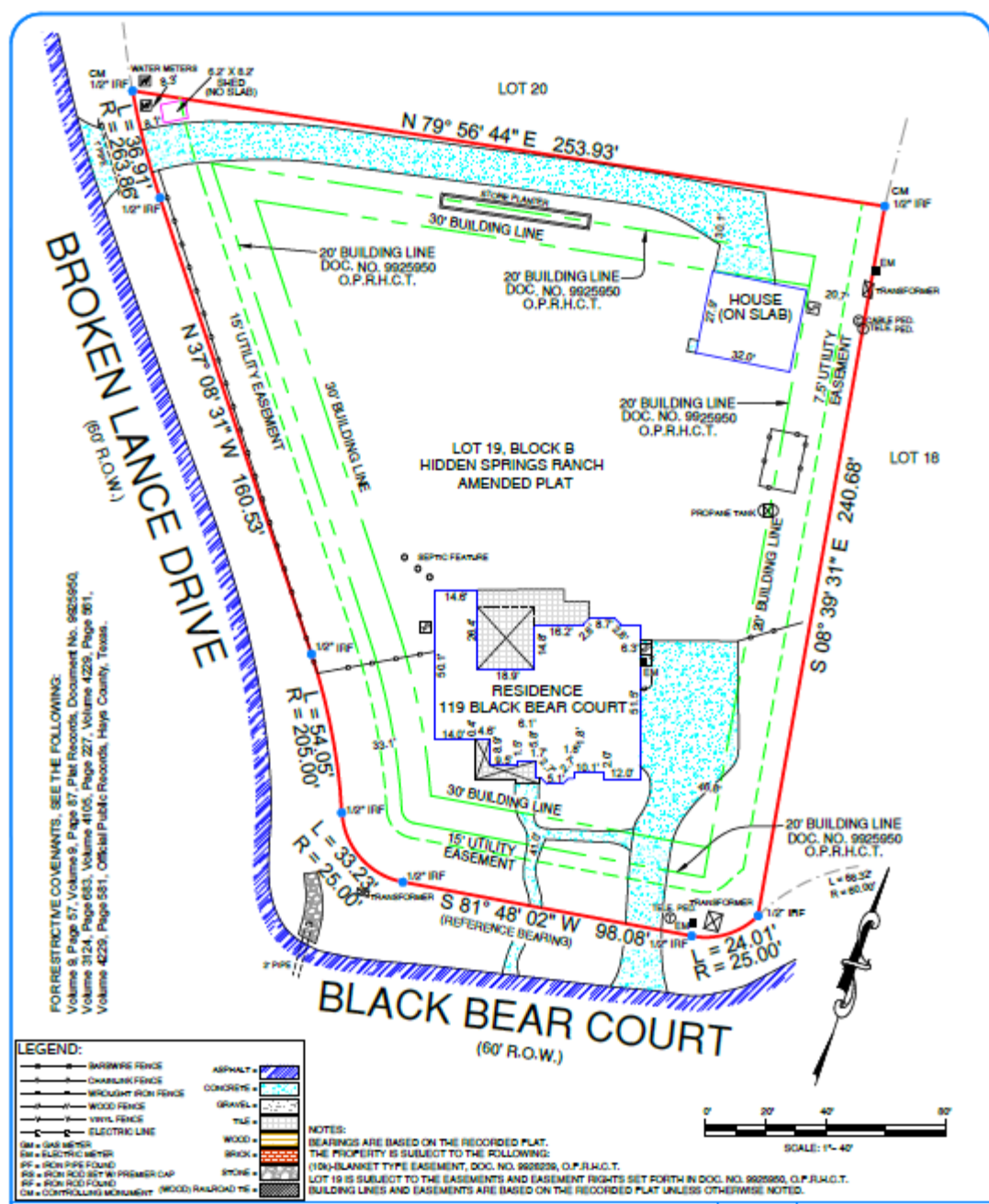




Hidden Springs Subdivision SF-1



Hidden Springs Subdivision SF-1



**Pound House
Hills
Subdivision
SF-1**



Subdivision Design

Density

- Units per acre
- width/length of lots
- setbacks

Landscaping/Tree Preservation

- Required planting criteria
- Not allowing clear cutting
- Street tree criteria

Design Standards

- Require design standards
- Variation in design/elevation

Next Meeting

- Use Chart for Residential Uses
- Accessory Structures/Temporary Structures