AGENDA | REGULAR TOWN COUNCIL MEETING

Tuesday, July 21, 2020 at 6:00 PM
Council Chamber at Apex Town Hall, 73 Hunter Street

Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Nicole L. Dozier
Council Members: Brett D. Gantt; Audra M. Killingsworth; Cheryl F. Stallings; Terry Mahaffey
Town Manager: Drew Havens | Assistant Town Managers: Shawn Purvis and Marty Stone
Town Clerk: Donna B. Hosch, MMC | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

PRESENTATIONS

CONSENT AGENDA

All Consent Agenda items are considered routine, to be enacted by one motion with the adoption of the Consent Agenda, and without discussion. If a Council Member requests discussion of an item, the item may be removed from the Consent Agenda and considered separately. The Mayor will present the Consent Agenda to be set prior to taking action on the following items

CN1 Donna Hosch, Town Clerk
Motion to approve Minutes of the June 2, 2020 and June 16, 2020 Regular Council Meetings

CN2 Amanda Bunce, Current Planning Manager
Motion to approve the Statement of the Apex Town Council pursuant to G.S. 160A-383 addressing action on the various Unified Development Ordinance (UDO) Amendments of June 16, 2020.

CN3 Sarah Van Every, Senior Planner
Motion to approve Statement of the Town Council for Rezoning Case #19CZ22 Wolfe Properties PUD, Josh Swindell, Envision Homes, LLC/Tony Streeter & Timothy V. Karr, Billy Ray Wolfe, Sarah W. Ronk, Willie T. Jr and Donna G. Wolfe, William D. II and Gaile E. Bunce, and John Terry Paton for the property located on 1405, 1409, 1209 & 1401 Wimberly Road and 1012 & 1000 Double Helix Road.

CN4 Sarah Van Every, Senior Planner
Motion to approve Statement of the Town Council and Ordinance for Rezoning Case #19CZ23 2524 & 2604 Kelly Road, Brian Griffith petitioner, for the properties located on 2524 & 2604 Kelly Road.

CN5 Lauren Staudenmaier, Planner I

Motion to approve Statement of the Town Council and Ordinance for Rezoning Case #20CZ03, Patrick Kiernan, Jones & Cnossen Engineering, PLLC./Cathleen & Kenneth Watson petitioners, for the property located on 1200 James Street.

CN6 Dianne Khin, Director

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Charles and Annette Herndon and J Dallas Herndon Heirs (Tullamore) property containing 10.1869 acres located at 1745 and 1805 Holt Road, Annexation #686 into the Town's corporate limits.

CN7 Dianne Khin, Director

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Faithwill Homes, LLC (Ananda at Bella Casa) property containing 2.0058 acres located at 2708 Blazing Trail Drive, Annexation #691 into the Town's corporate limits.

CN8 Dianne Khin, Director

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Construction Masters, LLC (Humie Olive Place) property containing 2 acres located at 7904 Humie Olive Road, Annexation #694 into the Town's corporate limits.

CN9 Marty Stone, Assistant Town Manager

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owner, Tri Pointe Homes, Inc. regarding Wake County, NC PIN#0742-68-5065, 816 Amley Place, as recorded in Book of Maps 2020, Page 205, Wake County Register of Deeds.

CN10 Marty Stone, Assistant Town Manager

Motion to approve and authorize the Town Manager to execute the same for and Encroachment Agreement between the Town and property owner, Tri Pointe Homes, Inc. regarding Wake County, NC PIN#0742-68-5061, 820 Amley Place, as recorded in Book of Maps 2020, Page 205, Wake County Register of Deeds.

CN11 Marty Stone, Assistant Town Manager

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owners, James T. Macdonell and wife Katharine G. Macdonell regarding Wake County, NC PIN#0722-64-5123, 2671 Timken Forest Drive, as recorded in Book of Maps 2008, Page 34, Wake County Register of Deeds.

CN12 Marty Stone, Assistant Town Manager

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owner, Pulte Home Company, LLC., regarding Greenmoor Phase 1B Subdivision as shown on the plat recorded in Book of Maps 2017, Pages 1027-1031, Wake County Register of Deeds.

CN13 David Wood, Halle Cultural Arts Center Manager

Motion to approve resolution designating Apex, North Carolina as a BEE CITY USA® affiliate.

CN14 Amanda Bunce, Current Planning Manager

Motion to approve Resolution reaffirming Sarah Van Every as a Wake County Review Officer subsequent to her changing her name from Sarah M. Rayfield to Sarah Van Every. She is already recognized as a Wake County Review Officer in order to certify that each map and plat presented to the Wake County Register of Deeds for recording satisfies the statutory requirements for recording.

CN15 Russell Dalton, Senior Transportation Engineer

Motion to adopt a Resolution to Support Vision Zero Apex.

CN16 Drew Havens, Town Manager

Motion to approve amending the current Apex Farmers Market Special Event Permit to allow for drive-thru pickup along Seaboard Street on each Saturday, beginning July 11, 2020 and ending April 24, 2021, to close marked parking spaces along the east side of Seaboard Street from 8:00 a.m. until 1:00 p.m. these days, and rescind the prior approval to close the Depot parking lot for the Farmer's Market.

CN17 John Letteney, Chief of Police

Motion to approve Contract for Off-Duty Police Officer Services provided to the Wake County Public School System (WCPSS) and to authorize the Chief of Police to execute the contract.

CN18 John Letteney, Chief of Police

Motion to approve NC Governor's Highway Safety Program Local Government Resolution.

CN19 Dennis Brown, Construction Project Manager

Motion to approve the renewal of lease with NC SECU and authorization for the Town Manager to sign lease for new ATM to be located in the new Mason Street parking lot near the Community Center.

CN20 Eric Neumann

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement and a Utility Relocation Agreement between the Town and NCDOT. Remove overhead fiber line and relocate to underground.

CN21 Drew Havens, Town Manager

Motion to approve an ordinance to amend the Apex Town Code Chapter 20 related to Towing.

CN22 Donna B. Hosch, Town Clerk

Motion to approve Apex Tax Report

REGULAR MEETING AGENDA

Mayor Gilbert will call for additional Agenda items from Council or Staff and set the Regular Meeting Agenda prior to Council actions.

PUBLIC FORUM

Public Forum allows the public an opportunity to address the Town Council. The speaker is requested not to address items that appear as Public Hearings scheduled on the Regular Agenda. The Mayor will recognize those who would like to speak at the appropriate time. Large groups are asked to select a representative to speak for the entire group. Comments must be limited to 3 minutes to allow others the opportunity to speak.

PUBLIC HEARINGS

PH1 Sarah Van Every, Senior Planner

Public Hearing and possible motion to approve Rezoning Application #20CZ05 West Village PUD Amendment. The applicant, Josh Decker, McAdams Company, seeks to rezone approximately 35.36 acres located at 2412 Kelly Road (PIN 0731331798) from Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33) to Planned Unit Development-Conditional Zoning (PUD-CZ).

PH2 Shelly Mayo, Planner II

Quasi-Judicial Public Hearing and possible motion regarding a revised Major Site Plan for 540 Flex and Business Park located at 1600 Olive Chapel Road. The subject properties are identified on Wake County Tax Maps as PINs 0732235461 & 0732234710.

PH3 Shannon Cox, Long Range Planning Manager

Public hearing and possible motion regarding proposed amendments to the Transit Plan map and the Thoroughfare and Collector Street Plan map of the Comprehensive Transportation Plan.

PH4 Amanda Bunce, Current Planning Manager

Public Hearing and possible motion to approve an amendment to the 2045 Land Use Map and Rezoning Application #20CZ01 Depot 499 PUD. The applicant, Stephen Dorn, Lennar, seeks to amend the 2045 Land Use Map classification of approximately 5.41 acres, a portion of 0 Apex Barbecue Road (PIN 0731761944), from Office Employment to High Density Residential and to rezone approximately 200.8 acres located at 0 Kelly Road; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem Street; 0 and 6401 Apex Barbecue Road from Residential Agricultural (RA) and Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01) to Planned Unit Development-Conditional Zoning (PUD-CZ).

PH5 Amanda Bunce, Current Planning Manager

Public Hearing and possible motion regarding various amendments to the Unified Development Ordinance.

OLD BUSINESS

UNFINISHED BUSINESS

NEW BUSINESS

NB1 Nicole Dozier, Mayor Pro-Tem

Possible Motion to amend the Town's Personnel Policies to include June 19, Juneteenth, as a paid Town Holiday for employees.

CLOSED SESSION

WORK SESSION

ADJOURNMENT

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter(s): Donna Hosch, Town Clerk

Department(s): Office of the Town Clerk

Requested Motion

Motion to approve Minutes of the June 2, 2020 and June 16, 2020 Regular Council Meetings

Approval Recommended?

Yes

Item Details

Attachments

- June 2, 2020 Regular Council Meeting Minutes
- June 16, 2020 Regular Council Meeting Minutes

REGULAR TOWN COUNCIL MEETING

Tuesday, June 02, 2020 at 6:00 PM
Council Chamber at Apex Town Hall, 73 Hunter Street

Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Nicole L. Dozier
Council Members: Brett D. Gantt; Audra M. Killingsworth; Cheryl F. Stallings; Terry Mahaffey
Town Manager: Drew Havens | Assistant Town Managers: Shawn Purvis and Marty Stone
Town Clerk: Donna B. Hosch, MMC | Town Attorney: Laurie L. Hohe

In attendance were Mayor Jacques K. Gilbert, Mayor Pro Tem Nicole L. Dozier, and Council Members Brett D. Gantt, Audra M. Killingsworth, Cheryl F. Stallings, and Terry Mahaffey. Also in attendance were Town Manager Drew Havens, Assistant Town Manager Shawn Purvis, Town Clerk Donna B. Hosch (remotely), and Town Attorney Laurie L. Hohe

COMMENCEMENT

Mayor Gilbert called the meeting to order, Pastor Jahmar Cobb of Oak Grove Missionary Baptist Church gave the Invocation, and Mayor Gilbert led the Pledge of Allegiance.

PRESENTATIONS

PR1 Mayor Pro Tem Nicole Dozier
Environmental Stewardship Award to the Apex Mosque

Mayor Pro Tem Dozier stated the purpose of the award, encouraging all to be good stewards of our environment. Mayor Pro Tem Dozier, Mayor Gilbert, and Council Member Gantt presented the Award to Mr. Asif Ansari. Mr. Ansari thanked Council on behalf of the Mosque for the award, stating that all in the Mosque were behind this initiative. Concern for saving the environment is all our concern. He encouraged all to consider going this route as well.

PR2 Mayor Jacques Gilbert
Proclamation – Community and Firearms Safety Awareness Day

Council Member Stallings stated the Proclamation was the product of the time and effort of several individuals passionate about the Town and wanting the best for Apex. She thanked all for their participation. All Council Members shared in the reading of the Proclamation.

PR3 Mayor Jacques Gilbert

Proclamation – Love and Unity Month

Mayor Gilbert spoke about the pandemic currently facing us and the situation currently existing due to police action. He spoke about his passion for unifying people and this community. This was about all coming together in unity to promote change.

Council Member Killingsworth gave remarks related to June being LGBTQIA month, calling for all to become more understanding and more accepting of this dynamic group of people. She spoke of the beauty and diversity of LGBTQIA individuals. Council Member Killingsworth led as all Council followed to share in the reading of the Proclamation.

Mayor Gilbert noted that Ms. Joanna Emery helped in construction of the Proclamation.

CONSENT AGENDA

CN1 Amanda Bunce, Current Planning Manager

Statement of the Apex Town Council pursuant to G.S. 160A-383 addressing action on the various Unified Development Ordinance (UDO) Amendments of May 19, 2020

CN2 Amanda Bunce, Current Planning Manager

Set the Public Hearing for the June 16, 2020 Town Council meeting regarding various amendments to the Unified Development Ordinance as requested by Planning staff

CN3 Sarah Van Every, Senior Planner

Resolution Directing the Town Clerk to Investigate Petition Received, Certificate of Sufficiency by the Town Clerk, and Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Tony Karr, Timothy V. Streeter, Billy Ray Wolfe, Sarah W. Ronk, Willie T. Wolfe, Jr., Donna G. Wolfe, William D. Bunce II and Gail E. Bunce and John Terry Paton, (Rezoning Case #19CZ22 Wolfe Properties PUD) property containing 44.357 acres located at 1209, 1401, 1405 and 1409 Wimberly Road and 1000 & 1012 Double Helix Road, Annexation #677 into the Town's corporate limits

CN4 Sarah Van Every, Senior Planner

Set Public Hearing for the June 16, 2020 Town Council meeting regarding Rezoning Application #19CZ22 Wolfe Properties PUD and Ordinance. The applicant, Josh Swindell, Envision Homes, LLC., sought to rezone approximately 43.52 acres located at 1405, 1409, 1209, & 1401 Wimberly Road and 1012 & 1000 Double Helix Road (PINs 0722595328, 0722598851, 0723406397, 0723504154, 0723504154, 0723508938, &

0723601654) from Wake County R-80W and Rural Residential (RR) to Planned Unit Development-Conditional Zoning (PUD-CZ).

CN5 Sarah Van Every, Senior Planner

Set Public Hearing for the June 16, 2020 Town Council Meeting regarding Rezoning Application #19CZ23 2524 & 2604 Kelly Road. The applicant, Brian Griffith, sought to rezone approximately 2.1 acres located at 2524 & 2604 Kelly Road (PINs 0731433004 & 0731424892) from Rural Residential (RR) to Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ).

CN6 Shelly Mayo, Planner II

Resolution Directing the Town Clerk to Investigate Petition Received, Certificate of Sufficiency by the Town Clerk, and Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex ATM Development, LLC (New Hill Holleman Road) property containing 0.981 acres located at 3036 New Hill Holleman Road, Annexation #685 into the Town's corporate limits

CN7 Shelly Mayo, Planner II

Set the Public Hearing for the June 16, 2020 Town Council meeting regarding Rezoning Application #20CZ02 3036 New Hill Holleman Road and Ordinance. The applicant, Alonzo Wilson for ATM Development, sought to rezone approximately 0.981 acres from Wake Co. GB to Medium Density-Conditional Zoning (MD-CZ). The proposed zoning is located at 3036 New Hill Holleman Road.

CN8 Lauren Staudenmaier, Planner I

Set Public Hearing for the June 16, 2020 Town Council meeting regarding Rezoning Application #20CZ03 James Street. The applicant, Jones & Cnossen Engineering, PLCC., sought to rezone approximately 4.09 acres for the property located at 1200 James Street (PIN 0741789012), from Medium Density Residential (MD) to Tech/Flex-Conditional Zoning (TF-CZ).

CN9 Dianne Khin, Director of Planning and Community Development

Resolution Directing the Town Clerk to Investigate Petition Received, Certificate of Sufficiency by the Town Clerk, and Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Jason Lucia and Trish Klenow (1121 Twin Creek Road) property containing 2.938 acres located at 1121 Twin Creek Road, Annexation #689 into the Town's corporate limits

CN10 Dianne Khin, Director of Planning and Community Development

Resolution Directing the Town Clerk to Investigate Petition Received, Certificate of Sufficiency by the Town Clerk, and Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Jainix, LLC (Jainix Green) property containing 6.5791 acres located west of 540 and south of Spire Bend (Greenmoor subdivision) Annexation #690 into the Town's corporate limits

CN11 Vance Holloman, Finance Officer
Budget Ordinance Amendment No. 15 and Capital Project Ordinance Amendment No. 2020-15 to appropriate the proceeds of the Town's recent sale of general obligation bonds

CN12 Michael Deaton, Water Resources Director
Emergency interconnection between the Town's water system and Aqua North Carolina, Inc. water system that currently serves the Merion public water system in the area near Colby Chase Road

CN13 Mary Beth Manville, Human Resources Director
Five (5) year contract with Cornerstone OnDemand, and authorization for the Town Manager to execute the same, for Recruiting, Performance and Learning Management Software Services

CN14 Vance Holloman, Finance Officer
Designation of J. P. Morgan Chase Bank as an official depository for the Town of Apex

CN15 Mary Beth Manville, Human Resources Director
FY20-21 Position Classification Plan and Salary Ranges

CN16 Mary Beth Manville, Human Resources Director
Approval and amendment of Personnel Policies

CN17 Vance Holloman, Finance Director
Resolution authorizing the Wake County Revenue Director to collect taxes on behalf of the Town of Apex

CN18 Michael Deaton, Water Resources Director
Fee-in-lieu for 169 linear feet of 8" gravity sewer as part of the Smith Farm Phase 2 development. Due to environmental impacts, this section of sewer cannot be permitted and built at this time. Once development proceeds upstream and this section of sewer is required, the fee-in-lieu funds can be utilized.

CN19 Colleen Merays, Downtown and Small Business Development Coordinator
Apex Chamber of Commerce and Town of Apex special event permit application for a banner and yard sign. Signage to include (25+/-) yard type signs installed at various intersections and locations around Apex, and a banner hung across N. Salem Street.

CN20 Vance Holloman, Finance Director
Budget Ordinance Amendment No. 16 which appropriates fund balance in the Recreation Capital Reserve Fund for the purpose of transferring those funds to the Recreation Capital Project Fund

CN21 Mike Deaton, Water Resources Director
Capital Project Ordinance Amendment No. 2020-16 to appropriate funds for the Inflow and Infiltration Reduction Program & Filter Upgrades Project

CN22 Keith McGee, Fire Chief

Authorization for the Town Manager to sign a Right of Entry Permit between Wake County and the Town to allow a training exercise between Apex, Cary and Morrisville Fire Departments to be held on the Wake County owned parcel of land behind Fire Station 3 (736 Hunter Street)

Mayor Gilbert called for a motion to adopt the Consent Agenda. Council Member Killingsworth made the motion; Council Member Gantt seconded the motion. The motion carried by a 5-0 vote.

REGULAR MEETING AGENDA

Mayor Gilbert called for a motion to adopt the Regular Meeting Agenda. Council Member Stallings made the motion; Council Member Killingworth seconded the motion. The motion carried by a 5-0 vote.

PUBLIC FORUM

Bridgett Taylor spoke on the fiscal year 2020/2021 Budget and Fee Schedule, stating there was no reason to raise any rates seeing as reserve monies are set aside every year. Those savings could be used to meet the budget needs. Too many residents are trying to recover from the shutdown and shouldn't be burdened with additional fees.

Phil Welch offered words of thanks and appreciation for keeping greenways open the past few months. Doing so has been a lifesaver for exercise and contemplation. The greenways were maintained, his bumping into staff dumping trashcans, etc. He even bumped into Council Members along Beaver Creed Greenway in particular. Even though there may have been risks, his experience was that residents were sensitive to keeping distances and being friendly and being sensitive to the conditions we are under due to COVID-19.

PUBLIC HEARINGS

There were no Public Hearings for consideration.

OLD BUSINESS

There were no Old Business items for consideration.

UNFINISHED BUSINESS

There were no Unfinished Business items for consideration.

NEW BUSINESS

NB1 Colleen Merays, Downtown and Small Business Development Coordinator

Closure of up to 30 on-street parallel parking spaces along N. Salem Street from Saunders St. to Chatham St. to allow for extended outdoor dining and alcohol consumption as permitted by ABC Law or regulations, and to approve an ordinance temporarily modifying Town Code Sections 14-14 and 18-11 as they relate to sidewalk dining and alcohol consumption on public streets and sidewalks through September 30, 2020.

Staff stated her department was looking to extend and amend Town Ordinances per Executive Order by Governor Cooper to allow for this request. She asked for one amendment – for this to extend through September 18 to allow for Peak Fest to have the spaces available for them during their event. Responding to Council, staff explained the unassigned spaces process. The spaces would be considered private dining spaces and comply with government guidelines. The spaces would be the personal design of the businesses, plans for which would come back to TRC to ensure adherence to town guidelines.

Staff stated that a letter from the ADBA which included retail businesses and restaurants fully supported the request. All conversations were positive, and all were looking forward to helping their neighbors to head towards 'normal'.

Council stated the change of date was a smart thing to do. Responding to Council, staff stated one day would be enough for clean up after Peak Fest and that staff would work with the restaurants to ensure their items are moved. Staff stated that if July 4th events occur, we would work within whatever parameters to accommodate the event. Staff stated the idea was to get broad authority to close the spaces for this length of time. If another event does occur, we would let the restaurants know that they would need to move their items and we would move the barricades.

Responding to Council, staff stated that after going through TRC approval, it would take about a week for staff to have the spaces become usable by the restaurants. The spaces would be closed down all at the same time.

Mayor Gilbert called for a motion. Council Member Killingsworth made a motion to approve the request with the September 18th change of date;

Council Member Dozier seconded the motion.

Council stated she was glad that we were able to do this for the businesses and that the ADBA was supportive. She was looking forward to this being a permanent situation where people could safely engage with the community.

Council stated this felt like a dry run for coming years and that this would be great for businesses. This will help restaurants who are only allowed 50% inside capacity; the expansion will allow them to almost meet their previous capacity. Upcoming ABC license changes will also help.

Council stated the parklet was a nice beginning experiment, this now coming full scale. He was looking forward to it becoming permanent.

The motion carried by a 5-0 vote.

NB2 Shawn Purvis, Assistant Town Manager

FY2020-2021 Annual Budget Ordinance and FY2020-2021 Fee Schedule

Staff gave a brief update on changes made between the Workshop and now. He stated we would not depend on grants. We will plan for them, but they would not be set up until funds become available. Responding to Council, staff explained the cuts/changes in capital items.

Mayor Gilbert called for a motion. Council Member Gantt made a motion to adopt the Budget Ordinance and Fee Schedule; Council Member Dozier seconded the motion.

Council thanked staff for the input he felt he was able to make into the budget. The process was smooth, and he appreciated the level of engagement. Staff put together something 'miraculous' while managing to keep the tax rate flat. He spoke about supporting the tax increase, which was partly directed by the voters.

Council stated the budget is an indication of the priorities of Council collectively. He was excited about the projects and spoke about being able to see immediate benefits of spending locally. The budget affects the day to day lives of the community, and Council stated he enjoyed having a strong impact on the local level.

Council agreed with the presented Council comments. The budget process does reflect Council priorities and citizen input. She thanked staff and Council for the collaborative efforts.

Council was also in agreement with presented comments. Everyone shared in things that the people wanted to see. The budget represented everyone paying to help all community members.

Council stated she agreed that the budget reflected the value of the Council and citizens. She was excited about the need to invest in affordable housing and hoped that Apex would be a leader in this and other areas.

The Mayor stated that Apex, speaking of being a leader, was the leader in adopting its budget before anyone else in Wake County.

The motion carried by a 5-0 vote

NB3 Shawn Purvis, Assistant Town Manager
FY2020-2021/24 Capital Improvement Program and associated capital project ordinances

Staff stated these projects were not part of the operating budget, that these were things which would carry over multiple years. He explained some projects would be added to and some would be new. We want to get these set up so that we can get started at the appropriate time. These projects may be the hardest to prioritize and staff thanked everyone for their guidance.

Council asked about the Salem and Saunders Streets projects. Staff stated Fund Balance was appropriated to keep these moving as requested by Council. He explained the timing perspective and logistics issues of the projects.

Council stated he was anxious to get something going on the downtown project; he did not want the projects to languish. He asked about the Tunstall House renovation and the timeline for this. He did not want to see the house decay for another year. Staff explained the steps to the renovation and noted that discussions would need to take place for the use of the property. He stated that the project would move forward over consecutive years. He spoke briefly about the property needing to conform to historic guidelines.

Council asked if there was any idea on grant funding for the Peakway project, staff stating that this was indefinite at this point. However, there was an update forthcoming after which there would be a work session to let Council know where projects would be heading.

Mayor Gilbert called for a motion. Council Member Killingsworth made a motion to adopt the Program and Ordinances; Council Member Stallings seconded the motion.

The motion carried by a 5-0 vote.

CLOSED SESSION

There were no Closed Session items for consideration.

WORK SESSION

There were no Work Session items for consideration.

ADJOURNMENT

With there being no further business and without objection from Council, Mayor Gilbert adjourned the meeting.

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

ATTEST:

_____
Jacques K. Gilbert, Mayor

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This meeting was additionally conducted by use of simultaneous communication

REGULAR TOWN COUNCIL MEETING

Tuesday, June 16, 2020 at 6:00 PM
Council Chamber at Apex Town Hall, 73 Hunter Street

Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Nicole L. Dozier
Council Members: Brett D. Gantt; Audra M. Killingsworth; Cheryl F. Stallings; Terry Mahaffey
Town Manager: Drew Havens | Assistant Town Managers: Shawn Purvis and Marty Stone
Town Clerk: Donna B. Hosch, MMC | Town Attorney: Laurie L. Hohe

In attendance were Mayor Jacques K. Gilbert, Mayor Pro Tem Nicole L. Dozier, and Council Members Brett D. Gantt, Audra M. Killingsworth, Cheryl F. Stallings, and Terry Mahaffey. Also in attendance were Town Manager Drew Havens, Assistant Town Manager Shawn Purvis, Town Clerk Donna B. Hosch (remotely), and Town Attorney Laurie L. Hohe

COMMENCEMENT

Mayor Gilbert called the meeting to order, read a statement of diversity and inclusion related to religion, and gave the Invocation followed by asking for a moment of silent reflection. Mayor Gilbert led the Pledge of Allegiance.

PRESENTATIONS

PR1 Mayor Jacques Gilbert

Presentation of National Parks and Recreation Month Proclamation

Mayor Gilbert read the Proclamation before presenting it to the 'legendary' Parks and Recreation Director John Brown. The Mayor thanked Mr. Brown and complimented his amazing staff. Mr. Brown stated he was blessed to have a supportive community and elected officials and for having a great team with which to work.

CONSENT AGENDA

CN1 Amanda Bunce, Current Planning Manager

Set Public Hearing for the July 21, 2020 Town Council meeting regarding an amendment to the 2045 Land Use Map and Rezoning Application #20CZ01 Depot 499 PUD. The applicant, Stephen Dorn, Lennar, sought to amend the 2045 Land Use Map

classification of approximately 5.41 acres, a portion of 0 Apex Barbecue Road (PIN 0731761944), from Office Employment to High Density Residential and to rezone approximately 200.8 acres located at 0 Kelly Road; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem Street; 0 and 6401 Apex Barbecue Road from Residential Agriculture (RA) and Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01) to Planned Unit Development-Conditional Zoning (PUD-CZ)

CN2 Sarah Van Every, Senior Planner

Set Public Hearing for the July 21, 2020 Town Council meeting regarding Rezoning Application #20CZ05 West Village PUD Amendment in order to revise a zoning condition related to a buffer. The applicant, Josh Decker, McAdams Company, sought to rezone approximately 35.36 acres located at 2412 Kelly Road (PIN 0731331798) from Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33) to Planned Unit Development-Conditional Zoning (PUD-CZ).

CN3 Amanda Bunce, Current Planning Manager

Set the Public Hearing for the July 21, 2020 Town Council meeting regarding various amendments to the Unified Development Ordinance

CN4 John M. Brown, Director

Amend section 15-10 of the Town Code of Ordinances to approve the use of roller skates at the Apex Skate Plaza

CN5 Vance Holloman, Finance Director

Resolution to amend the Town of Apex Local Government OPEB Trust Agreement to reflect changes in the personnel policy that were adopted by Council on June 2, 2020

CN6 Adam Stephenson, Engineering Supervisor

Award construction contract for 2020 Road Rehabilitation Project (R-20-4) to FSC II, LLC, dba Fred Smith Company and authorization for the Town Manager to execute the contract on behalf of the Town

CN7 Keith McGee, Fire Chief

Approval for the Town Manager to sign a one-year extension of the Fire Protection Agreement between Wake County and the Town of Apex

CN8 Keith McGee, Fire Chief

Authorization for the Town Manager to sign an agreement with the City of Raleigh to provide technician level hazardous materials response by the Raleigh Fire Department's Hazardous Materials Response Team within the Town of Apex

CN9 Donna Hosch, Town Clerk

Apex Tax Report dated 5/13//2020

CN10 Donna Hosch, Town Clerk

Minutes of the Regular Council Meeting of May 19, 2020 and the Budget Workshop of May 26, 2020

CN11 Eric Neumann

Capital Project Ordinance Amendment No. 2020-22 to appropriate funds for the Laura Duncan substation

CN12 Vance Holloman, Finance Officer

Capital Project Ordinance Amendment No. 2020-24 appropriating funds for various capital projects and Budget Amendment No. 17 which provides funding for some of those projects

CN13 Mike Deaton, Water Resources Director

Capital Project Ordinance Amendment No. 2020-23 to appropriate funds for the Lawrence Crossing Sewer Rehab project and to approve Budget Amendment No. 18 which will appropriate funds for a portion of the cost

CN14 Drew Havens, Town Manager

Appointment of the following persons to the Parks, Recreation, and Cultural Resources Advisory Commission for three year terms effective July 1, 2020 and ending June 30, 2023:

Lisa Gerboth – Initial Appointment
Tom Colwell - Reappointment
Alan Buck - Reappointment

and, appointment for a one year term July 1, 2020 and ending June 30, 2021 as

Chair: Renee Pheifer - Reappointment
Vice-Chair: Alan Buck - Reappointment

and, appointment of the following persons to the Public Art Committee for three year terms effective July 1, 2020 and ending June 30, 2023:

Sean Durham - Reappointment
Lafayette Trawick – Initial Appointment

and, appointment for a one year term July 1, 2020 and ending June 30, 2021 as

Chair: Tom Colwell - Reappointment
Vice-Chair: Bethany Bryant - Reappointment

Mayor Gilbert called for a motion to adopt the Consent Agenda. Council Member Stallings made the motion; Council Member Dozier seconded the motion.

The motion carried by a 5-0 vote.

REGULAR MEETING AGENDA

Mayor Gilbert stated there was an additional request to the Closed Session items, the item to state: pursuant to N.C.G.S. §143-318.11(a)(3) to preserve attorney-client privilege and pursuant to N.C.G.S. §143-318.11(a)(1) to prevent the disclosure of information that is

privileged or confidential pursuant to N.C.G.S. §143-318.10(e) and pursuant to N.C.G.S. §143-318.11(a)(5) to establish and instruct Town staff regarding the Town's negotiating position with respect to real property.

Mayor Gilbert called for a motion to adopt the Regular Meeting Agenda.
Council Member Killingsworth made the motion with the Closed Session addition;
Council Member Stallings seconded the motion.

Council Member Gantt stated he planned to make a process-based vote against the Regular Agenda. He felt New Business 03 was more appropriate as a Proclamation, and he objected to the timing being near the end of the month when it would be difficult for educational or celebratory events to be planned.

Mayor Gilbert re-called for a motion following Council Member Gantt's comments.
Council Member Mahaffey made the motion to adopt the Regular Meeting Agenda;
Council Member Dozier seconded the motion.
Council Members Mahaffey, Dozier, Killingsworth, and Stallings voted in the affirmative; Council Member Gantt voted in the negative.
The motion carried by a 4-1 vote.

PUBLIC FORUM

Tahira Hyman spoke about several incidents occurring at Apex Friendship High School involving racial comments made by fellow students. She stated the personal, negative effects of the comments. Ms. Hyman proposed launching a Town of Apex Diverse Committee to focus on outreach projects in the community that target young minority men and women, especially the Black community. It would also provide volunteer opportunities to students as well as allowing more Black owned business to come to Apex. Ms. Hyman planned for the Committee to become a staple in Apex. She asked Council to become a part of the solution.

Allison Best thanked Council and staff for all that they do. She spoke about a safety issue on her street which backs up to an unpaved County road. It is a cut through for the middle and high schools and has seen increased traffic. She has worked with Apex PD and the County to get the road paved and has had no success. Ms. Best exampled what happens on the street. Her community asked for a temporary fix – a pedestrian barricade until the County could address the road condition.

Anthony Barnes, Jr., representing Black Lives Matter Apex, stated he was one of the organizers of the June 5th protest march in Apex. He outlined the key concepts he believed needed to be achieved in order to make progress towards a better future for all Americans. Mr. Barnes gave a brief outline of his background and his relationship with his White girlfriend and speaking with her parents about what actions he would take if ever pulled over while driving. He talked about African Americans' fear of the police and how he hoped this would not carry over to his family members. Mr. Barnes stated now is the time for change and urged Apex PD to look at use of force polices and the targeting of Black Americans. He wanted Apex PD to be a model for the county. Mr. Barnes then stated his demands for change.

Rev. Tracy Johnson, representing Felton Grove Baptist Church, spoke about racial injustice and her experiences with such. She spoke about how she was seen as a threat, inferior, and less than. She urged Council to make decisions of the Town for all residents. Rev. Johnson talked about being told it was not in Apex's and the County's jurisdiction to speak to the youth at her church.

Brianna Baker spoke about the similarities between her and Ayanna Jones who was shot and killed by the police while sleeping on her grandmother's couch. She was present to speak on behalf of all those who barely got to live. Ms. Baker spoke about Black women being the unsung heroes of her generation. She pleaded for the protection of Black women.

Amber Johnson, who attends Greater Felton Grove Missionary Baptist Church, related her story about how students are being taught in relation to racial injustice and how she offered a solution which was basically ignored. She asked Council if they were a part of the problem or a part of the solution.

Stancey Dunn spoke about profiling and being a Black man in America. Police officers now make him nervous, and he wondered if he would be the next hash tag because of the way he looks. Mr. Dunn questioned how the Black community could regain trust in police officers. He does not trust a single one, even though he knows there are good cops. He wanted to regain trust for police officers in Apex, in particular, because this is where he goes to church and where he is employed.

Melissa Moss Oliver, representing Felton Grove Baptist Church, stated she was an assistant principal in the Wake County school system. She provided her family history living here in Apex and stated that she believes Apex is still a wonderful place to live. Ms. Oliver presented her early experiences of racism in Apex. She sees Apex on social media trying

to move in the right direction. Ms. Oliver asked the Mayor to continue taking the stand he was taking. She loves her home town of Apex and still says it's the peak of good living.

Mallory Harris talked about her family teaching her the value of diversity and celebrating differences. She spoke about racism being present, in many forms. Ms. Harris spoke about her experience with racial injustice in school. Lotorius Adams, representing Felton Grove Baptist Church, quoted James Baldwin and spoke about the difficult time the world is going through. She spoke about what she is trying to instill in her daughter. Ms. Adams stated we should all be playing by the same rules in order to not cause unjust loss of life. She spoke about racism being a social disease and how it can infect people in the community. Ms. Adams stated she spoke for 'e-racism'. She spoke about her daughter's experiences in school.

Raven Baker, member of Greater Felton Grove Missionary Baptist Church, spoke about wanting to be a police officer but now changing her mind because of being in a country where all are not forced to be treated fairly. She would now focus on basketball.

Mayor Gilbert stated all comments were well-received by Council and staff and that we are committed to doing what we need to do to make necessary changes.

Jennifer Job submitted comments questioning why Apex has not signed an ongoing proclamation declaring LGBTQ communities welcome and protected and declaring June as Pride Month. She asked that the LGBTQ communities be acknowledged as well as Pride Month.

Kevyn Creech submitted comments related to June being Pride Month. He agreed with the love and unity proclamation, which did mention the LGBTQ community. However, Pride Month was not centered in the proclamation. He spoke about one of his experiences with an LGBTQ youth and the purpose of Pride Month. He asked Apex to take the next opportunity to proclaim June as Apex Pride Month.

Vivian Magarino, art teacher at Apex Elementary, submitted comments on behalf of her students proposing a sustainability partnership between the school and the Town. They have launched a garden club that teaches a variety of subjects. They are hoping it becomes fiscally sustainable. Ms. Magarino spoke about their farm to table initiative and the research activities they went through. She was happy to hear that the Town has approved a Sustainability Coordinator and hoped they would be able to work in partnership with that person, using the school as a pilot for zero trash sustainability. Ms. Magarino outlined how they hoped the initiative would grow.

Council Member Killingsworth was excused from the dais.

Council Member Killingsworth returned to the dais.

PUBLIC HEARINGS

PH1 Sarah Van Every, Senior Planner

Ordinance on the Question of Annexation – Apex Town Council's intent to annex Tony Karr, Timothy V. Streeter, Billy Ray Wolfe, Sarah W. Ronk, Willie T. Wolfe, Jr., Donna G. Wolfe, William D. Bunce II and Gail E. Bunce and John Terry Paton, (Rezoning Case #19CZ22 Wolfe Properties PUD) property containing 44.357 acres located at 1209, 1401, 1405 and 1409 Wimberly Road and 1000 & 1012 Double Helix Road, Annexation #677 into the Town's corporate limits.

AND

PH2 Sarah Van Every, Senior Planner

Rezoning Application #19CZ22 Wolfe Properties PUD and Ordinance. The applicant, Josh Swindell, Envision Homes, LLC., sought to rezone approximately 43.52 acres located at 1405, 1409, 1209, & 1401 Wimberly Road and 1012 & 1000 Double Helix Road from Rural Residential (RR) & Wake County R-80W to Planned Unit Development-Conditional Zoning (PUD-CZ).

Staff oriented Council to the sites and details of the requests. A neighborhood meeting was conducted. The PUD will address economy housing. The Parks, Recreation, and Cultural Resources Commission recommended a land dedication contiguous to the future park property and a public greenway easement. Josh Swindell, Envision Homes, spoke to the reason for the odd shape of the entrance. Council asked about solar and the energy efficiency of the project. Council asked about tree replacement, which staff stated the applicant would speak to and how it would impact the ultimate layout. Staff and the Planning Board recommended approval with additional conditions offered by the applicant.

Amanda Bambrick, Attorney with the Morningstar Law Group, gave a brief overview of the process. She spoke about trees and their understanding that this may be the largest tree replacement process so far. She spoke about the economy housing and how these will fit with the other units. Ms. Bambrick explained the needed easements. All homes will be fitted with conduit for future solar panels, and all will have an energy star certification. For those who wish, an electric charging station will be installed in the garage. All conditions related to the fire station were aligned with what the Town envisions. A sidewalk gap would be addressed with a fee in lieu with potential connectivity in the future. Their team could

not address a second greenway in the northeastern corner, and Ms. Bambrick explained why.

Responding to Council about the Wake County median income, Mr. Swindell stated this was a fee simple offering and spoke about what could and could not be controlled. After reviewing how the condition was written, he stated they would allocate about 25% to the Wake County median income. Ms. Bambrick clarified all homes would be within the energy star certification standards, Mr. Swindell clarifying the added options.

Council asked about charging stations at any future amenities, to which Ms. Bambrick stated there would be no amenities.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public Hearing closed.

Council thanked the applicants for their package and for their collaboration with staff. Council concerns were heard. The package took small steps in the direction the Town wants to go, and he didn't think this was the end of the journey for us. Council talked a bit more about the tree canopy and affordable housing. He wanted to see what more could be done to drive down housing price points.

Council stated she was glad the applicants listened to staff, neighbors, and Council.

Mayor Gilbert called for a motion. Council Member Gantt made the motion to approve the Annexation Ordinance, the Rezoning Application, and the Rezoning Ordinance with the amended conditions and conditions offered by the applicant; Council Member Mahaffey seconded the motion.

Council stated she appreciated the applicant being open to her request and demonstrating being a trail blazer.

Council stated she appreciated the applicant's response to the Town's concerns.

The motion carried by a 5-0 vote.

PH3 Sarah Van Every, Senior Planner

Rezoning #19CZ23 2524 & 2604 Kelly Road. The applicant, Brian Griffith, sought to rezone approximately 2.1 acres located at 2524 & 2604 Kelly Road from Rural Residential (RR) to Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ).

Staff oriented Council to the site. A neighborhood meeting was conducted. Planning staff recommended approval with conditions as offered by the applicant as did the Planning Board.

Responding to Council, staff detailed distance standards for the entrance and stated the entrance would not cause any problems on the roadway. Conversation ensued about property lines and if the entrance would shift at some point in the future.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public hearing closed.

Mayor Gilbert called for a motion. Council Member Killingsworth made the motion to approve the rezoning; Council Member Gantt seconded the motion.

Council stated the entrance was not what was originally expected. He was concerned there would not be an entrance with internal connection and that the entrance would be developed independently of the adjacent village. He ideally wanted to see these developed together; he viewed a substandard outcome.

Council Members Killingsworth, Gantt, Dozier, and Stallings voted in the affirmative; Council Member Mahaffey voted in the negative.
The motion carried by a 4-1 vote.

PH4 Shelly Mayo, Planner II
Ordinance on the Question of Annexation – Apex Town Council's intent to annex ATM Development, LLC (New Hill Holleman Road) property containing 0.981 acres located at 3036 New Hill Holleman Road, Annexation #685 into the Town's corporate limits
AND

PH5 Shelly Mayo, Planner II
Rezoning Application #20CZ02 3036 New Hill Holleman Road and Ordinance. The applicant, Alonzo Wilson for ATM Development, sought to rezone approximately 0.981 acres from Wake County GB to Medium Density-Conditional Zoning (MD-CZ). The proposed zoning is located at 3036 New Hill Holleman Road.

Staff oriented Council to the sites. A neighborhood meeting was conducted. Planning staff recommended approval of the annexation and rezoning; the Planning Board recommended approval of the rezoning.

Responding to Council as to incorporating the homes into the HOA, staff stated this had not yet been finalized. The subdivision is currently under construction, the first plat being

under review. A cul de sac or stub street to the next property would be reviewed when a subdivision plan was received. Staff outlined what we would be looking for in the area regarding residential and commercial. There would be sidewalks.

Alonzo Wilson, applicant, thanked staff for working with him on this request. He asked Council for its support and approval. Responding to Council, staff stated the intent was to support affordable housing. At the moment, there was no condition to offer tree replacement, Mr. Wilson stating he would look at this when the development plan is complete. However, he would consider this. Mr. Wilson offered he does have other properties in the area targeted for affordable housing.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public Hearing closed.

Mayor Gilbert called for a motion. Council Member Killingsworth made the motion to approve the Annexation Ordinance, the Rezoning Application, and the Rezoning Ordinance with the offered conditions; Council Member Gantt seconded the motion.

Council stated he felt this property would be really nice when developed, and that he was excited to see the progress. Council agreed, stating it was a great property to be developed at this time.

The motion carried by a 5-0 vote.

PH6 Lauren Staudenmaier, Planner I

Rezoning Application #20CZ03 James Street. The applicant, Jones & Cnossen Engineering, PLCC, seeks to rezone approximately 4.09 acres for the property located at 1200 James Street (PIN 0741789012), from Medium Density Residential (MD) to Tech/Flex-Conditional Zoning (TF-CZ)

Staff oriented Council to the site. Planning staff and the Planning Board recommended approval with additional conditions offered by the applicant. Responding to Council, staff explained the meaning of a pilot plant.

Patrick Kiernan, Jones & Cnossen Engineering, representing the applicant, thanked staff for their cooperation. A neighbor concern about addressing off of Energy Drive had been resolved. A condition had been added related to site lighting. He addressed a flooding issue as it related to the pond, indicating resolution would be to drain the pond. Responding to Council, Mr. Kiernan spoke to the design of the site in relation to the land after the pond was drained. He did not envision a smaller pond going back on the property.

Mayor Gilbert declared the Public Hearing open.

The Town Manager stated a comment from Angie Gardner had been received prior to the applicant addressing concerns stated above. The recorded comment was presented.

Mayor Gilbert declared the Public Hearing closed.

Mayor Gilbert called for a motion. Council Member Killingsworth made the motion to approve the rezoning; Council Member Gantt seconded the motion.

Council expressed appreciation to the applicant for listening to neighbor concerns.

Council asked if vehicles associated with the request would touch the cul se sac on James Street, the applicant stating the road would only be used when draining the pond. He explained the location of the entrances for construction traffic.

Council asked if the property value question by a resident had been mitigated, Mr. Kiernan stating it had been.

The motion carried by a 5-0 vote.

Mayor Gilbert called for a ten-minute recess.

PH7 Dianne Khin, Director of Planning and Community Development
Ordinance on the Question of Annexation – Apex Town Council's intent to annex Jason Lucia and Trish Klenow (1121 Twin Creek Road) property containing 2.938 acres located at 1121 Twin Creek Road, Annexation #689 into the Town's corporate limits

Staff oriented Council to the site and stated staff recommended approval.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public Hearing closed.

Mayor Gilbert called for a motion. Council Member Dozier made the motion to approve the Ordinance; Council Member Killingsworth seconded the motion.
The motion carried by a 5-0 vote.

PH8 Dianne Khin, Director of Planning and Community Development
Ordinance on the Question of Annexation – Apex Town Council's intent to annex Jainix, LLC (Jainix Green) property containing 6.5791 acres located west of 540 and

south of Spire Bend (Greenmoor subdivision) Annexation #690 into the Town's corporate limits

Staff oriented Council to the site and stated staff recommended approval.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public Hearing closed.

Mayor Gilbert called for a motion. Council Member Gantt made the motion to approve the Ordinance; Council Member Stallings seconded the motion.
The motion carried by a 5-0 vote.

PH9 Amanda Bunce, Current Planning Manager
Various amendments to the Unified Development Ordinance as requested by Planning staff

Staff oriented Council to the amendments, stating the Planning Board recommended approval.

Mayor Gilbert declared the Public Hearing open. With no one wishing to speak, Mayor Gilbert declared the Public Hearing closed.

Mayor Gilbert called for a motion. Council Member Dozier made the motion to approve the amendments; Council Member Killingsworth seconded the motion.
The motion carried by a 5-0 vote.

OLD BUSINESS

There were no Old Business items for consideration.

UNFINISHED BUSINESS

There were no Unfinished Business items for consideration.

NEW BUSINESS

NB1 John M. Brown, Director
Craig Setzer, Park Operations Manager
Implementation of Adopt-A-Park / Adopt-a-Trail Program

Staff detailed how these programs would allow citizens to be more involved by including them in the cleanup of the parks. Staff stated he works with groups wanting to do things to keep the parks nice. He showed examples of signage that would be placed with the names of those selected to participate. Responding to Council, staff stated that If a business wanted to install public art in the parks or along the greenway, it would follow the Public Art Plan. If the request was from a neighborhood, for example, such a request would be brought before Council for approval.

Responding to Council, staff stated that no groups would be excluded from participating but priority would be given to Apex-based groups and residents. Staff further explained the application process, stating that no one or no groups have been turned down as yet. Council thanked staff for this great idea!

Mayor Gilbert called for a motion. Council Member Stallings made the motion to approve the Program; Council Member Dozier seconded the motion. The motion carried by a 5-0 vote.

NB2 Drew Havens, Town Manager

$20,000 contribution to the Apex Chamber of Commerce/Apex Sunrise Rotary Club Angel Fund, a $20,000 contribution to the Apex Chamber of Commerce for their operational expenses, and Budget Amendment #19 to appropriate Fund Balance to cover these unbudgeted expenditures

Staff outlined the Angel Fund and stated that the Chamber would be looking to make grants fairly soon. The additional operational expenses could be explained by Ms. Flaherty.

Shannon Flaherty, Executive Director of the Apex Chamber of Commerce, spoke more about the Angel Fund for which funding is short. They went through the applications again yesterday; they are wanting to do their part to assist affected businesses. The Mayor pointed out one doesn't need to be a Chamber member to receive funding. It's more about the businesses.

Ms. Flaherty spoke about the community-minded projects in which they're involved. Some Chamber members cannot renew because of the economy situation, but they were not being removed from the process because of this. Therefore, revenues are down. Ms. Flaherty stated they would be grateful for any consideration.

Responding to Council, Ms. Flaherty stated that the requested amount from Council would not meet the Chamber's goals, but it would make such a difference. She stated that there was one municipality that matched Angel Funds and that she would provide numbers for

other municipalities. This request would be a 100% grant, Ms. Flaherty stating the Chamber would want to begin distributing funds by week's end.

Mayor Gilbert called for a motion. Council Member Dozier made the motion to approve the requests; Council Member Killingsworth seconded the motion.

Council stated he was pleased to see this request come through. As time goes by, it will get harder to fundraise. He stated that the ADBA is in a similar situation, unable to hold events and raise funds.

Council stated she hoped that the Town would receive other funding that trickles down and that there would be other things that we could do to support people as other levels of government are getting money down to us.

Council asked if word had come from the County regarding reimbursement of this type of funding from the Town. Staff stated we had received guidance from the County for the application process for certain qualifying expenses related to COVID. We are going through the policy, because we can't overlap what has already been received, i.e., through FEMA. Responding to Council, staff stated this particular action would not be covered; it is not in the policy guidelines. He explained what would be covered.

The motion carried by a 5-0 vote.

NB3 Council Member Audra Killingsworth
Resolution recognizing June as LGBTQIA Month

Council Member Killingsworth stated she was asked by the Mayor to explain the background of the Pride Month Resolution and Love and Unity Day Proclamation. She outlined the process behind a Pride Month proclamation, which the Mayor was not agreeable supporting. He proposed a Love and Unity Proclamation which was not as she originally submitted, but she agreed with the concept of love and unity of all people.

Council Member Killingsworth, however, stated she did not speak up about her additional thoughts, and she expressed those thoughts. In not speaking up, it didn't give the Mayor the time or opportunity to withdraw or adjust the proclamation and she apologized. Council Member Killingsworth stated she had received emails about the subject, and apologized for any problems the process caused.

Council Member Killingsworth named and spoke about many LGBTQIA individuals left out of history, feeling it was important not to forget them. She talked about outcomes of some of their lives. She talked about LGBTQIA youth being homeless and incarcerated and why.

Council Member Killingsworth stated why a Pride Month resolution was asked for. Recognizing such acknowledges not forgetting where they've been, where they are, and where they still need to go. Recognizing such takes pride in their truth of their selves. Council Member Killingsworth read the Resolution.

Mayor Gilbert called for a motion. Council Member Killingsworth made the motion to adopt the Resolution; Council Member Mahaffey seconded the motion.

Council thanked Council Member Killingsworth for bringing the Resolution forward and acknowledged the importance of naming those who had been/are marginalized in our community and beyond.

Council appreciated the history and the explanation of the path that got us here on this night. She also appreciated those being named.

The Mayor stated he appreciated the apology, but that it was not necessary. This was just a misunderstanding. We will continue to work together and get it right for the future – we will make it work.

The motion carried by a 5-0 vote.

CLOSED SESSION

CS1 Laurie Hohe, Town Attorney

Closed Session pursuant to N.C.G.S. §143-318.11(a)(3) to preserve attorney-client privilege and pursuant to N.C.G.S. §143-318.11(a)(1) to prevent the disclosure of information that is privileged or confidential pursuant to N.C.G.S. §143-318.10(e) and pursuant to N.C.G.S. §143-318.11(a)(5) to establish and instruct Town staff regarding the Town's negotiating position with respect to real property

Mayor Gilbert called for a motion to go into Closed Session. Council Member Gantt made the motion; Council Member Mahaffey seconded the motion.

The motion carried by a 5-0 vote.

With no objection from Council, Mayor Gilbert called for a return to Open Session.

WORK SESSION

There were no Work Session items for consideration.

ADJOURNMENT

With there being no further business and without objection from Council, Mayor Gilbert adjourned the meeting.

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

ATTEST:

_____
Jacques K. Gilbert, Mayor

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager
Department(s): Planning and Community Development

Requested Motion

Motion to approve the Statement of the Apex Town Council pursuant to G.S. 160A-383 addressing action on the various Unified Development Ordinance (UDO) Amendments of June 16, 2020.

Approval Recommended?

The Planning and Community Development Department recommends approval.

Item Details

Attachments

- Statement of Town Council

STATEMENT OF THE APEX TOWN COUNCIL PURSUANT TO G.S. 160A-383 ADDRESSING ACTION ON UNIFIED DEVELOPMENT ORDINANCE (UDO) AMENDMENTS OF JUNE 16, 2020

Pursuant to G.S. §160A-384 and Sec. 2.2.11.E of the Unified Development Ordinance, the Planning Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting), of a public hearing on UDO Amendments before the Town Council on the 16th day of June 2020.

The Apex Town Council held a public hearing on the 16th day of June 2020. Amanda Bunce, Current Planning Manager, presented the Planning Board's vote to recommend approval by a vote of 6-0 at the public hearing.

All persons who desired to present information relevant to the UDO Amendments and who were residents of Apex or its extraterritorial jurisdiction were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away.

The Town Council by a vote of 5 to 0 approved the Ordinance for UDO Amendments.

The Apex Town Council finds from information and testimony provided at the public hearing that the approval of the UDO Amendments of June 16, 2020 is consistent with the Advance Apex: The 2045 Plan and reasonable and in the public interest for the following reason(s):

1. The amendments to UDO Sec. 5.1.5 *Table of Intensity and Dimensional Standards, Small Town Character Overlay District* increases the permitted building height in the Central Business District subject to specific standards and in a manner consistent with the adopted Downtown Plan.

2. The amendments to UDO Sec. 6.1 *Watershed Protection Overlay Districts* and Sec. 7.2.1 *Design Standards, Streets* changes all references to "Stormwater and Utility Engineering Manager" to "Environmental Engineering Manager" in Sec. 6.1 and to "Water Resources Director" in Sec. 7.2.1 in order to reflect changes in position titles and duties.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

_____
Date

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter(s): Sarah Van Every, Senior Planner

Department(s): Planning & Community Development

Requested Motion

Motion to approve Statement of the Town Council for Rezoning Case #19CZ22 Wolfe Properties PUD, Josh Swindell, Envision Homes, LLC/Tony Streeter & Timothy V. Karr, Billy Ray Wolfe, Sarah W. Ronk, Willie T. Jr and Donna G. Wolfe, William D. II and Gaile E. Bunce, and John Terry Paton for the property located on 1405, 1409, 1209 & 1401 Wimberly Road and 1012 & 1000 Double Helix Road.

Approval Recommended?

Planning and Community Development Department recommends approval.

Item Details

Rezoning Case #19CZ22 Wolfe Properties PUD was approved at the June 16, 2020 Town Council meeting.

Attachments

- Statement of the Town Council

STATEMENT OF THE APEX TOWN COUNCIL PURSUANT TO G.S. 160A-383
ADDRESSING ACTION ON ZONING PETITION #19CZ22

Josh Swindell, Envision Homes, LLC/Tony Streeter & Timothy V. Karr, Billy Ray Wolfe, Sarah W. Ronk, Willie T. Jr and Donna G. Wolfe, William D. II and Gaile E. Bunce, and John Terry Paton, owner/applicant (the "Applicant"), submitted a completed application for a conditional zoning on the 1st day of October 2019 (the "Application"). The proposed conditional zoning is designated #19CZ22.

The Planning & Community Development Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #19CZ22 before the Planning Board held on the 8th day of June 2020.

Pursuant to G.S. §160A-384 and Sec. 2.2.11(E) of the Unified Development Ordinance, the Planning and Community Development Director caused proper notice to be given (by publication and posting), of a public hearing on #19CZ22 before the Town Council on the 16th day of June 2020.

The Apex Planning Board held a public hearing on the 8th day of June 2020, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #19CZ22. A motion was made at the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #19CZ22.

The Apex Town Council held a public hearing on the 16th day of June 2020. Sarah Van Every, Senior Planner presented the Planning Board's recommendation at the public hearing.

All persons who desired to present information relevant to the application for #19CZ22 and who were residents of Apex or its extraterritorial jurisdiction, or who owned property adjoining the property for which the conditional zoning is sought, were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away.

The Town Council by a vote of 5 to 0 approved Application #19CZ22 rezoning the subject tract located at 1405, 1409, 1209 & 1401 Wimberly Road and 1012 & 1000 Double Helix Road from Wake County R-80W and Rural Residential (RR) to Planning Unit Development-Conditional Zoning (PUD-CZ).

The Apex Town Council finds that the approval of the rezoning is consistent with the 2045 Land Use Plan and other adopted plans in that: The 2045 Land Use Map designates this area as Low Density Residential. This designation on the 2045 Land Use Map includes the zoning district Planned Unit Development-Conditional Zoning (PUD-CZ) and the Apex Town Council has further considered that the proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) will maintain the character and appearance of the area and provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map.

The Apex Town Council finds that the approval of the rezoning is reasonable and in the public interest in that it will allow for additional land for a future public park and development of single-family residential uses that will be compatible with the single-family uses to the north, south, and east. The rezoning will encourage compatible development of the property and increase the tax base.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

_____
Date

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Sarah Van Every, Senior Planner
Department(s): Planning and Community Development

Requested Motion

Motion to approve Statement of the Town Council and Ordinance for Rezoning Case #19CZ23 2524 & 2604 Kelly Road, Brian Griffith petitioner, for the properties located on 2524 & 2604 Kelly Road.

Approval Recommended?

Planning and Community Development Department recommends approval.

Item Details

Rezoning Case #19CZ23 2524 & 2604 Kelly Road was approved at the June 16, 2020 Town Council meeting.

Attachments

- Statement of the Town Council
- Ordinance to Amend the Official Zoning District Map

STATEMENT OF THE APEX TOWN COUNCIL PURSUANT TO G.S. 160A-383
ADDRESSING ACTION ON ZONING PETITION #19CZ23 2524 & 2604 KELLY ROAD

Brian Griffith, owner/applicant (the "Applicant"), submitted a completed application for a conditional zoning on the 29th day of October 2019 (the "Application"). The proposed conditional zoning is designated #19CZ23 2524 & 2604 Kelly Road.

The Planning Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #19CZ23 before the Planning Board held on the 8th day of June 2020.

Pursuant to G.S. §160A-384 and Sec. 2.2.11(E) of the Unified Development Ordinance, the Planning Director caused proper notice to be given (by publication and posting), of a public hearing on #19CZ23 before the Town Council on the 16th day of June 2020.

The Apex Planning Board held a public hearing on the 8th day of June 2020, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #19CZ23. A motion was made at the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #19CZ23.

The Apex Town Council held a public hearing on the 16th day of June 2020. Sarah Van Every, Senior Planner, presented the Planning Board's recommendation at the public hearing.

All persons who desired to present information relevant to the application for #19CZ23 and who were residents of Apex or its extraterritorial jurisdiction, or who owned property adjoining the property for which the conditional zoning is sought, were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away.

The Town Council by a vote of 4 to 1 approved Application #19CZ23 rezoning the subject tract located at 2524 & 2604 Kelly Road from Rural Residential (RR) to Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ).

The Apex Town Council finds that the approval of the rezoning is consistent with the 2045 Land Use Plan and other adopted plans in that: The 2045 Land Use Map designates this area as High Density/Office Employment/Commercial Services. This designation on the 2045 Land Use Map includes the zoning district Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ) and the Apex Town Council has further considered that the proposed rezoning to Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ) will maintain the character and appearance of the area and

provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map.

Approval of the rezoning is reasonable because the proposed Mixed Office-Residential-Retail-Conditional Zoning district is generally consistent with High Density/Office Employment/Commercial Services land use classification on the 2045 Land Use Map.

The proposed rezoning is reasonable and in the public interest because it will allow the property to maintain the current single-family uses, while allowing future development consistent with approved development adjacent to the subject properties. The proposed rezoning will maintain the character and appearance of the area and provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map. The rezoning will encourage compatible development of the property and increase the tax base.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

_____
Date

ORDINANCE AMENDING THE OFFICIAL ZONING DISTRICT MAP OF THE TOWN OF APEX TO CHANGE THE ZONING OF APPROXIMATELY 2.1 ACRES LOCATED ON 2524 & 2604 KELLY ROAD FROM RURAL RESIDENTIAL (RR) TO MIXED OFFICE-RESIDENTIAL-RETIAL-CONDITIONAL ZONING (MORR-CZ).

#19CZ23

WHEREAS, the application of Brian Griffith petitioner, for the rezoning of lands hereinafter described was duly filed with the office of the Planning Director and thereafter public hearings were held hereon on the 8th day of June 2020 before the Planning Board and the 16th day of June 2020, before the Town Council, respectively, pursuant to due notice mailed and published pursuant to G.S. § 160A-384. Thereafter, the Planning Board submitted its final report to the Town Council recommending approval of said application for the rezoning of the lands hereinafter described, all in accordance with the requirements of the Town of Apex Unified Development Ordinance and the provisions of Chapter 160A, Article 19, of the North Carolina General Statutes; **NOW, THEREFORE,**

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference, and said lands are hereafter referred to as the "Rezoned Lands."

Section 2: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the "Rezoned Lands" from Rural Resdiential (RR) to Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ) District, subject to the conditions stated herein.

Section 3: The "Rezoned Lands" are subject to all of the following conditions which are imposed as part of this rezoning:

Zoning Conditions:
The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

Permitted Uses:

1. Accessory Apartment
2. Day care facility
3. Church or place of worship (P/S)
4. Government service
5. School, public or private
6. Utility, minor
7. Tailor shop
8. Pet services
9. Botanical Garden
10. Greenway
11. Park, active
12. Park, passive
13. Restaurant,drive through
14. Restaurant, general
16. Office, business or professional
17. Barber and beauty shop
18. Book store
19. Convenience store
20. Dry cleaners and laundry service
21. Financial institution
22. Floral shop
23. Greenhouse or nursery, retail
24. Grocery,specialty
25. Health/fitness center or spa
26. Newsstand or gift shop
27. Personal service
28. Pharmacy
29. Studio for art

15. Medical or dental clinic or office 30. Retail sales, general

For uses utilizing the existing structures the following shall apply:

1. Only existing structures may be used for residential uses.
2. Parking shall be provided to the side or rear of the principal building.

For future uses, the following shall apply:

1. The use "Accessory apartment" shall be permitted only on floors above nonresidential uses in new construction.

Non-Residential / Mixed-use new construction Design Guidelines:

1. Buildings shall be arranged to define, create and activate edges and public places.
2. No more than (1) double-loaded parking bay shall be provided between any building and thoroughfares as identified on the Apex Transportation Map.
3. Drive-thru lanes, pick-up windows, and other like functions shall not be permitted along any thoroughfare or collector street as identified on the Apex Transportation Plan. Landscaping and/or other architectural features should be used to create screenings for these types of uses.
4. Elevations of corner buildings shall utilize design features such as variations in wall plane, variation in building mass, and window placement to generate street interest.
5. Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials, and ornamental details as well as landscaping shall be incorporated to add visual interest.
6. Facades shall not have blank side walls creating a false front appearance.
7. Buildings shall have vertical proportions with no blank walls exceeding sixty (60) feet in width without being interrupted with an architectural feature such as, but not limited to, a column, recess in or projection from the facade.
8. Windows shall be divided to be square or vertical in proportion so each section of glass is taller than it is wide.
9. Differences of roof height, pitch, ridgelines, and materials shall be used to create visual interest and avoid repetition.
10. Vehicular and pedestrian cross access shall be provided to adjacent properties.
11. Public street access shall be by one of the three (2) methods below.
    a. Abutting, within ten (10) feet of the shared property line of 2524 and 2604 Kelly Road or further south on 2604 Kelly Road property as a shared access easement in either case.
    b. To existing West Village development streets.

Non-residential / mixed used exteriors shall incorporate variation in materials. The primary (front) façade of the main buildings to be considered may include:

1. Brick and/or stone masonry
2. Decorative concrete block (integral color and/or textured)
3. Stone accents
4. Aluminum storefronts with anodized or pre-finished window colors
5. EIFS cornices, and parapet trim
6. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to 25% of each building façade

7. Precast concrete
8. Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material
9. Soffit and fascia materials to be considered include EIFS with crown trim elements
10. Cementitious siding

Exterior materials not allowable as a part of the development are as follows:

1. Vinyl siding
2. Painted, smooth faced concrete block
3. Metal walls

Section 4: The Planning Director is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 5: The "Rezoned Lands" shall be perpetually bound to the conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 6: This ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member_____

Seconded by Council Member_____

With ____ Council Member(s) voting "aye."
With ____ Council Member(s) voting "no."

This the _____ day of _____ 2020.

TOWN OF APEX

_____
Mayor

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
Town Attorney

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: _____ Submittal Date: _____

Insert legal description below.

LEGAL DESCRIPTION OF 2524 Kelly Road, Apex, NC

All of a tract of land lying and being in Wake County, Apex, NC, being described as Lot 1 of the "Minor Subdivision for Barrett Richardson", as recorded in Book of Maps 1997, Page 2069, Wake County Registry, and being more particularly described as follows:

BEGINNING at an iron pipe with cap, the southwestern corner of said lot 1, said beginning point having NAD 83(NSRS 2011) coordinates of North: 713,038.84 and East: 2,034,178.81 feet, thence from said beginning point in a clockwise direction north 32°56'13"east and 244.10 feet, through an iron pipe with a cap, lying 5.84 feet from the 35' r/w, to a point in the center of Kelly Road, thence 326.20 feet along the center of Kelly Road, along the arc of a non-tangent curve to the southeast, with a radius of 5116.44 feet and a chord bearing and distance of south 36°08'51" east and 326.14 feet to a point in the center of Kelly Road, thence leaving the center of Kelly Road, south 50°44'20" west and 129.69 feet through an iron pipe, lying 5.31' from the 35' r/w, to an iron pipe with a cap, thence north 35°33'52" west and 53.32 feet to an iron pipe with a cap, thence south 73°45'09" west and 148.87 feet to an iron pipe with a cap, thence north 20°04'42" west and 147.83 feet to the point and place of BEGINNING, containing net 1.147 acres, more or less, according to an ALTA/ACSM Land Title Survey by PTS Land Surveying, dated 09/05/2019, reference to which is made for a more particular description.

LEGAL DESCRIPTION OF 2604 Kelly Road, Apex, NC

BEGINNING at a point in the center line of S.R. 1163, said point being located 632.55 feet measured in a northwesterly direction along the center line of said road from the center line of old U.S. Highway #1 (now SR 1011) and runs thence South 54 degrees 31 minutes 50 seconds West 190.82 feet to an existing iron pipe; runs thence North 35 degrees 31 minutes 48 seconds West 228.44 fee to an existing iron pipe; runs thence north 54 degrees 25 minutes 45 seconds East 190.94 feet to an iron pipe in the centerline of S.R. 1163; runs thence South 35 degrees 30 minutes 00 seconds East 228.77 feet to the point and place of BEGINNING, containing 1.002 acres, according to map and survey entitled "Property of Charles A. Morris and wife, Debra C. Morris" by MM Weeks, RLS, dated May 13, 1991.

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for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter(s): Lauren Staudenmaier, Planner I

Department(s): Planning and Community Development

Requested Motion

Motion to approve Statement of the Town Council and Ordinance for Rezoning Case #20CZ03, Patrick Kiernan, Jones & Cnossen Engineering, PLLC./Cathleen & Kenneth Watson petitioners, for the property located on 1200 James Street.

Approval Recommended?

Planning and Community Development Department recommends approval.

Item Details

Rezoning Case #20CZ03 was approved at the June 16, 2020 Town Council meeting.

Attachments

- Statement of the Town Council
- Ordinance to Amend the Official Zoning District Map

ORDINANCE AMENDING THE OFFICIAL ZONING DISTRICT MAP OF THE TOWN OF APEX TO CHANGE THE ZONING OF APPROXIMATELY 4.09 ACRES LOCATED AT 1200 JAMES STREET FROM MEDIUM DENSITY RESIDENTIAL (MD) TO TECH/FLEX-CONDITIONAL ZONING (TF-CZ)
#20CZ03

WHEREAS, the application of Patrick Kiernan, Jones & Cnossen Engineering, PLLC./Cathleen & Kenneth Watson, petitioners, for the rezoning of lands hereinafter described was duly filed with the office of the Planning Director and thereafter public hearings were held hereon on the 8th day of June 2020 before the Planning Board and the 16th day of June 2020, before the Town Council, respectively, pursuant to due notice mailed and published pursuant to G.S. § 160A-384. Thereafter, the Planning Board submitted its final report to the Town Council recommending approval of said application for the rezoning of the lands hereinafter described, all in accordance with the requirements of the Town of Apex Unified Development Ordinance and the provisions of Chapter 160A, Article 19, of the North Carolina General Statutes; **NOW, THEREFORE,**

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference, and said lands are hereafter referred to as the "Rezoned Lands."

Section 2: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the "Rezoned Lands" from Medium Density Residential (MD) to Tech/Flex–Conditional Zoning (TF-CZ) District, subject to the conditions stated herein.

Section 3: The "Rezoned Lands" are subject to all of the following conditions which are imposed as part of this rezoning:

Zoning Conditions:
The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

Permitted Uses and Limitations:

Day care facility
Drop-in or short-term day care
Government services
School, public or private
Transportation facility
Veterinary clinic or hospital
Vocational school
Utility, minor
Wireless support structure
Wireless communication facility
Greenway
Park, passive
Broadcasting station (radio and television)
Radio and television recording studio
Commissary
Dispatching office
Medical or dental office or clinic
Medical or dental laboratory
Office, business or professional
Publishing office
Research facility
Artisan studio
Health/fitness center or spa
Personal services
Printing and copying service
Real estate sales
Repair services, limited
Retail sales, bulky goods
Studio for art
Tailor shop
Upholstery shop
Pet services
Automotive accessory sales and installation
Repair and maintenance, general
Vehicle inspection center
Vehicle sales and rental, light
Building supplies, wholesale
Laboratory, industrial research
Machine or welding shop
Warehousing
Woodworking or cabinetmaking
Wholesaling, general
Brewery
Distillery
Manufacturing and processing, minor
Microbrewery
Microdistillery
Restaurant, general
Pilot plant
Manufacturing and processing
Retail sales, general

Conditions:

1. Access to this parcel shall be served from Energy Drive. No direct access shall be permitted to Schieffelin Road or James Street.
2. The “Broadcasting station (radio and television)” and “Radio and television recording studio” shall not use towers that exceed 30 feet in height.
3. The “Building supplies, wholesale” use shall only be limited to indoor storage.
4. The “Retail sales, bulky goods” use shall only be limited to indoor storage.
5. The “Vehicle sales and rental, light” use shall be only limited to indoor storage.
6. The parcel associated to Wake County PIN 0741789012 shall be incorporated in the non-residential Master Subdivision Plan for Schieffelin Industrial Park.
7. Public art will be provided on site, by the developer, consistent with UDO Section 8.4.5.
8. The use “School, public or private” shall not exceed 9,000 square feet.
9. Building(s) shall not be addressed to James Street or Schieffelin Road.
10. Only full cutoff lighting fixtures with external house side shields on pole-mounted lighting shall be allowed along the northern property line. The lighting from these fixtures shall be extinguished no later than 11:00 p.m. or close of business, whichever is later.

Architectural Conditions:

1. Predominant exterior building materials shall be high quality, including brick, wood, staked stone, other native stone, and tinted/textured concrete masonry units. Elevations of non-residential buildings facing public roadways and public areas within the development shall be constructed with similar materials.
2. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only 25% of each building façade.
3. The rear elevations of non-residential buildings that are not visible from parking lots or public streets may include decorative concrete masonry, metal coping, or EIFS trim.
4. The proposed building(s) shall be compatible to the existing non-residential building elevations in the Peak City Business Park Development.

Section 4: The Planning Director is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 5: The "Rezoned Lands" shall be perpetually bound to the conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 6: This ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member_____

Seconded by Council Member_____

With ____ Council Member(s) voting "aye."
With ____ Council Member(s) voting "no."

This the _____ day of _____ 2020.

TOWN OF APEX

_____
Mayor

ATTEST:

_____
Town Clerk

APPROVED AS TO FORM:

_____
Town Attorney

STATEMENT OF THE APEX TOWN COUNCIL PURSUANT TO G.S. 160A-383 ADDRESSING ACTION ON ZONING PETITION #20CZ03

Patrick Kiernan, Jones & Cnossen Engineering, PLLC/Cathleen & Kenneth Watson, owner/applicant (the "Applicant"), submitted a completed application for a conditional zoning on the 3rd day of February 2020 (the "Application"). The proposed conditional zoning is designated #20CZ03.

The Planning and Community Development Director for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #20CZ03 before the Planning Board held on the 8th day of June 2020.

Pursuant to G.S. §160A-384 and Sec. 2.2.11(E) of the Unified Development Ordinance, the Planning Director caused proper notice to be given (by publication and posting), of a public hearing on #20CZ03 before the Town Council on the 16th day of June 2020.

The Apex Planning Board held a public hearing on the 8th day of June 2020, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #20CZ03. A motion was made at the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #20CZ03.

The Apex Town Council held a public hearing on the 16th day of June 2020. Lauren Staudenmaier, Planner I, presented the Planning Board's recommendation at the public hearing.

All persons who desired to present information relevant to the application for #20CZ03 and who were residents of Apex or its extraterritorial jurisdiction, or who owned property adjoining the property for which the conditional zoning is sought, were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away.

The Town Council by a vote of 5 to 0 approved Application #20CZ03 rezoning the subject tract located at 1200 James Street from Medium Density Residential (MD) to Tech/Flex–Conditional Zoning (TF-CZ).

The Apex Town Council finds that the approval of the rezoning is consistent with the 2045 Land Use Plan and other adopted plans in that: the 2045 Land Use Map designates this area as Industrial Employment & Office Employment. This designation on the 2045 Land Use Map includes the zoning district Tech/Flex–Conditional Zoning (TF-CZ) and the Apex Town Council has further considered that the proposed rezoning to Tech/Flex–Conditional Zoning (TF-CZ) will maintain the character and appearance of the area and provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map.

The Apex Town Council finds that the approval of the rezoning is reasonable and in the public interest in that it will provide an opportunity for non-residential uses to serve the surrounding area, while being incorporated in to the Peak City Business Park or known as the Schieffelin Industrial Non-Residential Master Subdivision Plan. The proposed rezoning will maintain the character and appearance of the area and provide uses similar to those approved for the adjacent non-residential subdivision. The rezoning will encourage compatible development of the property and increase the tax base.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

_____
Date

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: 20CZ03 Submittal Date: 2/3/2020

Insert legal description below.

Beginning at an existing iron pipe labeled control corner at the southeast corner of Lot 12 as shown on Book of Maps 2004, Page 1194, Wake County Registry, thence from said Beginning point South 71°46'33" West 404.95 feet to a point on the eastern right of way of Schieffelin Road (Public Right of Way), thence with said right of way North 15°45'15" West 425.25 feet to a point at the intersection with the southern right of way of James Street (50' Private Right of Way), thence with said James Street right of way North 72°24'44" East 86.60 feet to a point, thence along a curve to the right having a radius of 777.25 feet, an arc length of 145.54 feet and a chord bearing and distance of North 79°29'15" East 145.33 feet to a point, thence North 85°15'09" East 96.33 feet to a point, thence leaving said right of way North 87°55'50" East 150.10 feet to an existing iron pipe, thence South 44°47'12" East 24.42 feet to an existing iron pipe, thence South 01°58'37" East 331.58 feet to the point and place of Beginning containing 4.09 Acres more or less as shown on Book of Maps 2004, Page 1194, Wake County Registry.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July21, 2020

Item Details

Presenter: Dianne Khin, Director

Department: Planning and Community Development

Requested Motion

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Charles and Annette Herndon and J Dallas Herndon Heirs (Tullamore) property containing 10.1869 acres located at 1745 and 1805 Holt Road, Annexation #686 into the Town's corporate limits.

Approval Recommended?

Yes, by the Planning and Community Development Department.

Item Details

The Town Clerk certifies to the investigation of said annexation. Adoption of the Resolution authorizes the Town Clerk to advertise said public hearing by electronic means and on the Town of Apex's website. The Public Hearing would be scheduled for the August 4, 2020 Town Council meeting.

Attachments

- Annexation Petition
- Legal Description
- Vicinity Map
- Resolution Directing the Town Clerk to Investigate Petition
- Certificate of Sufficiency by the Town Clerk
- Resolution Setting Date of Public Hearing

RESOLUTION DIRECTING THE TOWN CLERK
TO INVESTIGATE PETITION RECEIVED UNDER G.S.§ 160A-31

Annexation Petition #686
JS Development Company, LLC

WHEREAS, G.S. §160-A 31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Apex deems it advisable to proceed in response to this request for annexation;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, that the Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify to the Town Council the result of her investigation.

This the 21st day of July 2020.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

CERTIFICATE OF SUFFICIENCY BY THE TOWN CLERK

Annexation Petition #686
JS Development Company, LLC

To: The Town Council of the Town of Apex, North Carolina

I, Donna B. Hosch, Town Clerk, do hereby certify that I have investigated the annexation petition attached hereto, and have found, as a fact, that said petition is signed by all owners of real property lying in the area described therein, in accordance with G.S.§ 160A-31, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Apex, North Carolina this 21st day of July 2020.

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

(Seal)

Home

Wake County Real Estate Data
Account Summary

iMaps
Tax Bills

Account Search
Go!

Real Estate ID **0115090** PIN # **0733839147**

Location Address
1745 HOLT RD

Property Description
PROP C W HERNDON EST NORTH TRACT TRH

Pin/Parcel History Search Results New Search

Account | Buildings | Land | Deeds | Notes | Sales | Photos | Tax Bill | Map

Property Owner	Owner's Mailing Address	Property Location Address
HERNDON, J DALLAS HEIRS (Use the Deeds link to view any additional owners)	**LOU DOVE HERNDON** **EXECUTRIX** **1010 N SALEM ST** **APEX NC 27502-2922**	**1745 HOLT RD** **APEX NC 27523-9434**

Administrative Data		**Transfer Information**		**Assessed Value**	
Old Map #	**569-00000-0122**				
Map/Scale	**0733 04**	Deed Date	**11/5/2008**	Land Value Assessed	**$624,325**
VCS	**20AP900**	Book & Page	**08-E- 3122**	Bldg. Value Assessed	
City		Revenue Stamps			
Fire District	**23**	Pkg Sale Date			
Township	**WHITE OAK**	Pkg Sale Price		Tax Relief	
Land Class	**VACANT**	Land Sale Date			
ETJ	**AP**	Land Sale Price		Land Use Value	
Spec Dist(s)				Use Value Deferment	
Zoning	**PUD-CZ**	**Improvement Summary**		Historic Deferment	
History ID 1				Total Deferred Value	
History ID 2		Total Units	**0**		
Acreage	**9.13**	Recycle Units	**0**		
Permit Date		Apt/SC Sqft		Use/Hist/Tax Relief	
Permit #		Heated Area		Assessed	
				Total Value Assessed*	**$624,325**

*Wake County assessed building and land values reflect the market value as of January 1, 2020, which is the date of the last county-wide revaluation. Any inflation, deflation or other economic changes occurring after this date does not affect the assessed value of the property and cannot be lawfully considered when reviewing the value for adjustment.

The January 1, 2020 values will remain in effect until the next county-wide revaluation. Until that time, any real estate accounts created or new construction built is assessed according to the 2020 Schedule of Values.

For questions regarding the information displayed on this site, please contact the Department of Tax Administration at Taxhelp@wakegov.com or call 919-856-5400.

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 686 Submittal Date: 4/9/2020

Fee Paid $ 200.00 Check # 2261

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☐ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

JS Development Company, LLC	0733-83-7691
Owner Name (Please Print)	Property PIN or Deed Book & Page #
919-389-7595	josh@envisionhomesnc.com
Phone	E-mail Address
J. Dallas Herndon Heirs - Lou D Herndon, Executrix	0733-83-9147
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Charles & Annette Herndon	0733-83-5369

Surveyor Information

Surveyor: Smith & Smith Surveyors

Phone: 919-362-7111 Fax:

E-mail Address: staley@smithandsmithsurveyors.net

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	10.1869	Need water service due to well failure	☐
Population of acreage to be annexed:	--	Need sewer service due to septic system failure	☐
Existing # of housing units:	0	Water service (new construction)	☑
Proposed # of housing units:	35	Sewer service (new construction)	☑
Zoning District*:	PUD-CZ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 686 Submittal Date: 4/9/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, JS Development Company, LLC a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 31 day of March, 2020.

Name of Limited Liability Company JS Development Company, LLC

By: _____
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Linda DeSantis a Notary Public for the above State and County, this the 31 day of March, 2020.

_____
Notary Public

SEAL

LINDA DESANTIS
Notary Public
Wake
County
My Comm. Exp.
11-16-2021
NORTH CAROLINA

My Commission Expires: _____

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

PETITION FOR VOLUNTARY ANNEXATION

Application #: 686 Submittal Date: 4/9/2020

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

Charles Herndon — Please Print
Charles Herndon — Signature

Annette Herndon — Please Print
Annette Herndon — Signature

J Dallas Herndon Heirs — Please Print
J. Dallas Herndon Heirs — Signature
Charles Herndon

Please Print — Signature

STATE OF NORTH CAROLINA
COUNTY OF ~~WAKE~~ Wayne

Sworn and subscribed before me, Jonathan David Parker, a Notary Public for the above State and County, this the 1st day of, April, 2020.

JONATHAN DAVID PARKER NOTARY PUBLIC WAYNE COUNTY, NC SEAL

Jonathan David Parker
Notary Public

My Commission Expires: 01/24/2022

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the _____ day of _____, 20_____.

Corporate Name _____

SEAL

By: _____
President (Signature)

Attest:

_____
Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

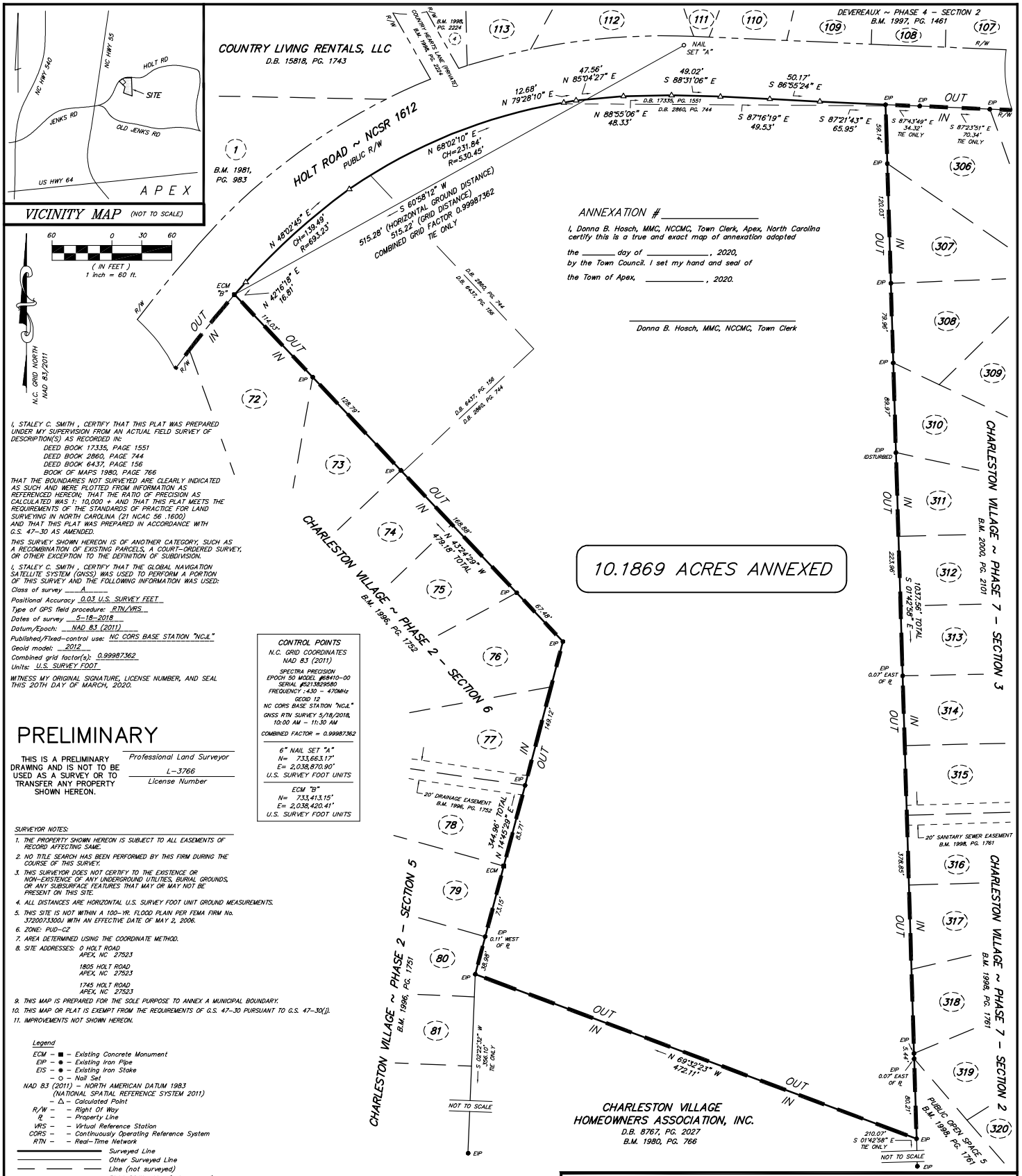
My Commission Expires: _____

Smith & Smith Surveyors, P.A.
P.O. Box 457
Apex, N.C. 27502
(919) 362-7111
Firm License No. C-0155

Lying and being in Town of Apex ETJ, White Oak Township, Wake County, North Carolina and described more fully as follows to wit:

BEGINNING at an existing concrete control monument being the northernmost corner of Lot 72 as shown in B.M. 1996, PG. 1752 bearing NAD (83/2011) N.C. grid coordinate values of N= 733,413.15 U.S. Survey Feet, E= 2,038,420.41 U.S. Survey Feet; thence with the southern right of way of Holt Road ~ NCSR 1612 North 42° 16' 18" East, 16.81 feet to a calculated point; thence a curve to the right North 48° 02' 45" East, 139.49 feet (chord), 693.23 feet (radius) to a calculated point; thence a curve to the right North 68° 02' 10" East, 231.84 feet (chord), 530.45 feet (radius) to a calculated point; thence North 79° 28' 10" East, 12.68 feet to a calculated point; thence North 85° 04' 27" East, 47.56 feet to a calculated point; thence North 88° 55' 06" East, 48.33 feet to a calculated point; thence South 88° 31' 06" East, 49.02 feet to a calculated point; thence South 87° 16' 19" East, 49.53 feet to a calculated point; thence South 86° 55' 24" East, 50.17 feet to a calculated point; thence South 87° 21' 43" East, 65.95 feet to an existing iron pipe on the southern right of way of Holt Road ~ NCSR 1612; thence South 01° 42' 58" East, 1037.56 feet to an existing iron pipe; thence North 69° 32' 23" West, 472.11 feet to an existing iron pipe; thence North 14° 45' 29" East, 344.96 feet to an existing iron pipe; thence North 43° 24' 29" West, 479.18 feet to the BEGINNING containing 10.1869 total acres more or less.

The above-described area is recorded in:
D.B. 17335, PG. 1551 ~ PIN 0733-83-7691
D.B. 2860, PG. 744 ~ PIN 0733-83-9147
D.B. 6437, PG. 156 ~ PIN 0733-83-5369



I, STALEY C. SMITH , CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL FIELD SURVEY OF DESCRIPTION(S) AS RECORDED IN:
DEED BOOK 17335, PAGE 1551
DEED BOOK 2860, PAGE 744
DEED BOOK 6437, PAGE 156
BOOK OF MAPS 1980, PAGE 766
THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS SUCH AND WERE PLOTTED FROM INFORMATION AS REFERENCED HEREON; THAT THE RATIO OF PRECISION AS CALCULATED WAS 1: 10,000 + AND THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56 .1600) AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THIS SURVEY SHOWN HEREON IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

I, STALEY C. SMITH , CERTIFY THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) WAS USED TO PERFORM A PORTION OF THIS SURVEY AND THE FOLLOWING INFORMATION WAS USED:

Class of survey: A
Positional Accuracy: 0.03 U.S. SURVEY FEET
Type of GPS field procedure: RTN/VRS
Dates of survey: 5-18-2018
Datum/Epoch: NAD 83 (2011)
Published/Fixed-control use: NC CORS BASE STATION "NCJL"
Geoid model: 2012
Combined grid factor(s): 0.99987362
Units: U.S. SURVEY FOOT

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 20TH DAY OF MARCH, 2020.

CONTROL POINTS
N.C. GRID COORDINATES
NAD 83 (2011)
SPECTRA PRECISION
EPOCH 50 MODEL #68410-00
SERIAL #5213529580
FREQUENCY : 430 - 470MHz
GEOID 12
NC CORS BASE STATION "NCJL"
GNSS RTN SURVEY 5/18/2018, 10:00 AM - 11:30 AM
COMBINED FACTOR = 0.99987362

6" NAIL SET "A"
N= 733,663.17'
E= 2,038,870.90'
U.S. SURVEY FOOT UNITS

ECM "B"
N= 733,413.15'
E= 2,038,420.41'
U.S. SURVEY FOOT UNITS

PRELIMINARY

THIS IS A PRELIMINARY DRAWING AND IS NOT TO BE USED AS A SURVEY OR TO TRANSFER ANY PROPERTY SHOWN HEREON.

Professional Land Surveyor
L-3766
License Number

SURVEYOR NOTES:
1. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
2. NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
3. THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
4. ALL DISTANCES ARE HORIZONTAL U.S. SURVEY FOOT UNIT GROUND MEASUREMENTS.
5. THIS SITE IS NOT WITHIN A 100-YR. FLOOD PLAIN PER FEMA FIRM No. 3720073300J WITH AN EFFECTIVE DATE OF MAY 2, 2006.
6. ZONE: PUD-CZ
7. AREA DETERMINED USING THE COORDINATE METHOD.
8. SITE ADDRESSES: 0 HOLT ROAD, APEX, NC 27523
1805 HOLT ROAD, APEX, NC 27523
1745 HOLT ROAD, APEX, NC 27523
9. THIS MAP IS PREPARED FOR THE SOLE PURPOSE TO ANNEX A MUNICIPAL BOUNDARY.
10. THIS MAP OR PLAT IS EXEMPT FROM THE REQUIREMENTS OF G.S. 47-30 PURSUANT TO G.S. 47-30(j).
11. IMPROVEMENTS NOT SHOWN HEREON.

Legend
ECM - ■ - Existing Concrete Monument
EIP - ● - Existing Iron Pipe
EIS - ● - Existing Iron Stake
- ○ - Nail Set
NAD 83 (2011) - NORTH AMERICAN DATUM 1983 (NATIONAL SPATIAL REFERENCE SYSTEM 2011)
- △ - Calculated Point
R/W - Right Of Way
ft - Property Line
VRS - Virtual Reference Station
CORS - Continuously Operating Reference System
RTN - Real-Time Network
Surveyed Line
Other Surveyed Line
Line (not surveyed)
Right Of Way Line (not surveyed)
Other Line (not surveyed)
Existing Corporate Limit Line

LISTED OWNERS
(NOT A TITLE VERIFICATION)
- JS DEVELOPMENT COMPANY, LLC
4441 SIX FORKS ROAD
SUITE 106-117
RALEIGH, NC 27609
- J. DALLAS HERNDON HEIRS
1010 N SALEM ST
APEX, NC 27502
- CHA
ANN
531
MOU

ANNEXATION MAP for the TOWN OF APEX
JS DEVELOPMENT COMPANY, LLC
AND
CHARLES E. HERNDON & ANNETTE C. HERNDON
TOWN OF APEX ETJ, WHITE OAK TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

P.I.N. 0733-83-7691
0733-83-9147
0733-83-5369

Smith & Smith, Surveyors, P.A.
P.O. BOX 457 APEX, N.C. 27502 (919) 362-7111
FIRM LICENSE No. C-0155 PITTSBORO, N.C. 27312 (919) 542-4921

DATE MAY 18, 2018
SCALE 1" = 60'
DRAWN BY WBH
PROJ. NO. 19-79-ANNEX

RECORDED IN BOOK OF MAPS 2020, PAGE _____.

RESOLUTION SETTING DATE OF PUBLIC HEARING
ON THE QUESTION OF ANNEXATION PURSUANT TO G.S.§ 160A-31 AS AMENDED

Annexation Petition ##686
JS Development Company, LLC

WHEREAS, a petition requesting annexation of the area described herein has been received; and

WHEREAS, the Town Council of Apex, North Carolina has by Resolution directed the Town Clerk to investigate the sufficiency thereof; and

WHEREAS, Certification by the Town Clerk as to the sufficiency of said petition has been made;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, North Carolina that:

Section 1. A public hearing on the question of annexation of the area described herein will be held at the Apex Town Hall at 6 o'clock p.m. on the 4th day of August 2020.

Section 2. The area proposed for annexation is described as attached.

Section 3. Notice of said public hearing shall be published on the Town of Apex Website, www.apexnc.org, Public Notice, at least ten (10) days prior to the date of said public hearing.

This the 21st day of July 2020.

_____
Jacques K. Gilbert, Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC, Town Clerk

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 686 Submittal Date: 4/9/2020

Fee Paid $ 200.00 Check # 2261

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☐ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

JS Development Company, LLC Owner Name (Please Print)	0733-83-7691 Property PIN or Deed Book & Page #
919-389-7595 Phone	josh@envisionhomesnc.com E-mail Address
J. Dallas Herndon Heirs - Lou D Herndon, Executrix Owner Name (Please Print)	0733-83-9147 Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Charles & Annette Herndon	0733-83-5369

Surveyor Information

Surveyor: Smith & Smith Surveyors

Phone: 919-362-7111 Fax:

E-mail Address: staley@smithandsmithsurveyors.net

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	10.1869	Need water service due to well failure	☐
Population of acreage to be annexed:	--	Need sewer service due to septic system failure	☐
Existing # of housing units:	0	Water service (new construction)	☑
Proposed # of housing units:	35	Sewer service (new construction)	☑
Zoning District*:	PUD-CZ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 686 Submittal Date: 4/9/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, JS Development Company, LLC a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 31 day of March, 2020.

Name of Limited Liability Company JS Development Company, LLC

By: _____
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Linda DeSantis a Notary Public for the above State and County, this the 31 day of March, 2020.

_____
Notary Public

SEAL

LINDA DESANTIS
Notary Public
Wake
County
My Comm. Exp.
11-16-2021
NORTH CAROLINA

My Commission Expires: _____

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

PETITION FOR VOLUNTARY ANNEXATION

Application #: 686 Submittal Date: 4/9/2020

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

Charles Herndon — Please Print
Charles Herndon — Signature

Annette Herndon — Please Print
Annette Herndon — Signature

J Dallas Herndon Heirs — Please Print
J. Dallas Herndon Heirs — Signature
Charles Herndon

Please Print

Signature

STATE OF NORTH CAROLINA
COUNTY OF ~~WAKE~~ Wayne

Sworn and subscribed before me, Jonathan David Parker, a Notary Public for the above State and County, this the 1st day of, April, 2020.

JONATHAN DAVID PARKER NOTARY PUBLIC WAYNE COUNTY, NC SEAL

Notary Public

My Commission Expires: 01/24/2022

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the _____ day of _____, 20_____.

Corporate Name _____

SEAL

By: _____
President (Signature)

Attest:

_____
Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

Smith & Smith Surveyors, P.A.
P.O. Box 457
Apex, N.C. 27502
(919) 362-7111
Firm License No. C-0155

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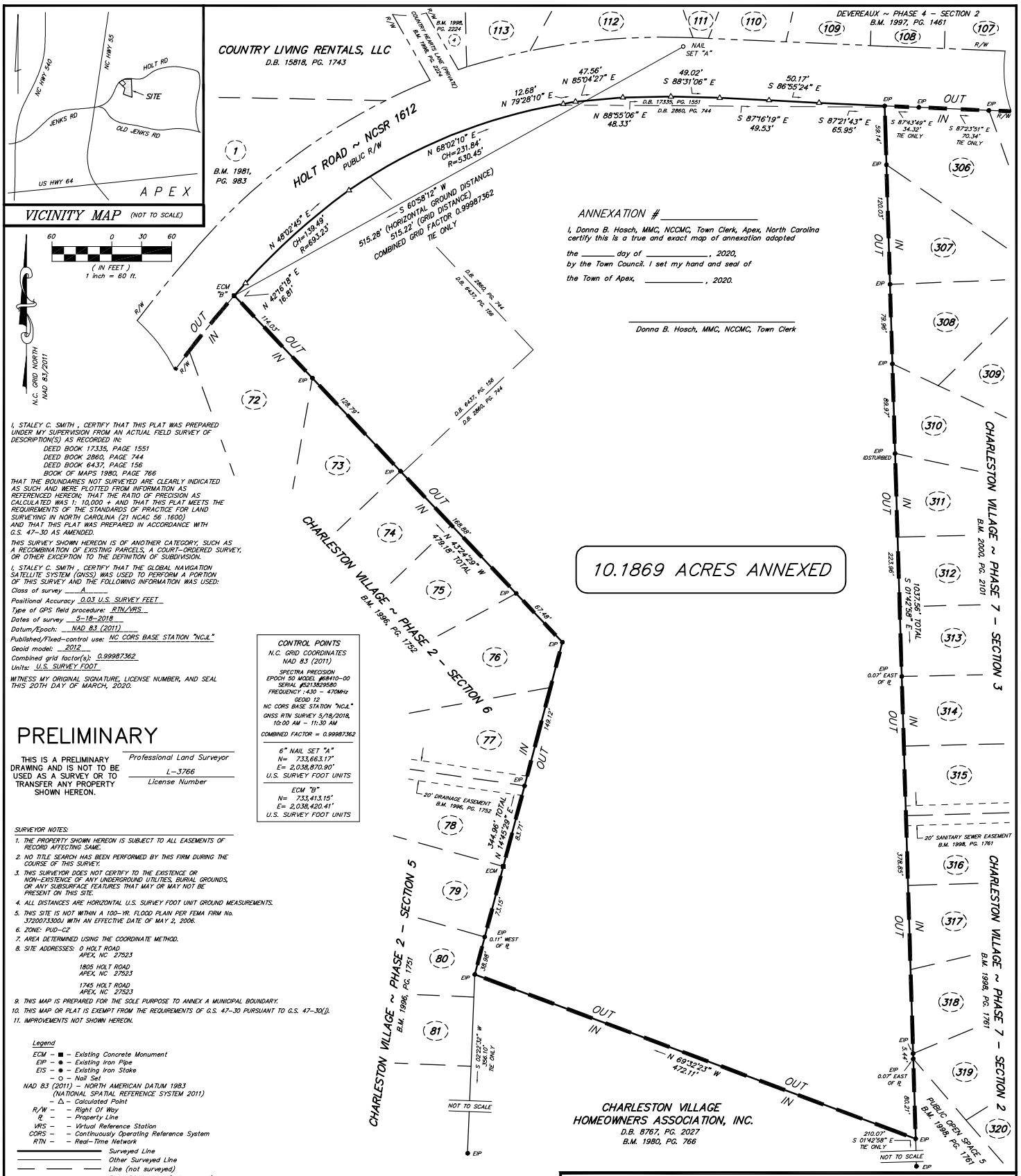
VICINITY MAP (NOT TO SCALE)
NC HWY 540
NC HWY 55
HOLT RD
SITE
JENKS RD
OLD JENKS RD
US HWY 64
APEX
COUNTRY LIVING RENTALS, LLC
D.B. 15818, PG. 1743
COUNTRY HEARTS AVE (PRIVATE)
B.M. 1998, PG. 2224
DEVEREAUX ~ PHASE 4 ~ SECTION 2
B.M. 1997, PG. 1461
HOLT ROAD ~ NCSR 1612
PUBLIC R/W
B.M. 1981, PG. 983
NAIL SET "A"
ECM "B"
ANNEXATION #
I, Donna B. Hosch, MMC, NCCMC, Town Clerk, Apex, North Carolina certify this is a true and exact map of annexation adopted
the _____ day of _____, 2020,
by the Town Council. I set my hand and seal of
the Town of Apex, _____, 2020.
Donna B. Hosch, MMC, NCCMC, Town Clerk
10.1869 ACRES ANNEXED
CHARLESTON VILLAGE ~ PHASE 7 ~ SECTION 3
B.M. 2000, PG. 2101
CHARLESTON VILLAGE ~ PHASE 7 ~ SECTION 2
B.M. 1998, PG. 1761
CHARLESTON VILLAGE ~ PHASE 2 ~ SECTION 6
B.M. 1996, PG. 1752
CHARLESTON VILLAGE ~ PHASE 2 ~ SECTION 5
B.M. 1996, PG. 1751
CHARLESTON VILLAGE HOMEOWNERS ASSOCIATION, INC.
D.B. 8767, PG. 2027
B.M. 1980, PG. 766
PUBLIC OPEN SPACE 5
B.M. 1998, PG. 1761
20' SANITARY SEWER EASEMENT
B.M. 1998, PG. 1761
20' DRAINAGE EASEMENT
B.M. 1996, PG. 1752
CONTROL POINTS
N.C. GRID COORDINATES
NAD 83 (2011)
SPECTRA PRECISION
EPOCH 50 MODEL #68410-00
SERIAL #5213529580
FREQUENCY: 430 - 470MHz
GEOID 12
NC CORS BASE STATION "NCJL"
GNSS RTN SURVEY 5/18/2018, 10:00 AM - 11:30 AM
COMBINED FACTOR = 0.99987362
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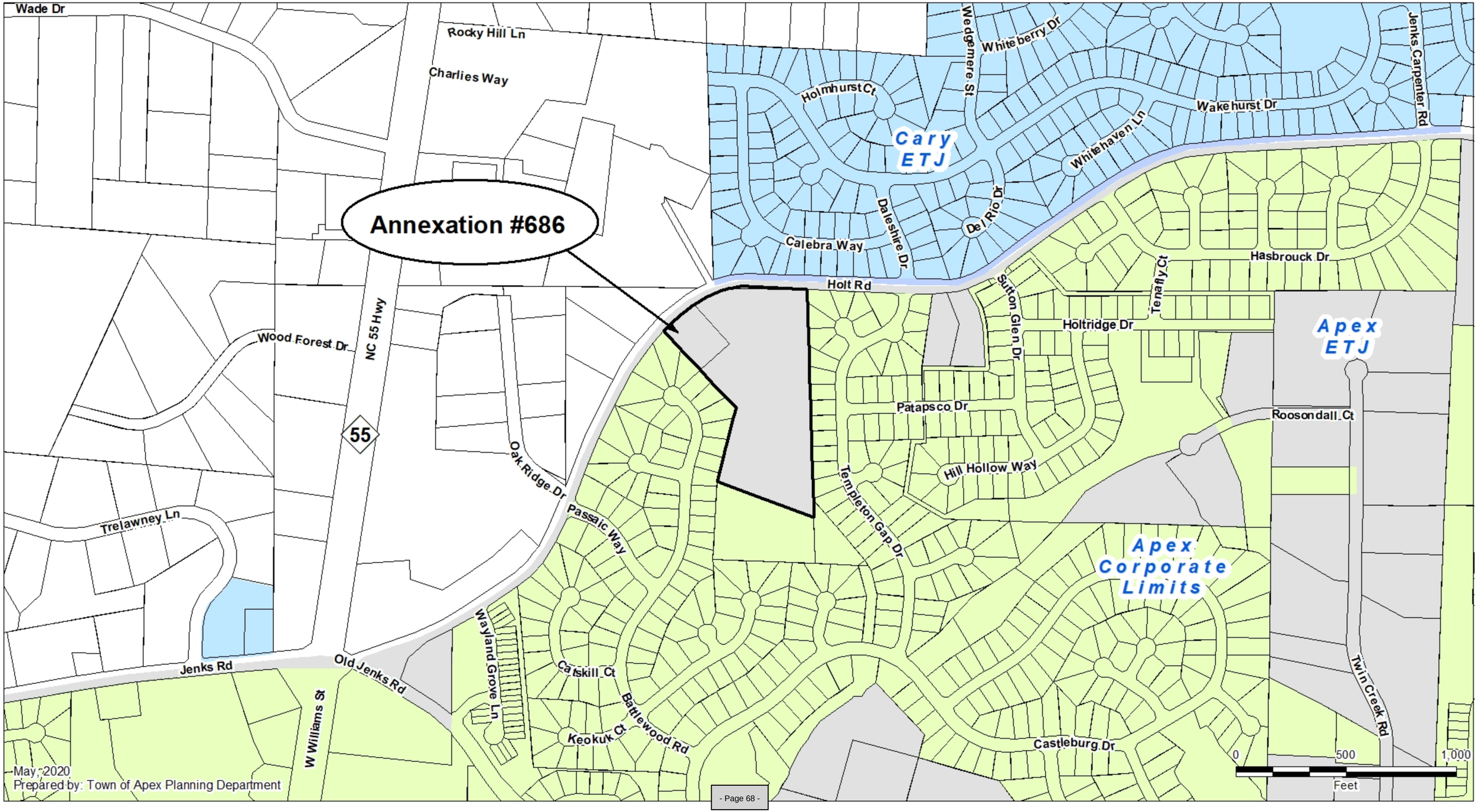
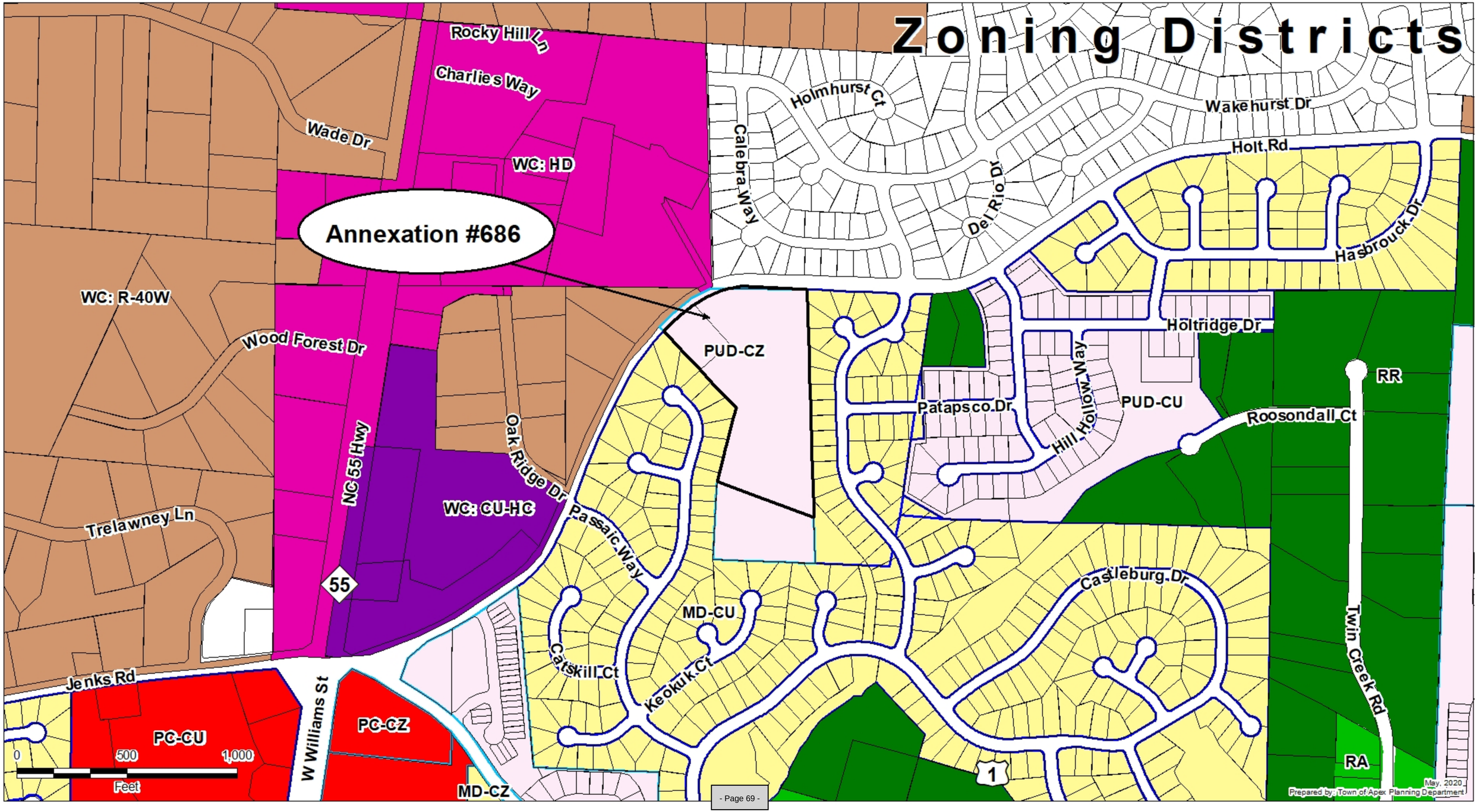
N= 733,663.17'
E= 2,038,870.90'
U.S. SURVEY FOOT UNITS
ECM "B"
N= 733,413.15'
E= 2,038,420.41'
U.S. SURVEY FOOT UNITS
PRELIMINARY
THIS IS A PRELIMINARY DRAWING AND IS NOT TO BE USED AS A SURVEY OR TO TRANSFER ANY PROPERTY SHOWN HEREON.
Professional Land Surveyor
L-3766
License Number
SURVEYOR NOTES:
1. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
2. NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
3. THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
4. ALL DISTANCES ARE HORIZONTAL U.S. SURVEY FOOT UNIT GROUND MEASUREMENTS.
5. THIS SITE IS NOT WITHIN A 100-YR. FLOOD PLAIN PER FEMA FIRM No. 3720073300J WITH AN EFFECTIVE DATE OF MAY 2, 2006.
6. ZONE: PUD-CZ
7. AREA DETERMINED USING THE COORDINATE METHOD.
8. SITE ADDRESSES: 0 HOLT ROAD APEX, NC 27523
1805 HOLT ROAD APEX, NC 27523
1745 HOLT ROAD APEX, NC 27523
9. THIS MAP IS PREPARED FOR THE SOLE PURPOSE TO ANNEX A MUNICIPAL BOUNDARY.
10. THIS MAP OR PLAT IS EXEMPT FROM THE REQUIREMENTS OF G.S. 47-30 PURSUANT TO G.S. 47-30(j).
11. IMPROVEMENTS NOT SHOWN HEREON.
Legend
ECM - Existing Concrete Monument
EIP - Existing Iron Pipe
EIS - Existing Iron Stake
Nail Set
NAD 83 (2011) - NORTH AMERICAN DATUM 1983 (NATIONAL SPATIAL REFERENCE SYSTEM 2011)
Calculated Point
R/W - Right Of Way
ft - Property Line
VRS - Virtual Reference Station
CORS - Continuously Operating Reference System
RTN - Real-Time Network
Surveyed Line
Other Surveyed Line
Line (not surveyed)
Right Of Way Line (not surveyed)
Other Line (not surveyed)
Existing Corporate Limit Line
LISTED OWNERS
(NOT A TITLE VERIFICATION)
- JS DEVELOPMENT COMPANY, LLC 4441 SIX FORKS ROAD SUITE 106-117 RALEIGH, NC 27609
- J. DALLAS HERNDON HEIRS 1010 N SALEM ST APEX, NC 27502
ANNEXATION MAP for the TOWN OF APEX
JS DEVELOPMENT COMPANY, LLC
AND
CHARLES E. HERNDON & ANNETTE C. HERNDON
TOWN OF APEX ETJ, WHITE OAK TOWNSHIP, WAKE COUNTY, NORTH CAROLINA
P.I.N. 0733-83-7691
0733-83-9147
0733-83-5369
Smith & Smith, Surveyors, P.A.
P.O. BOX 457 APEX, N.C. 27502 (919) 362-7111
FIRM LICENSE No. C-0155 PITTSBORO, N.C. 27312 (919) 542-4921
DATE MAY 18, 2018
SCALE 1" = 60'
DRAWN BY WBH
PROJ. NO. 19-79-ANNEX
RECORDED IN BOOK OF MAPS 2020 ,PAGE _____.

Annexation #686
NC 55 Hwy
Country Hearts Ln
Calebra Way
Daleshire Dr
Del Rio Dr
Montclair
Holt Rd
Sutton Glen Dr
Holtridge Dr
Templeton Gap Dr
Sutton Place
Patapsco Dr
Sutton Place
Hill Hollow Way
Oak Ridge Dr
Passaic Way
Charleston Village
Battlewood Rd
Sassacus Ln
Wayland Grove
May, 2020
January 2020 Aerial Photography
Prepared by: Town of Apex Planning Department
0
250
500
Feet


Annexation #686
Wade Dr
Rocky Hill Ln
Charlies Way
Wedgemere St
Whiteberry Dr
Jenks Carpenter Rd
Holmhurst Ct
Cary ETJ
Wakehurst Dr
Whitehaven Ln
Daleshire Dr
Del Rio Dr
Calebra Way
Holt Rd
Hasbrouck Dr
Tenafly Ct
Sutton Glen Dr
Holtridge Dr
Apex ETJ
Wood Forest Dr
NC 55 Hwy
55
Patapsco Dr
Roosondall Ct
Oak Ridge Dr
Hill Hollow Way
Templeton Gap Dr
Passaic Way
Trelawney Ln
Apex Corporate Limits
Jenks Rd
Old Jenks Rd
Wayland Grove Ln
Catskill Ct
Battlewood Rd
Keokuk Ct
W Williams St
Castleburg Dr
Twin Creek Rd
0
500
1,000
Feet
May, 2020
Prepared by: Town of Apex Planning Department


Zoning Districts
Annexation #686
Rocky Hill Ln
Charlies Way
Wade Dr
WC: HD
WC: R-40W
Wood Forest Dr
NC 55 Hwy
Oak Ridge Dr
WC: CU-HC
Trelawney Ln
55
Jenks Rd
W Williams St
PC-CU
PC-CZ
MD-CZ
PUD-CZ
Passaic Way
Catskill Ct
Keokuk Ct
MD-CU
Holmhurst Ct
Calebra Way
Del Rio Dr
Wakehurst Dr
Holt Rd
Hasbrouck Dr
Holtridge Dr
Patapsco Dr
Hill Hollow Way
PUD-CU
RR
Roosondall Ct
Castleburg Dr
Twin Creek Rd
RA
1
0
500
1,000
Feet
May, 2020
Prepared by: Town of Apex Planning Department

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter: Dianne Khin, Director

Department: Planning and Community Development

Requested Motion

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Faithwill Homes, LLC (Ananda at Bella Casa) property containing 2.0058 acres located at 2708 Blazing Trail Drive, Annexation #691 into the Town's corporate limits.

Approval Recommended?

Yes, by the Planning and Community Development Department.

Item Details

The Town Clerk certifies to the investigation of said annexation. Adoption of the Resolution authorizes the Town Clerk to advertise said public hearing by electronic means and on the Town of Apex's website. The Public Hearing would be scheduled for the August 4, 2020 Town Council meeting.

Attachments

- Annexation Petition
- Legal Description
- Vicinity Map
- Resolution Directing the Town Clerk to Investigate Petition
- Certificate of Sufficiency by the Town Clerk
- Resolution Setting Date of Public Hearing

RESOLUTION DIRECTING THE TOWN CLERK
TO INVESTIGATE PETITION RECEIVED UNDER G.S.§ 160A-31

Annexation Petition #691
Faithwill Homes LLC

WHEREAS, G.S. §160-A 31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Apex deems it advisable to proceed in response to this request for annexation;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, that the Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify to the Town Council the result of her investigation.

This the 21st day of July 2020.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

CERTIFICATE OF SUFFICIENCY BY THE TOWN CLERK

Annexation Petition 691
Faithwill Homes LLC

To: The Town Council of the Town of Apex, North Carolina

I, Donna B. Hosch, Town Clerk, do hereby certify that I have investigated the annexation petition attached hereto, and have found, as a fact, that said petition is signed by all owners of real property lying in the area described therein, in accordance with G.S.§ 160A-31, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Apex, North Carolina this 21st day of July 2020.

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

(Seal)

Home

Wake County Real Estate Data
Account Summary

iMaps
Tax Bills

Account Search
Go!

Real Estate ID **0098911** PIN # **0721518983**

Location Address
2708 BLAZING TRAIL DR

Property Description
LO4 PROP OF J.V. SCOTT BM1977-00117

Pin/Parcel History Search Results New Search

Account | Buildings | Land | Deeds | Notes | Sales | Photos | Tax Bill | Map

Property Owner	Owner's Mailing Address	Property Location Address
FAITHWILL HOMES LLC (Use the Deeds link to view any additional owners)	**2101 DELLA CT** **APEX NC 27502-9708**	**2708 BLAZING TRAIL DR** **APEX NC 27502-6717**

Administrative Data		**Transfer Information**		**Assessed Value**	
Old Map #	**669-00000-0093**				
Map/Scale	**0721 04**	Deed Date	**4/17/2020**	Land Value Assessed	**$178,000**
VCS	**03AP900**	Book & Page	**17829 2704**	Bldg. Value Assessed	**$19,157**
City		Revenue Stamps	**824.00**		
Fire District	**23**	Pkg Sale Date			
Township	**BUCKHORN**	Pkg Sale Price		Tax Relief	
Land Class	**R-<10-HS**	Land Sale Date	**4/17/2020**		
ETJ	**AP**	Land Sale Price	**$412,000**	Land Use Value	
Spec Dist(s)				Use Value Deferment	
Zoning	**MD-CZ**	**Improvement Summary**		Historic Deferment	
History ID 1				Total Deferred Value	
History ID 2		Total Units	**1**		
Acreage	**2.00**	Recycle Units	**1**		
Permit Date	**3/22/2004**	Apt/SC Sqft		Use/Hist/Tax Relief	
Permit #	**0000042765**	Heated Area	**1,168**	Assessed	
				Total Value Assessed*	**$197,157**

*Wake County assessed building and land values reflect the market value as of January 1, 2020, which is the date of the last county-wide revaluation. Any inflation, deflation or other economic changes occurring after this date does not affect the assessed value of the property and cannot be lawfully considered when reviewing the value for adjustment.

The January 1, 2020 values will remain in effect until the next county-wide revaluation. Until that time, any real estate accounts created or new construction built is assessed according to the 2020 Schedule of Values.

For questions regarding the information displayed on this site, please contact the Department of Tax Administration at Taxhelp@wakegov.com or call 919-856-5400.

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #:	691	Submittal Date:	5/13/2020
Fee Paid	$ 200.00	Check #	1800

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☒ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

Faithwill Homes LLC	0721518983
Owner Name (Please Print)	Property PIN or Deed Book & Page #
917-371-7175	sanjay.khazanchi@gmail.com
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address

Surveyor Information

Surveyor: Smith & Smith Surveyors, PA

Phone: 919-362-7111 Fax:

E-mail Address: staley@smithandsmithsurveyors.net

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	2.0058	Need water service due to well failure	☐
Population of acreage to be annexed:		Need sewer service due to septic system failure	☐
Existing # of housing units:	1	Water service (new construction)	☐
Proposed # of housing units:	6	Sewer service (new construction)	☐
Zoning District*:	ETJ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 691 Submittal Date: 5/13/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, Faithwill Homes, LLC a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 13 day of May, 2020.

Name of Limited Liability Company FAITHWILL HOMES, LLC

By: [signature]
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, this the 13th day of, May, 2020.

[signature]
Notary Public

SEAL

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/2020

My Commission Expires: November 19, 2020

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

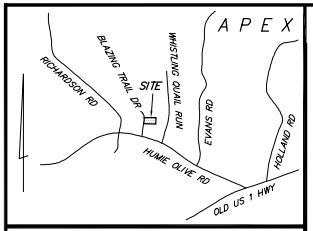
My Commission Expires: _____

Smith & Smith Surveyors, P.A.
P.O. Box 457
Apex, N.C. 27502
(919) 362-7111
Firm License No. C-0155

Lying and being in Town of Apex ETJ, White Oak Township, Wake County, North Carolina and described more fully as follows to wit:

BEGINNING at an existing iron pipe on the eastern 60' public right of way of Blazing Trail Drive (B.M. 2016, Pg. 157) also being the southwesternmost corner of Lot 389 (B.M. 2014, PG. 1340) located South 78° 11' 50" East, 57.03 feet from a 6 inch nail set "A" bearing NAD 83 (2011) coordinate values of North 712,056.57 feet, East 2,025,633.83 feet; thence South 88° 36' 38" East, 127.18 feet to an existing iron pipe; thence South 88° 31' 21" East, 299.77 feet to an existing iron pipe; thence South 02° 23' 38" West, 211.73 feet to an existing iron pipe; thence North 86° 37' 57" West, 427.39 feet to an existing iron pipe; thence a curve to the left North 03° 08' 10" East, 34.22 feet (chord) 2068.17 feet (radius) to an existing iron pipe; thence North 02° 23' 38" East, 163.23 feet to the BEGINNING, containing 2.0058 total acres more or less as shown on a map prepared by Smith & Smith Surveyors, P.A. entitled "Annexation Map for the Town Of Apex, Faithwill Homes, LLC", dated January 14, 2020.

The above-described area is recorded in:
D.B. 17829, Pg. 2704 (also see D.B 2490, Pg. 422) ~ PIN 0721-51-8983



VICINITY MAP (NOT TO SCALE)

I, STALEY C. SMITH , CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL FIELD SURVEY OF DESCRIPTION(S) AS RECORDED IN:
DEED BOOK 17829, PAGE 2704
DEED BOOK 2490, PAGE 422
BOOK OF MAPS 1977, PAGE 117
THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS SUCH AND WERE PLOTTED FROM INFORMATION AS REFERENCED HEREON; THAT THE RATIO OF PRECISION AS CALCULATED WAS 1: 10,000 + AND THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56 .1600) AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THIS SURVEY SHOWN HEREON IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

I, STALEY C. SMITH , CERTIFY THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) WAS USED TO PERFORM A PORTION OF THIS SURVEY AND THE FOLLOWING INFORMATION WAS USED:
Class of survey A
Positional Accuracy 0.03 U.S. SURVEY FOOT
Type of GPS field procedure: RTN/VRS
Dates of survey 1-14-2020
Datum/Epoch: NAD 83 (2011)
Published/Fixed-control use: NC CORS BASE STATION "NCJL"
Geoid model: 2012
Combined grid factor(s): 0.99982992
Units: U.S. SURVEY FOOT

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 1ST DAY OF MAY, 2020.

PRELIMINARY
THIS IS A PRELIMINARY DRAWING AND IS NOT TO BE USED AS A SURVEY OR TO TRANSFER ANY PROPERTY SHOWN HEREON.

Professional Land Surveyor
L-3766
License Number

SURVEYOR NOTES:
1. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
2. NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
3. THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
4. ALL DISTANCES ARE HORIZONTAL U.S. SURVEY FOOT UNIT GROUND MEASUREMENTS.
5. THIS SITE IS NOT WITHIN A 100-YR. FLOOD PLAIN PER FEMA FIRM No. 3720072100J WITH AN EFFECTIVE DATE OF MAY 2, 2006.
6. ZONE: MD-CZ
7. AREA DETERMINED USING THE COORDINATE METHOD.
8. SITE ADDRESSES: 2708 BLAZING TRAIL DR APEX, NC 27502
9. THIS MAP IS PREPARED FOR THE SOLE PURPOSE TO ANNEX A MUNICIPAL BOUNDARY.
10. THIS MAP OR PLAT IS EXEMPT FROM THE REQUIREMENTS OF G.S. 47-30 PURSUANT TO G.S. 47-30(j).
11. IMPROVEMENTS NOT SHOWN HEREON.

Legend
EIP – ● – Existing Iron Pipe
EIS – ● – Existing Iron Stake (Rebar)
– ○ – Nail Set
NAD 83 (2011) – NORTH AMERICAN DATUM 1983 (NATIONAL SPATIAL REFERENCE SYSTEM 2011)
R/W – – Right Of Way
VRS – – Virtual Reference Station
CORS – – Continuously Operating Reference System
RTN – – Real-Time Network
Surveyed Line
Other Surveyed Line
Line (not surveyed)
Right Of Way Line (not surveyed)
Other Line (not surveyed)
Not To Scale
Existing Corporate Limit Line

ANNEXATION # _____
I, Donna B. Hosch, MMC, NCCMC, Town Clerk, Apex, North Carolina certify this is a true and exact map of annexation adopted the _____ day of _____, 2020, by the Town Council. I set my hand and seal of the Town of Apex, _____, 2020.

Donna B. Hosch, MMC, NCCMC, Town Clerk

CONTROL POINTS
N.C. GRID COORDINATES NAD 83 (2011)
SPECTRA PRECISION EPOCH 50 MODEL #HB410-00 SERIAL #231.3529580 FREQUENCY : 430 - 470MHz GEOID 12 NC CORS BASE STATION "NCJL" GNSS RTN SURVEY 1/14/2020, 4:00 PM - 5:30 PM COMBINED FACTOR = 0.99982992
6" NAIL SET "A" N= 712,056.57' E= 2,025,633.83' U.S. SURVEY FEET
6" NAIL SET "B" N= 711,645.36' E= 2,025,654.57' U.S. SURVEY FEET

N.C. GRID NORTH NAD 83/2011

(390) DANIEL FRANCIS SMITH
JENNIFER OVERCASH SMITH
D.B. 17035, PG. 1791
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT) (CONDITIONAL ZONING)
PIN 0721-52-5171

BLAZING TRAIL DRIVE
50' PUBLIC R/W
B.M. 2014, PG. 1340

(389) GREYSON CRAIG DAVIS
LAUREN B. DAVIS
D.B. 16363, PG. 2303
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-52-7057

(369) JUAN CARLOS DELGADO
LORENA CASTELLANOS
D.B. 16330, PG. 2631
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-52-8077

LAKE WACCAMAW TRAIL
50' PUBLIC R/W
B.M. 2014, PG. 1340

(368) CHARLES K. AIKENS
REBECCA MICHELLE AIKENS
D.B. 16238, PG. 2712
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-62-0056

(3) JERRY BENJAMIN LEWTER, SR.
D.B. 17077, PG. 2023
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-62-3186

(7) PALEKAR ET UX.
D.B. 12031, PG. 1383
B.M. 1981, PG. 588
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-51-4966

BLAZING TRAIL DRIVE
60' PUBLIC R/W
B.M. 2016, PG. 157
ANNEXATION # 467
B.M. 1981, PG. 588 - 60' PRIVATE ROAD
B.M. 1977, PG. 117 - 60' PRIVATE ROAD

2.0058 ACRES ANNEXED

(2) STEVEN HARDESTY
CHRISTINA HARDESTY
D.B. 17765, PG. 2615
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-61-3839

ANNEXATION # 503
ANNEXATION # 535
TOWN OF APEX CORPORATE LIMIT
10' TYPE B LANDSCAPE BUFFER (B.M. 2016, PG. 157)

THE TOWNES AT BELLA CASA ASSOCIATION, INC.
D.B. 17442, PG. 1802
B.M. 2016, PG. 157
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-51-8752

(476) D.B. 16953, PG. 975, B.M. 2017, PG. 1328, ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING), PIN 0721-51-7820
(477) D.B. 16965, PG. 1057, B.M. 2017, PG. 1328, ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING), PIN 0721-51-7727
(478) D.B. 16957, PG. 863, B.M. 2017, PG. 1328, ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING), PIN 0721-51-7724
(474) D.B. 17686, PG. 765, B.M. 2016, PG. 157, ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING), PIN 0721-51-5794
(475) D.B. 17628, PG. 2014, B.M. 2016, PG. 157, ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING), PIN 0721-51-5784

(1) ANDREW M. PARKS
SYLVIA J. PARKS
LOUISE C. EDWARDS
D.B. 6862, PG. 315
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-61-3839

ANNEXATION MAP for the TOWN OF APEX
FAITHWILL HOMES, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
TOWN OF APEX ETJ, WHITE OAK TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

LISTED OWNER (NOT A TITLE VERIFICATION)
FAITHWILL HOMES, LLC
2101 DELLA COURT
APEX, NC 27502
P.I.N. 0721-51-8983

Smith & Smith, Surveyors, P.A.
P.O. BOX 457 APEX, N.C. 27502 (919) 362-7111
FIRM LICENSE No. C-0155 PITTSBORO, N.C. 27312 (919) 542-4321

DATE JAN 14, 2020
SCALE 1" = 30'
DRAWN BY WBH
PROJ. NO. 2020-03-A

30 0 15 30
(IN FEET)
1 inch = 30 ft.

RECORDED IN BOOK OF MAPS 2020 ,PAGE _____.

RESOLUTION SETTING DATE OF PUBLIC HEARING
ON THE QUESTION OF ANNEXATION PURSUANT TO G.S.§ 160A-31 AS AMENDED

Annexation Petition 691
Faithwill Homes LLC

WHEREAS, a petition requesting annexation of the area described herein has been received; and

WHEREAS, the Town Council of Apex, North Carolina has by Resolution directed the Town Clerk to investigate the sufficiency thereof; and

WHEREAS, Certification by the Town Clerk as to the sufficiency of said petition has been made;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, North Carolina that:

Section 1. A public hearing on the question of annexation of the area described herein will be held at the Apex Town Hall at 6 o'clock p.m. on the 4th day of August 2020.

Section 2. The area proposed for annexation is described as attached.

Section 3. Notice of said public hearing shall be published on the Town of Apex Website, www.apexnc.org, Public Notice, at least ten (10) days prior to the date of said public hearing.

This the 21st day of July 2020.

_____
Jacques K. Gilbert, Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC, Town Clerk

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #:	691	Submittal Date:	5/13/2020
Fee Paid	$ 200.00	Check #	1800

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☒ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

Faithwill Homes LLC	0721518983
Owner Name (Please Print)	Property PIN or Deed Book & Page #
917-371-7175	sanjay.khazanchi@gmail.com
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address

Surveyor Information

Surveyor: Smith & Smith Surveyors, PA

Phone: 919-362-7111 Fax:

E-mail Address: staley@smithandsmithsurveyors.net

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	2.0058	Need water service due to well failure	☐
Population of acreage to be annexed:		Need sewer service due to septic system failure	☐
Existing # of housing units:	1	Water service (new construction)	☐
Proposed # of housing units:	6	Sewer service (new construction)	☐
Zoning District*:	ETJ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 691 Submittal Date: 5/13/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, Faithwill Homes, LLC a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 13 day of May, 2020.

Name of Limited Liability Company FAITHWILL HOMES, LLC

By: [signature]
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, this the 13th day of, May, 2020.

[signature]
Notary Public

SEAL

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/2020

My Commission Expires: November 19, 2020

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

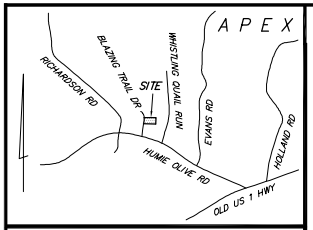
My Commission Expires: _____

Smith & Smith Surveyors, P.A.
P.O. Box 457
Apex, N.C. 27502
(919) 362-7111
Firm License No. C-0155

Lying and being in Town of Apex ETJ, White Oak Township, Wake County, North Carolina and described more fully as follows to wit:

BEGINNING at an existing iron pipe on the eastern 60' public right of way of Blazing Trail Drive (B.M. 2016, Pg. 157) also being the southwesternmost corner of Lot 389 (B.M. 2014, PG. 1340) located South 78° 11' 50" East, 57.03 feet from a 6 inch nail set "A" bearing NAD 83 (2011) coordinate values of North 712,056.57 feet, East 2,025,633.83 feet; thence South 88° 36' 38" East, 127.18 feet to an existing iron pipe; thence South 88° 31' 21" East, 299.77 feet to an existing iron pipe; thence South 02° 23' 38" West, 211.73 feet to an existing iron pipe; thence North 86° 37' 57" West, 427.39 feet to an existing iron pipe; thence a curve to the left North 03° 08' 10" East, 34.22 feet (chord) 2068.17 feet (radius) to an existing iron pipe; thence North 02° 23' 38" East, 163.23 feet to the BEGINNING, containing 2.0058 total acres more or less as shown on a map prepared by Smith & Smith Surveyors, P.A. entitled "Annexation Map for the Town Of Apex, Faithwill Homes, LLC", dated January 14, 2020.

The above-described area is recorded in:
D.B. 17829, Pg. 2704 (also see D.B 2490, Pg. 422) ~ PIN 0721-51-8983



VICINITY MAP (NOT TO SCALE)

I, STALEY C. SMITH , CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL FIELD SURVEY OF DESCRIPTION(S) AS RECORDED IN:
DEED BOOK 17829, PAGE 2704
DEED BOOK 2490, PAGE 422
BOOK OF MAPS 1977, PAGE 117
THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS SUCH AND WERE PLOTTED FROM INFORMATION AS REFERENCED HEREON; THAT THE RATIO OF PRECISION AS CALCULATED WAS 1: 10,000 + AND THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56 .1600) AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THIS SURVEY SHOWN HEREON IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

I, STALEY C. SMITH , CERTIFY THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) WAS USED TO PERFORM A PORTION OF THIS SURVEY AND THE FOLLOWING INFORMATION WAS USED:
Class of survey A
Positional Accuracy 0.03 U.S. SURVEY FOOT
Type of GPS field procedure: RTN/VRS
Dates of survey 1-14-2020
Datum/Epoch: NAD 83 (2011)
Published/Fixed-control use: NC CORS BASE STATION "NCJL"
Geoid model: 2012
Combined grid factor(s): 0.99982992
Units: U.S. SURVEY FOOT

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 1ST DAY OF MAY, 2020.

PRELIMINARY
THIS IS A PRELIMINARY DRAWING AND IS NOT TO BE USED AS A SURVEY OR TO TRANSFER ANY PROPERTY SHOWN HEREON.

Professional Land Surveyor
L-3766
License Number

SURVEYOR NOTES:
1. THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME.
2. NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
3. THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
4. ALL DISTANCES ARE HORIZONTAL U.S. SURVEY FOOT UNIT GROUND MEASUREMENTS.
5. THIS SITE IS NOT WITHIN A 100-YR. FLOOD PLAIN PER FEMA FIRM No. 3720072100J WITH AN EFFECTIVE DATE OF MAY 2, 2006.
6. ZONE: MD-CZ
7. AREA DETERMINED USING THE COORDINATE METHOD.
8. SITE ADDRESSES: 2708 BLAZING TRAIL DR APEX, NC 27502
9. THIS MAP IS PREPARED FOR THE SOLE PURPOSE TO ANNEX A MUNICIPAL BOUNDARY.
10. THIS MAP OR PLAT IS EXEMPT FROM THE REQUIREMENTS OF G.S. 47-30 PURSUANT TO G.S. 47-30(j).
11. IMPROVEMENTS NOT SHOWN HEREON.

Legend
EIP – ● – Existing Iron Pipe
EIS – ● – Existing Iron Stake (Rebar)
– ○ – Nail Set
NAD 83 (2011) – NORTH AMERICAN DATUM 1983 (NATIONAL SPATIAL REFERENCE SYSTEM 2011)
R/W – – Right Of Way
VRS – – Virtual Reference Station
CORS – – Continuously Operating Reference System
RTN – – Real-Time Network
Surveyed Line
Other Surveyed Line
Line (not surveyed)
Right Of Way Line (not surveyed)
Other Line (not surveyed)
Not To Scale
Existing Corporate Limit Line

ANNEXATION # _____
I, Donna B. Hosch, MMC, NCCMC, Town Clerk, Apex, North Carolina certify this is a true and exact map of annexation adopted the _____ day of _____, 2020, by the Town Council. I set my hand and seal of the Town of Apex, _____, 2020.

Donna B. Hosch, MMC, NCCMC, Town Clerk

CONTROL POINTS
N.C. GRID COORDINATES NAD 83 (2011)
SPECTRA PRECISION EPOCH 50 MODEL #68410-00 SERIAL #231.3529580 FREQUENCY : 430 - 470MHz GEOID 12 NC CORS BASE STATION "NCJL" GNSS RTN SURVEY 1/14/2020, 4:00 PM - 5:30 PM COMBINED FACTOR = 0.99982992
6" NAIL SET "A" N= 712,056.57' E= 2,025,633.83' U.S. SURVEY FEET
6" NAIL SET "B" N= 711,645.36' E= 2,025,654.57' U.S. SURVEY FEET

N.C. GRID NORTH NAD 83/2011

(390) DANIEL FRANCIS SMITH
JENNIFER OVERCASH SMITH
D.B. 17035, PG. 1791
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT) (CONDITIONAL ZONING)
PIN 0721-52-5171

BLAZING TRAIL DRIVE
50' PUBLIC R/W
B.M. 2014, PG. 1340

(389) GREYSON CRAIG DAVIS
LAUREN B. DAVIS
D.B. 16363, PG. 2303
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-52-7057

(369) JUAN CARLOS DELGADO
LORENA CASTELLANOS
D.B. 16330, PG. 2631
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-52-8077

LAKE WACCAMAW TRAIL
50' PUBLIC R/W
B.M. 2014, PG. 1340

(368) CHARLES K. AIKENS
REBECCA MICHELLE AIKENS
D.B. 16238, PG. 2712
B.M. 2014, PG. 1340
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-62-0056

(3) JERRY BENJAMIN LEWTER, SR.
D.B. 17077, PG. 2023
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-62-3186

ANNEXATION # 503

6" NAIL SET "A"
TIE ONLY 62.01' TOTAL 56.14' N 62°17'55" W
S 78°11'50" E 57.03' TIE ONLY
TIE ONLY 5.67'
S 88°36'38" E 127.18'
EIP (LINE BENDS HERE)
124.88'
299.77' TOTAL 49.89' S 88°31'21" E
125.00'
TOWN OF APEX CORPORATE LIMIT
TIE ONLY 53.52'
IN OUT

BLAZING TRAIL DRIVE
60' PUBLIC R/W
B.M. 2016, PG. 157
ANNEXATION # 467
B.M. 1981, PG. 589 - 60' PRIVATE ROAD
B.M. 1977, PG. 117 - 60' PRIVATE ROAD

TIE ONLY 411.60' (GROUND) 411.77' N 14°55'51" W
163.23' N 02°23'38" E
TOWN OF APEX CORPORATE LIMIT
211.73' S 02°23'38" W 460.56' TOTAL

2.0058 ACRES ANNEXED

(7) PALEKAR ET UX.
D.B. 12031, PG. 1383
B.M. 1981, PG. 588
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-51-4966

(2) STEVEN HARDESTY
CHRISTINA HARDESTY
D.B. 17765, PG. 2615
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-61-3839

R=2068.17' CH=134.22' N 01°08'10" E
6" NAIL SET "B"
TIE ONLY CH=23.38' 23.39' S 03°48'53" W
3/8" EIP
N 86°37'57" W 427.39'
TOWN OF APEX CORPORATE LIMIT
10' TYPE B LANDSCAPE BUFFER (B.M. 2016, PG. 157)
ANNEXATION # 535
177.37' TIE ONLY

THE TOWNES AT BELLA CASA ASSOCIATION, INC.
D.B. 17442, PG. 1802
B.M. 2016, PG. 157
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-51-8752

TIE ONLY S 60°52'53" W 72.14'
EIS REBAR N 85°39'50" W 46.03' TIE ONLY

(476) D.B. 16953, PG. 975 B.M. 2017, PG. 1328 ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING) PIN 0721-51-7820
(477) D.B. 16965, PG. 1057 B.M. 2017, PG. 1328 ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING) PIN 0721-51-7727
(478) D.B. 16957, PG. 863 B.M. 2017, PG. 1328 ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING) PIN 0721-51-7724

(474) D.B. 17606, PG. 765 B.M. 2016, PG. 157 ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING) PIN 0721-51-5794
(475) D.B. 17624, PG. 2014 B.M. 2016, PG. 157 ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING) PIN 0721-51-5784

THE TOWNES AT BELLA CASA ASSOCIATION, INC.
D.B. 17442, PG. 1802
B.M. 2016, PG. 157
ZONE: PUD-CZ (PLANNED UNIT DEVELOPMENT – CONDITIONAL ZONING)
PIN 0721-51-8752

TIE ONLY 212.99' N 68°18'12" W
1" EIP
1" EIP
17.94' TIE ONLY

(1) ANDREW M. PARKS
SYLVIA J. PARKS
LOUISE C. EDWARDS
D.B. 6862, PG. 315
B.M. 1987, PG. 99
ZONE: RR (RURAL RESIDENTIAL)
PIN 0721-61-3839

30 0 15 30
(IN FEET)
1 inch = 30 ft.

ANNEXATION MAP for the TOWN OF APEX
FAITHWILL HOMES, LLC
A NORTH CAROLINA LIMITED LIABILITY COMPANY
TOWN OF APEX ETJ, WHITE OAK TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

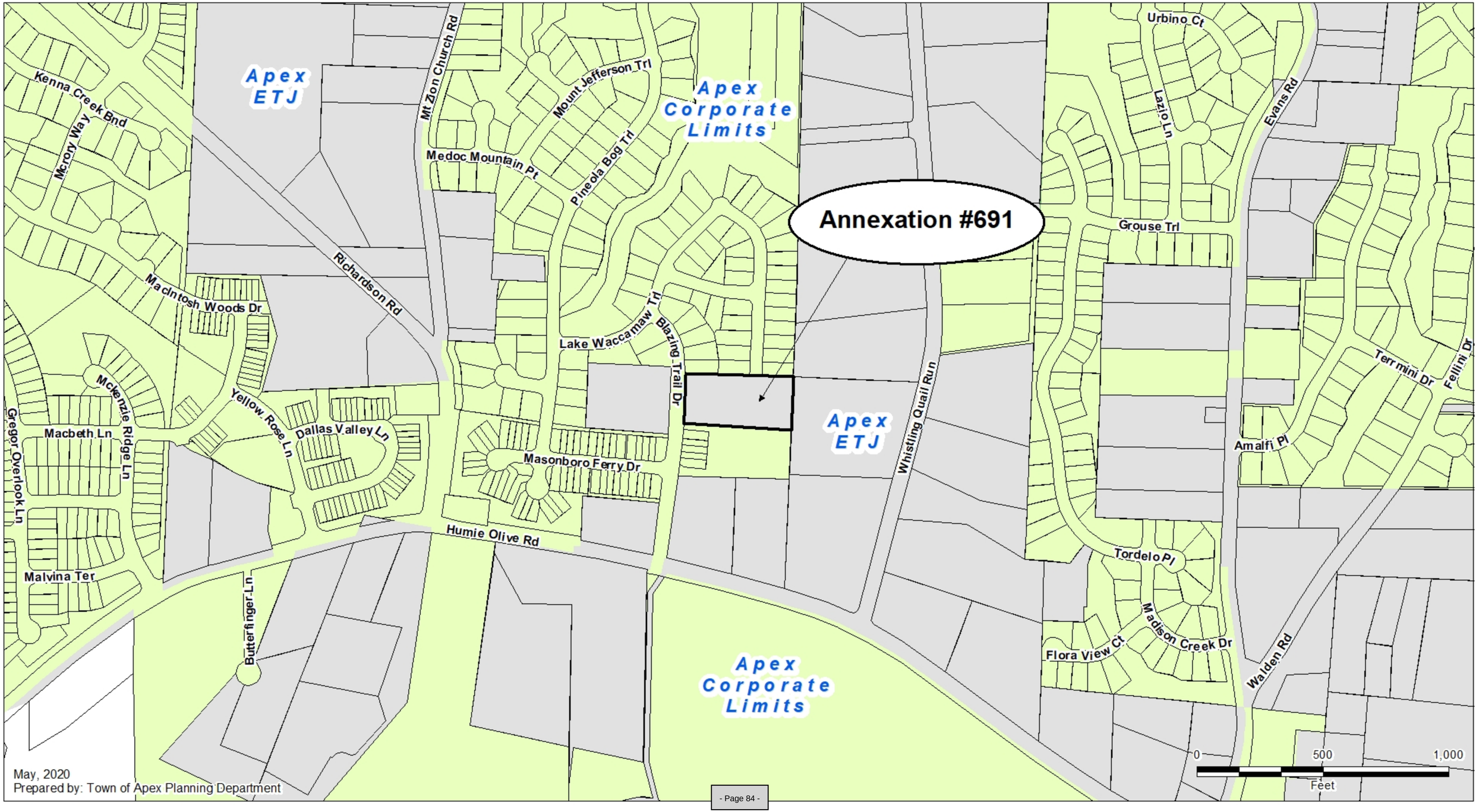
LISTED OWNER (NOT A TITLE VERIFICATION)
FAITHWILL HOMES, LLC
2101 DELLA COURT
APEX, NC 27502
P.I.N. 0721-51-8983

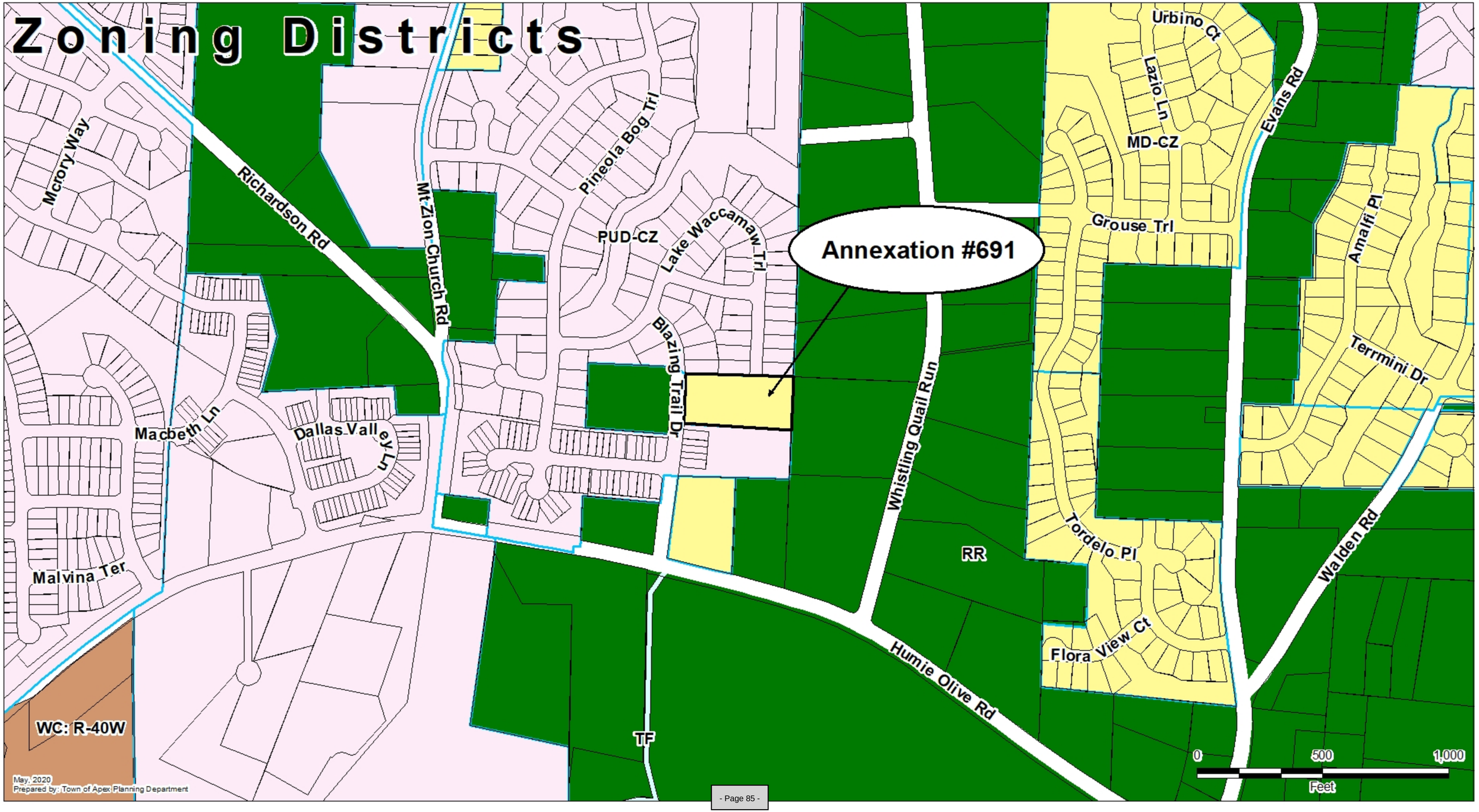
Smith & Smith, Surveyors, P.A.
P.O. BOX 457 APEX, N.C. 27502 (919) 362-7111
FIRM LICENSE No. C-0155 PITTSBORO, N.C. 27312 (919) 542-4321

DATE JAN 14, 2020
SCALE 1" = 30'
DRAWN BY WBH
PROJ. NO. 2020-03-A

RECORDED IN BOOK OF MAPS 2020 ,PAGE _____.

Weymouth Woods Trl
Blazing Trail Dr
Lake Waccamaw Trl
Pineola Bog Trl
Annexation #691
Whistling Quail
Whistling Quail Run
Parkside PUD
Masonboro Ferry Dr
May, 2020
January 2020 Aerial Photography
Prepared by: Town of Apex Planning Department
0
250
500
Feet


Annexation #691
Apex ETJ
Apex Corporate Limits
Apex ETJ
Apex Corporate Limits
Kenna Creek Bnd
Mcrory Way
Mt Zion Church Rd
Mount Jefferson Trl
Medoc Mountain Pt
Pineola Bog Trl
Richardson Rd
Macintosh Woods Dr
Lake Waccamaw Trl
Blazing Trail Dr
Mckenzie Ridge Ln
Macbeth Ln
Gregor Overlook Ln
Yellow Rose Ln
Dallas Valley Ln
Masonboro Ferry Dr
Humie Olive Rd
Malvina Ter
Butterfinger Ln
Whistling Quail Run
Urbino Ct
Lazio Ln
Evans Rd
Grouse Trl
Termini Dr
Fellini Dr
Amalfi Pl
Tordelo Pl
Madison Creek Dr
Flora View Ct
Walden Rd
0
500
1,000
Feet
May, 2020
Prepared by: Town of Apex Planning Department


Zoning Districts
Annexation #691
Urbino Ct
Lazio Ln
MD-CZ
Evans Rd
Grouse Trl
Amalfi Pl
Terrmini Dr
Mcrory Way
Richardson Rd
Mt Zion Church Rd
Pineola Bog Trl
PUD-CZ
Lake Waccamaw Trl
Blazing Trail Dr
Whistling Quail Run
Macbeth Ln
Dallas Valley Ln
Malvina Ter
RR
Tordelo Pl
Walden Rd
Flora View Ct
Humie Olive Rd
TF
WC: R-40W
0
500
1,000
Feet
May, 2020
Prepared by: Town of Apex Planning Department

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter: Dianne Khin, Director

Department: Planning and Community Development

Requested Motion

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting Date of Public Hearing on the Question of Annexation – Apex Town Council's intent to annex Construction Masters, LLC (Humie Olive Place) property containing 2 acres located at 7904 Humie Olive Road, Annexation #694 into the Town's corporate limits.

Approval Recommended?

Yes, by the Planning and Community Development Department.

Item Details

The Town Clerk certifies to the investigation of said annexation. Adoption of the Resolution authorizes the Town Clerk to advertise said public hearing by electronic means and on the Town of Apex's website. The Public Hearing would be scheduled for the August 4, 2020 Town Council meeting.

Attachments

- Annexation Petition
- Legal Description
- Vicinity Map
- Resolution Directing the Town Clerk to Investigate Petition
- Certificate of Sufficiency by the Town Clerk
- Resolution Setting Date of Public Hearing

RESOLUTION DIRECTING THE TOWN CLERK
TO INVESTIGATE PETITION RECEIVED UNDER G.S.§ 160A-31

Annexation Petition #694
Construction Masters LLC

WHEREAS, G.S. §160-A 31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Apex deems it advisable to proceed in response to this request for annexation;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, that the Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify to the Town Council the result of her investigation.

This the 21st day of July 2020.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

CERTIFICATE OF SUFFICIENCY BY THE TOWN CLERK

Annexation Petition #694
Construction Masters LLC

To: The Town Council of the Town of Apex, North Carolina

I, Donna B. Hosch, Town Clerk, do hereby certify that I have investigated the annexation petition attached hereto, and have found, as a fact, that said petition is signed by all owners of real property lying in the area described therein, in accordance with G.S.§ 160A-31, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Apex, North Carolina this 21st day of July 2020.

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

(Seal)

Home

Wake County Real Estate Data
Account Summary

iMaps
Tax Bills

Account Search
Go!

Real Estate ID **0101073** PIN # **0721517458**

Location Address
7904 HUMIE OLIVE RD

Property Description
LOGR PT 2 PROP OF J V SCOTT BM1977-00117

Pin/Parcel History Search Results New Search

Account | Buildings | Land | Deeds | Notes | Sales | Photos | Tax Bill | Map

Property Owner	Owner's Mailing Address	Property Location Address
CONSTRUCTION MASTERS LLC (Use the Deeds link to view any additional owners)	**7904 HUMIE OLIVE RD** **APEX NC 27502-9604**	**7904 HUMIE OLIVE RD** **APEX NC 27502-9604**

Administrative Data		**Transfer Information**		**Assessed Value**	
Old Map #	**669-00000-0097**				
Map/Scale	**0721 04**	Deed Date	**12/11/2019**	Land Value Assessed	**$178,000**
VCS	**03AP900**	Book & Page	**17680 0223**	Bldg. Value Assessed	**$59,391**
City		Revenue Stamps	**610.00**		
Fire District	**23**	Pkg Sale Date	**12/11/2019**		
Township	**BUCKHORN**	Pkg Sale Price	**$305,000**	Tax Relief	
Land Class	**R-<10-HS**	Land Sale Date			
ETJ	**AP**	Land Sale Price		Land Use Value	
Spec Dist(s)				Use Value Deferment	
Zoning	**MD-CZ**	**Improvement Summary**		Historic Deferment	
History ID 1				Total Deferred Value	
History ID 2		Total Units	**1**		
Acreage	**2.00**	Recycle Units	**1**		
Permit Date		Apt/SC Sqft		Use/Hist/Tax Relief Assessed	
Permit #		Heated Area	**1,040**	Total Value Assessed*	**$237,391**

*Wake County assessed building and land values reflect the market value as of January 1, 2020, which is the date of the last county-wide revaluation. Any inflation, deflation or other economic changes occurring after this date does not affect the assessed value of the property and cannot be lawfully considered when reviewing the value for adjustment.

The January 1, 2020 values will remain in effect until the next county-wide revaluation. Until that time, any real estate accounts created or new construction built is assessed according to the 2020 Schedule of Values.

For questions regarding the information displayed on this site, please contact the Department of Tax Administration at Taxhelp@wakegov.com or call 919-856-5400.

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #:	694	Submittal Date:	6/4/2020
Fee Paid	$ 200.00	Check #	1548

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☒ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

Construction Masters LLC	0721517458
Owner Name (Please Print)	Property PIN or Deed Book & Page #
919-995-5876	office@conzalpm.com
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address

Surveyor Information

Surveyor: RWK, PA

Phone: 919-779-4854 Fax:

E-mail Address: sean@rwkpa.com

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	2	Need water service due to well failure	☐
Population of acreage to be annexed:	0	Need sewer service due to septic system failure	☐
Existing # of housing units:	0	Water service (new construction)	☐
Proposed # of housing units:	8	Sewer service (new construction)	☐
Zoning District*:	ETJ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 694 Submittal Date: 6/4/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, Construction Masters llc a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 5 day of June, 2020.

Name of Limited Liability Company Construction Masters llc

By: _____
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, this the 5th day of, June, 2020.

_____
Notary Public

SEAL

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/2020

My Commission Expires: November 19, 2020

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

RWK, PA
ENGINEERING ~ SURVEYING
P.O. BOX 444
GARNER, NC 27529
PHONE (919) 779-4854
FAX (919) 779-4056

LAND DESCRIPTION FOR
ANNEXATION OF WAKE COUNTY PIN#: 0721517458
7904 HUMIE OLIVE ROAD (NCSR 1142)
APEX, NORTH CAROLINA

BEING ALL THAT PIECE OR PARCEL OF LAND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD (NCSR 1142) AND BLAZING TRAIL DRIVE IN THE TOWN OF APEX , WAKE COUNTY, NORTH CAROLINA TO BE ANNEXED INTO THE TOWN OF APEX AND IS MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A PK NAIL IN AN ASHPALT WALK AT THE SOUTHWEST CORNER OF LANDS IN THE NAME OF CONSTRUCTION MASTERS, LLC AS DESCRIBED IN DEED BOOK TO 17680 PAGE 223 AND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD AND BLAZING TRAIL DRIVE AND RUNS;

THENCE N08°03'22"E A DISTANCE OF 330.58' WITH THE EAST RIGHT-OF-WAY OF BLAZING TRAIL DRIVE TO AN EIP IN THE LINE OF LANDS SHOWN AS "HOA COMMON AREA" OF PARKSIDE AT BELLA CASA RECORDED IN BOOK OF MAPS 2016 PAGE 157 AND RUNS;

THENCE S88°16'53"E A DISTANCE OF 227.95' TO AN EIP IN THE WEST LINE OF LANDS IN THE NAME OF SCOTT ELVIN AND DESCRIBED IN DEED BOOK 14353 PAGE 1971 AND RUNS;

THENCE S02°26'32"W A DISTANCE OF 383.21' WITH ELVIN'S WEST LINE TO A PK NAIL SET IN THE NORTH RIGHT-OF-WAY LINE OF HUMIE OLIVE ROAD AND RUNS;

THENCE N75°55'09"W A DISTANCE OF 174.59' WITH HUMIE OLIVE ROAD TO A PK NAIL SET AND RUNS;

THENCE N77°19'42"W A DISTANCE OF 90.71' CONTINUING WITH HUMIE OLIVE ROAD TO THE POINT AND PLACE OF BEGINNING AND CONTAINING 2.000 ACRES OR 87,122 SQUARE FEET.

LAND DESCRIPTION FOR
ANNEXATION A PORTION OF HUMIE OLIVE ROAD (NCSR 1142)
ABBUTING THE SOUTH PROPERTY LINE OF HUMIE OLIVE ROAD
APEX, NORTH CAROLINA

BEING ALL THAT PIECE OR PARCEL OF LAND IN THE AT THE INTERSECTION OF HUMIE OLIVE ROAD (NCSR 1142) AND BLAZING TRAIL DRIVE IN THE TOWN OF APEX , WAKE COUNTY, NORTH CAROLINA TO BE ANNEXED INTO THE TOWN OF APEX, SAID PROPERTY BEING A SHORT SECTION OF HUMIE OLIVE ROAD AND IS MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:
BEGINNING AT A PK NAIL IN AN ASHPALT WALK AT THE SOUTHWEST CORNER OF LANDS IN THE NAME OF CONSTRUCTION MASTERS, LLC AS DESCRIBED IN DEED BOOK TO 17680 PAGE 223 AND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD AND BLAZING TRAIL DRIVE AND RUNS;
THENCE S77°19'42"E A DISTANCE OF 90.71' WITH THE NORTH RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO A PK NAIL SET AND RUNS;
THENCE S75°55'09"E A DISTANCE OF 174.59' WITH THE NORTH RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO PK NAIL SET IN THE WEST LINE OF LANDS IN THE NAME OF SCOTT ELVIN AND DESCRIBED IN DEED BOOK 14353 PAGE 1971 AND RUNS;
THENCE S15°07'09"W A DISTANCE OF 61.68' ACROSS THE RIGHT-OF-WAY OF HUMIE OLIVER ROAD TO A POINT IN THE OLD (60') RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO A POINT AND RUNS;
THENCE WITH THE OLD SOUTHERN RIGHT-OF-WAY OF HUMIE OLIVER ROAD THE FOLLOWING COURSES AND DISTANCES;
THENCE N74°52'51"W A DISTANCE OF 24.78' TO A POINT AND RUNS;
THENCE N75°19'57"W A DISTANCE OF 50.27' TO A POINT AND RUNS;
THENCE N75°52'27"W A DISTANCE OF 50.31' TO A POINT AND RUNS;
THENCE N76°10'27"W A DISTANCE OF 50.74' TO A POINT AND RUNS;
THENCE N76°28'20"W A DISTANCE OF 50.71' TO A POINT AND RUNS;
THENCE N76°52'46"W A DISTANCE OF 50.50' TO A POINT AND RUNS;
THENCE N77°25'01"W A DISTANCE OF 5.52' TO A POINT AND RUNS;
THENCE N12°35'18"E A DISTANCE OF 59.65' AND CROSSING HUMIE OLIVE ROAD TO A POINT AND RUNS;
THENCE S77°21'20"E A DISTANCE OF 20.22' TO THE POINT AND PLACE OF BEGINNING AND CONTAINING 0.395 ACRES OR 17,222 SQUARE FEET.

2 of 2

ANNEXATION # _____

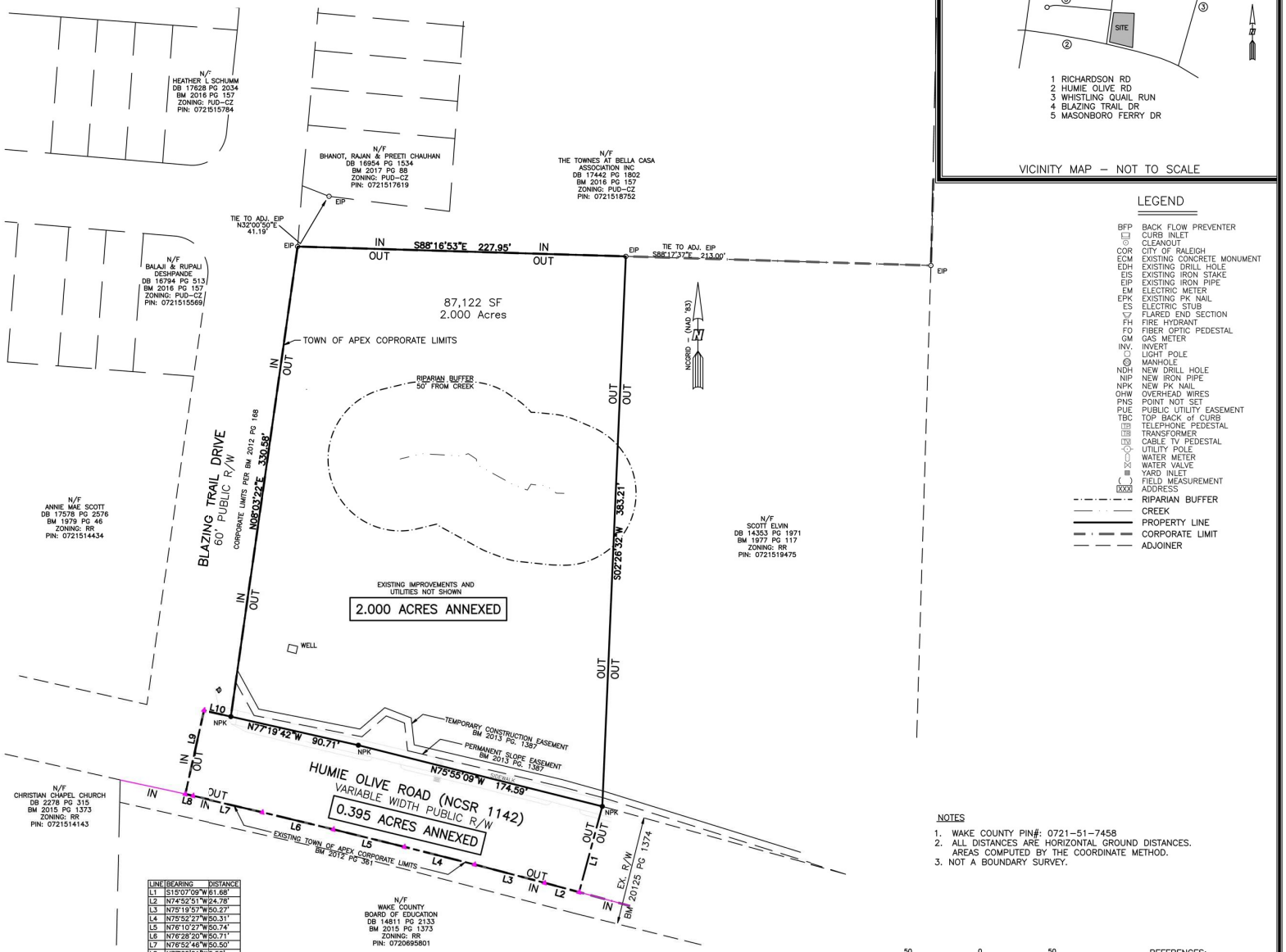
I, DONNA B. HOSCH, MMC, NCCMC, TOWN CLERK, APEX, NORTH CAROLINA CERTIFY THIS IS A TRUE AND EXACT MAP OF ANNEXATION ADOPTED THE _____ DAY OF _____ , 2020,

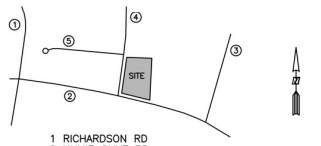
BY THE TOWN COUNCIL, I SET MY HAND SEAL OF

THE TOWN OF APEX, _____ , 2020

_____

DONNA B. HOSCH , MMC, NCCMC, TOWN CLERK





1 RICHARDSON RD
2 HUMIE OLIVE RD
3 WHISTLING QUAIL RUN
4 BLAZING TRAIL DR
5 MASONBORO FERRY DR

VICINITY MAP – NOT TO SCALE

LEGEND

BFP	BACK FLOW PREVENTER
	CURB INLET
	CLEANOUT
COR	CITY OF RALEIGH
ECM	EXISTING CONCRETE MONUMENT
EDH	EXISTING DRILL HOLE
EIS	EXISTING IRON STAKE
EIP	EXISTING IRON PIPE
EM	ELECTRIC METER
EPK	EXISTING PK NAIL
ES	ELECTRIC STUB
	FLARED END SECTION
FH	FIRE HYDRANT
FO	FIBER OPTIC PEDESTAL
GM	GAS METER
INV.	INVERT
	LIGHT POLE
	MANHOLE
NDH	NEW DRILL HOLE
NIP	NEW IRON PIPE
NPK	NEW PK NAIL
OHW	OVERHEAD WIRES
PNS	POINT NOT SET
PUE	PUBLIC UTILITY EASEMENT
TBC	TOP BACK of CURB
	TELEPHONE PEDESTAL
	TRANSFORMER
	CABLE TV PEDESTAL
	UTILITY POLE
	WATER METER
	WATER VALVE
	YARD INLET
( )	FIELD MEASUREMENT
XXX	ADDRESS
	RIPARIAN BUFFER
	CREEK
	PROPERTY LINE
	CORPORATE LIMIT
	ADJOINER

LINE	BEARING	DISTANCE
L1	S15°07'09"W	61.68'
L2	N74°52'51"W	24.78'
L3	N75°19'57"W	50.27'
L4	N75°52'27"W	50.31'
L5	N76°10'27"W	50.74'
L6	N76°28'20"W	50.71'
L7	N76°52'46"W	50.50'
L8	N77°25'01"W	5.52'
L9	N12°35'18"E	59.65'
L10	S77°21'20"E	20.22'

NOTES

1. WAKE COUNTY PIN#: 0721-51-7458
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES. AREAS COMPUTED BY THE COORDINATE METHOD.
3. NOT A BOUNDARY SURVEY.

50 0 50
SCALE: 1" = 50'

REFERENCES:
BM 1977, PG 117
DB 17680 PG 223

I, CHARLES R. PIRATZKY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEED DESCRIPTION RECORDED IN BOOK SEE , PAGE REF , THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM CITED REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1/10,000, THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS _____ DAY OF _____, _____

THIS SURVEY SHOWN HEREON IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

PRELIMINARY

CHARLES R. PIRATZKY, P.L.S.
L-2813

RECORDED IN BOOK OF MAPS _____, PAGE _____.

DWN: 05/29/2020 | BY | TC | CK'D | CRP
...GTS\HUMIOLV\RM\HUMIOLV 7904 ANNEX.DWG
...Q:\FIELDLOC\HUMIEOLIVE.TXT

ANNEXATION MAP – TOWN OF APEX OF
7904 HUMIE OLIVE ROAD
LOT 2 PROPERTY OF J V SCOTT
BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA
OWNERS
CONSTRUCTION MASTERS, LLC
7904 HUMIE OLIVE ROAD
APEX, NORTH CAROLINA 27502-9604
AND A PORTION OF
HUMIE OLIVE ROAD
BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

RWK, PA
ENGINEERING ~ SURVEYING
Corporate License: C-1771
101 W. Main St., Suite 202
Garner, NC 27529
Phone (919) 779-4854
Fax (919) 779-4056

SHEET 1 OF 1

RESOLUTION SETTING DATE OF PUBLIC HEARING
ON THE QUESTION OF ANNEXATION PURSUANT TO G.S.§ 160A-31 AS AMENDED

Annexation Petition #694
Construction Masters LLC

WHEREAS, a petition requesting annexation of the area described herein has been received; and

WHEREAS, the Town Council of Apex, North Carolina has by Resolution directed the Town Clerk to investigate the sufficiency thereof; and

WHEREAS, Certification by the Town Clerk as to the sufficiency of said petition has been made;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, North Carolina that:

Section 1. A public hearing on the question of annexation of the area described herein will be held at the Apex Town Hall at 6 o'clock p.m. on the 4th day of August 2020.

Section 2. The area proposed for annexation is described as attached.

Section 3. Notice of said public hearing shall be published on the Town of Apex Website, www.apexnc.org, Public Notice, at least ten (10) days prior to the date of said public hearing.

This the 21st day of July 2020.

_____
Jacques K. Gilbert, Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC, Town Clerk

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #:	694	Submittal Date:	6/4/2020
Fee Paid	$ 200.00	Check #	1548

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, North Carolina.
2. The area to be annexed is ☒ contiguous, ☐ non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

Owner Information

Construction Masters LLC	0721517458
Owner Name (Please Print)	Property PIN or Deed Book & Page #
919-995-5876	office@conzalpm.com
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address
Owner Name (Please Print)	Property PIN or Deed Book & Page #
Phone	E-mail Address

Surveyor Information

Surveyor: RWK, PA

Phone: 919-779-4854 Fax:

E-mail Address: sean@rwkpa.com

Annexation Summary Chart

Property Information		Reason(s) for annexation (select all that apply)	
Total Acreage to be annexed:	2	Need water service due to well failure	☐
Population of acreage to be annexed:	0	Need sewer service due to septic system failure	☐
Existing # of housing units:	0	Water service (new construction)	☐
Proposed # of housing units:	8	Sewer service (new construction)	☐
Zoning District*:	ETJ	Receive Town Services	☑

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Planning Department at 919-249-3426 for questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 694 Submittal Date: 6/4/2020

COMPLETE IF IN A LIMITED LIABILITY COMPANY

In witness whereof, Construction Masters llc a limited liability company, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the 5 day of June, 2020.

Name of Limited Liability Company Construction Masters llc

By: _____
Signature of Member/Manager

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, this the 5th day of, June, 2020.

_____
Notary Public

SEAL

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/2020

My Commission Expires: November 19, 2020

COMPLETE IF IN A PARTNERSHIP

In witness whereof, _____, a partnership, caused this instrument to be executed in its name by a member/manager pursuant to authority duly given, this the _____ day of _____, 20_____.

Name of Partnership _____

By: _____
Signature of General Partner

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the _____day of _____, 20____.

_____
Notary Public

SEAL

My Commission Expires: _____

RWK, PA
ENGINEERING ~ SURVEYING
P.O. BOX 444
GARNER, NC 27529
PHONE (919) 779-4854
FAX (919) 779-4056

LAND DESCRIPTION FOR
ANNEXATION OF WAKE COUNTY PIN#: 0721517458
7904 HUMIE OLIVE ROAD (NCSR 1142)
APEX, NORTH CAROLINA

BEING ALL THAT PIECE OR PARCEL OF LAND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD (NCSR 1142) AND BLAZING TRAIL DRIVE IN THE TOWN OF APEX , WAKE COUNTY, NORTH CAROLINA TO BE ANNEXED INTO THE TOWN OF APEX AND IS MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A PK NAIL IN AN ASHPALT WALK AT THE SOUTHWEST CORNER OF LANDS IN THE NAME OF CONSTRUCTION MASTERS, LLC AS DESCRIBED IN DEED BOOK TO 17680 PAGE 223 AND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD AND BLAZING TRAIL DRIVE AND RUNS;

THENCE N08°03'22"E A DISTANCE OF 330.58' WITH THE EAST RIGHT-OF-WAY OF BLAZING TRAIL DRIVE TO AN EIP IN THE LINE OF LANDS SHOWN AS "HOA COMMON AREA" OF PARKSIDE AT BELLA CASA RECORDED IN BOOK OF MAPS 2016 PAGE 157 AND RUNS;

THENCE S88°16'53"E A DISTANCE OF 227.95' TO AN EIP IN THE WEST LINE OF LANDS IN THE NAME OF SCOTT ELVIN AND DESCRIBED IN DEED BOOK 14353 PAGE 1971 AND RUNS;

THENCE S02°26'32"W A DISTANCE OF 383.21' WITH ELVIN'S WEST LINE TO A PK NAIL SET IN THE NORTH RIGHT-OF-WAY LINE OF HUMIE OLIVE ROAD AND RUNS;

THENCE N75°55'09"W A DISTANCE OF 174.59' WITH HUMIE OLIVE ROAD TO A PK NAIL SET AND RUNS;

THENCE N77°19'42"W A DISTANCE OF 90.71' CONTINUING WITH HUMIE OLIVE ROAD TO THE POINT AND PLACE OF BEGINNING AND CONTAINING 2.000 ACRES OR 87,122 SQUARE FEET.

LAND DESCRIPTION FOR
ANNEXATION A PORTION OF HUMIE OLIVE ROAD (NCSR 1142)
ABBUTING THE SOUTH PROPERTY LINE OF HUMIE OLIVE ROAD
APEX, NORTH CAROLINA

BEING ALL THAT PIECE OR PARCEL OF LAND IN THE AT THE INTERSECTION OF HUMIE OLIVE ROAD (NCSR 1142) AND BLAZING TRAIL DRIVE IN THE TOWN OF APEX , WAKE COUNTY, NORTH CAROLINA TO BE ANNEXED INTO THE TOWN OF APEX, SAID PROPERTY BEING A SHORT SECTION OF HUMIE OLIVE ROAD AND IS MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:
BEGINNING AT A PK NAIL IN AN ASHPALT WALK AT THE SOUTHWEST CORNER OF LANDS IN THE NAME OF CONSTRUCTION MASTERS, LLC AS DESCRIBED IN DEED BOOK TO 17680 PAGE 223 AND IN THE NORTHEAST CORNER OF THE INTERSECTION OF HUMIE OLIVE ROAD AND BLAZING TRAIL DRIVE AND RUNS;
THENCE S77°19'42"E A DISTANCE OF 90.71' WITH THE NORTH RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO A PK NAIL SET AND RUNS;
THENCE S75°55'09"E A DISTANCE OF 174.59' WITH THE NORTH RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO PK NAIL SET IN THE WEST LINE OF LANDS IN THE NAME OF SCOTT ELVIN AND DESCRIBED IN DEED BOOK 14353 PAGE 1971 AND RUNS;
THENCE S15°07'09"W A DISTANCE OF 61.68' ACROSS THE RIGHT-OF-WAY OF HUMIE OLIVER ROAD TO A POINT IN THE OLD (60') RIGHT-OF-WAY OF HUMIE OLIVE ROAD TO A POINT AND RUNS;
THENCE WITH THE OLD SOUTHERN RIGHT-OF-WAY OF HUMIE OLIVER ROAD THE FOLLOWING COURSES AND DISTANCES;
THENCE N74°52'51"W A DISTANCE OF 24.78' TO A POINT AND RUNS;
THENCE N75°19'57"W A DISTANCE OF 50.27' TO A POINT AND RUNS;
THENCE N75°52'27"W A DISTANCE OF 50.31' TO A POINT AND RUNS;
THENCE N76°10'27"W A DISTANCE OF 50.74' TO A POINT AND RUNS;
THENCE N76°28'20"W A DISTANCE OF 50.71' TO A POINT AND RUNS;
THENCE N76°52'46"W A DISTANCE OF 50.50' TO A POINT AND RUNS;
THENCE N77°25'01"W A DISTANCE OF 5.52' TO A POINT AND RUNS;
THENCE N12°35'18"E A DISTANCE OF 59.65' AND CROSSING HUMIE OLIVE ROAD TO A POINT AND RUNS;
THENCE S77°21'20"E A DISTANCE OF 20.22' TO THE POINT AND PLACE OF BEGINNING AND CONTAINING 0.395 ACRES OR 17,222 SQUARE FEET.

2 of 2

ANNEXATION # _____

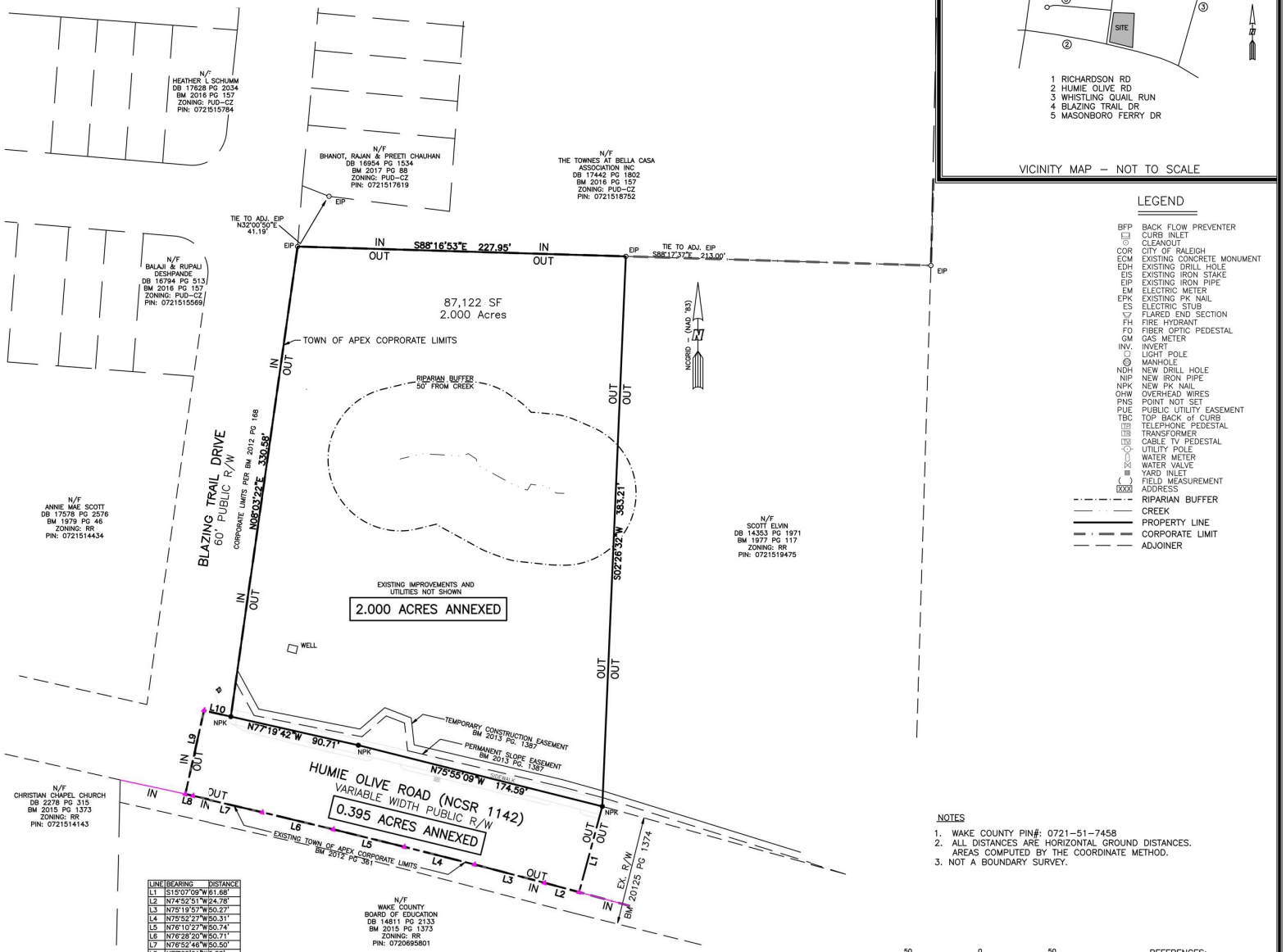
I, DONNA B. HOSCH, MMC, NCCMC, TOWN CLERK, APEX, NORTH CAROLINA CERTIFY THIS IS A TRUE AND EXACT MAP OF ANNEXATION ADOPTED THE _____ DAY OF _____ , 2020,

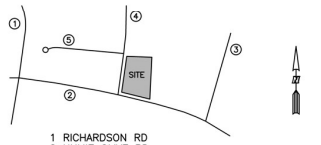
BY THE TOWN COUNCIL, I SET MY HAND SEAL OF

THE TOWN OF APEX, _____ , 2020

_____

DONNA B. HOSCH , MMC, NCCMC, TOWN CLERK





1 RICHARDSON RD
2 HUMIE OLIVE RD
3 WHISTLING QUAIL RUN
4 BLAZING TRAIL DR
5 MASONBORO FERRY DR

VICINITY MAP – NOT TO SCALE

LEGEND

BFP	BACK FLOW PREVENTER
	CURB INLET
	CLEANOUT
COR	CITY OF RALEIGH
ECM	EXISTING CONCRETE MONUMENT
EDH	EXISTING DRILL HOLE
EIS	EXISTING IRON STAKE
EIP	EXISTING IRON PIPE
EM	ELECTRIC METER
EPK	EXISTING PK NAIL
ES	ELECTRIC STUB
	FLARED END SECTION
FH	FIRE HYDRANT
FO	FIBER OPTIC PEDESTAL
GM	GAS METER
INV.	INVERT
	LIGHT POLE
	MANHOLE
NDH	NEW DRILL HOLE
NIP	NEW IRON PIPE
NPK	NEW PK NAIL
OHW	OVERHEAD WIRES
PNS	POINT NOT SET
PUE	PUBLIC UTILITY EASEMENT
TBC	TOP BACK of CURB
	TELEPHONE PEDESTAL
	TRANSFORMER
	CABLE TV PEDESTAL
	UTILITY POLE
	WATER METER
	WATER VALVE
	YARD INLET
( )	FIELD MEASUREMENT
XXX	ADDRESS

RIPARIAN BUFFER
CREEK
PROPERTY LINE
CORPORATE LIMIT
ADJOINER

NOTES

1. WAKE COUNTY PIN#: 0721-51-7458
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES. AREAS COMPUTED BY THE COORDINATE METHOD.
3. NOT A BOUNDARY SURVEY.

LINE	BEARING	DISTANCE
L1	S15°07'09"W	61.68'
L2	N74°52'51"W	24.78'
L3	N75°19'57"W	50.27'
L4	N75°52'27"W	50.31'
L5	N76°10'27"W	50.74'
L6	N76°28'20"W	50.71'
L7	N76°52'46"W	50.50'
L8	N77°25'01"W	5.52'
L9	N12°35'18"E	59.65'
L10	S77°21'20"E	20.22'

50 0 50
SCALE: 1" = 50'

REFERENCES:
BM 1977, PG 117
DB 17680 PG 223

I, CHARLES R. PIRATZKY, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEED DESCRIPTION RECORDED IN BOOK SEE , PAGE REF , THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM CITED REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1/10,000, THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS _____ DAY OF _____, _____

THIS SURVEY SHOWN HEREON IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

PRELIMINARY

CHARLES R. PIRATZKY, P.L.S.
L-2813

RECORDED IN BOOK OF MAPS _____, PAGE _____.

N: 05/29/2020	BY	TC	CK'D	CRP
S:\HUMIOLV\RM\HUMIOLV 7904 ANNEX.DWG				
Q:\FIELDLOC\HUMIEOLIVE.TXT				

ANNEXATION MAP – TOWN OF APEX OF
7904 HUMIE OLIVE ROAD
LOT 2 PROPERTY OF J V SCOTT
BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA
OWNERS
CONSTRUCTION MASTERS, LLC
7904 HUMIE OLIVE ROAD
APEX, NORTH CAROLINA 27502-9604
AND A PORTION OF
HUMIE OLIVE ROAD
BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

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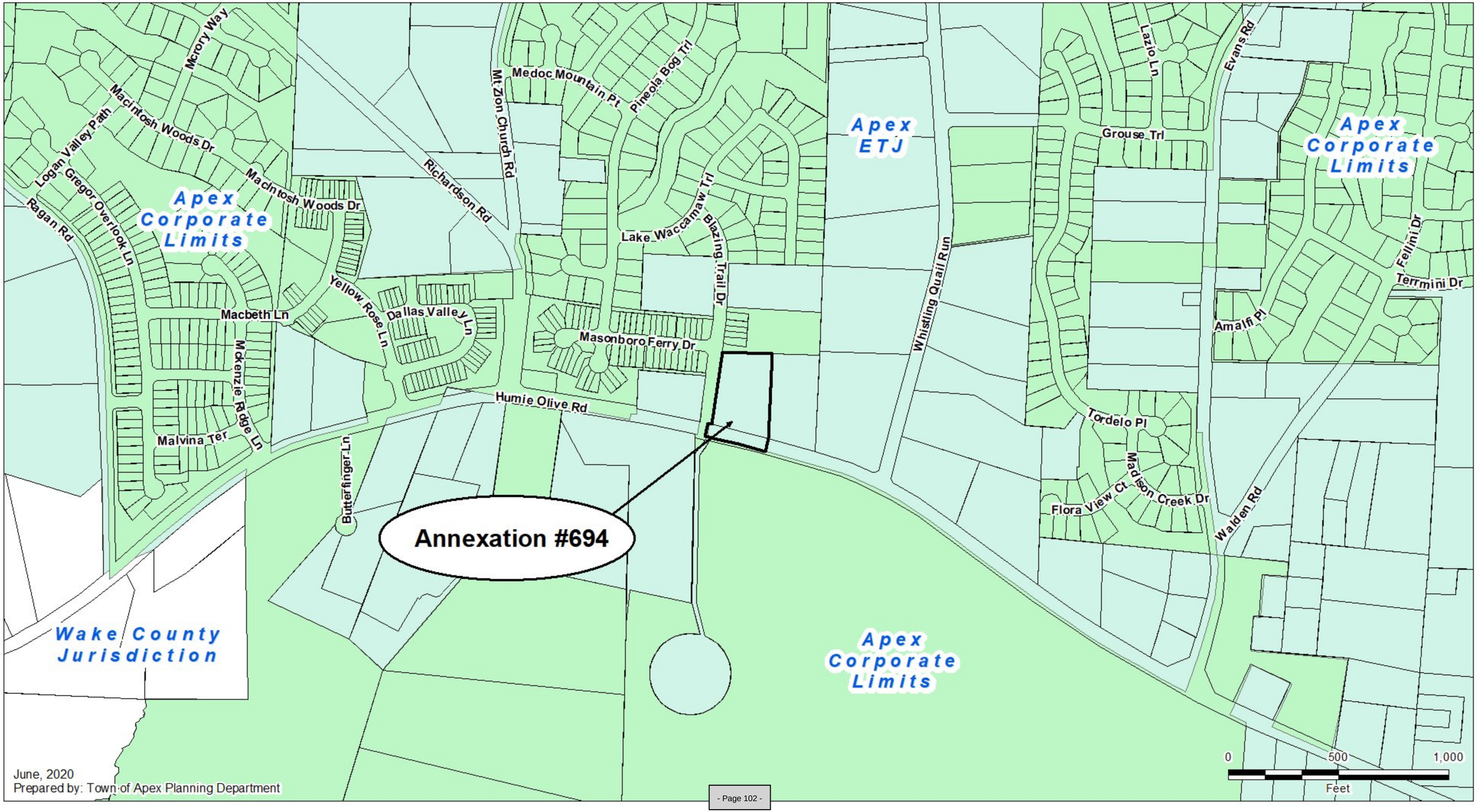
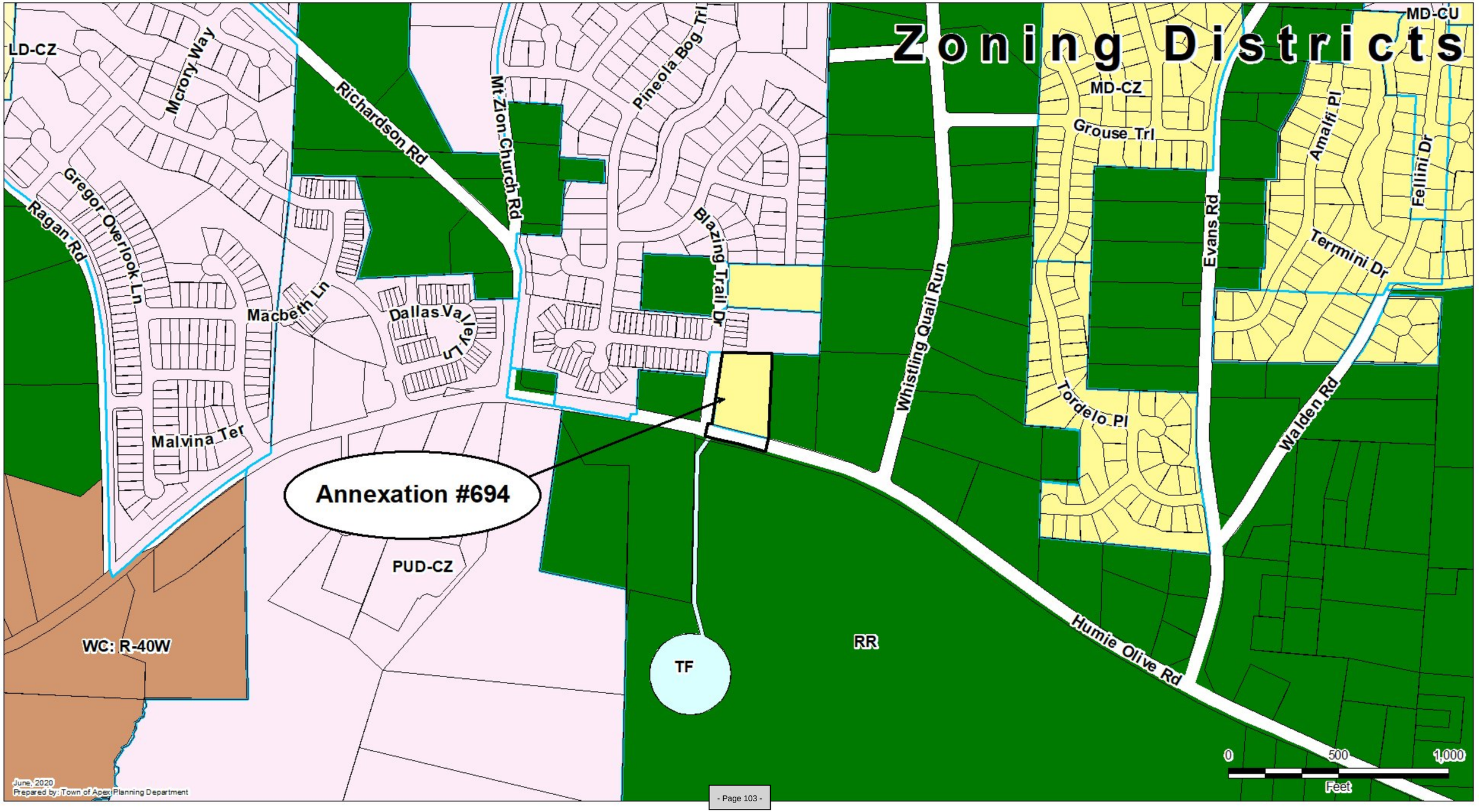
Garner, NC 27529
Phone (919) 779-4854
Fax (919) 779-4056

SHEET 1 OF 1

Annexation #694
Friendship Station Section 7
Parkside PUD
Pineola Bog Trl
Masonboro Ferry Dr
Blazing Trail Dr
Whistling Quail Run
Humie Olive Rd
Richardson Rd
Greater Christian Chapel Church
Whistling Quail
Friendship Station PUD
Apex Friendship High School
0
250
500
Feet
June, 2020
January 2020 Aerial Photography
Prepared by: Town of Apex Planning Department


Annexation #694
Apex ETJ
Apex Corporate Limits
Apex Corporate Limits
Apex Corporate Limits
Wake County Jurisdiction
Mcrory Way
Macintosh Woods Dr
Logan Valley Path
Gregor Overlook Ln
Ragan Rd
Macintosh Woods Dr
Richardson Rd
Mt Zion Church Rd
Medoc Mountain Pt
Pineola Bog Trl
Lake Waccamaw Trl
Blazing Trail Dr
Whistling Quail Run
Lazio Ln
Evans Rd
Grouse Trl
Fellini Dr
Terrmini Dr
Amalfi Pl
Macbeth Ln
Yellow Rose Ln
Dallas Valley Ln
Masonboro Ferry Dr
Mckenzie Ridge Ln
Malvina Ter
Humie Olive Rd
Butterfinger Ln
Tordelo Pl
Madison Creek Dr
Flora View Ct
Walden Rd
June, 2020
Prepared by: Town of Apex Planning Department
0
500
1,000
Feet


Zoning Districts
LD-CZ
Mcrory Way
Richardson Rd
Mt Zion Church Rd
Pineola Bog Trl
MD-CU
MD-CZ
Grouse Trl
Amalfi Pl
Fellini Dr
Termini Dr
Evans Rd
Gregor Overlook Ln
Ragan Rd
Macbeth Ln
Dallas Valley Ln
Blazing Trail Dr
Whistling Quail Run
Tordelo Pl
Walden Rd
Malvina Ter
Annexation #694
PUD-CZ
WC: R-40W
TF
RR
Humie Olive Rd
0
500
1,000
Feet
June, 2020
Prepared by: Town of Apex Planning Department

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Marty Stone, Assistant Town Manager
Department(s): Administration

Requested Motion

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owner, Tri Pointe Homes, Inc. regarding Wake County, NC PIN#0742-68-5065, 816 Amley Place, as recorded in Book of Maps 2020, Page 205, Wake County Register of Deeds.

Approval Recommended?

Yes

Item Details

Approve Encroachment Agreement between the Town and Tri Pointe Homes, Inc. (Grantee) for the property described as a residential lot known as Wake County PIN#0742-68-5065, Book of Maps 2020, Page 205, Lot 87, 816 Amley Place, Apex, NC 27523. Grantee desires to encroach through installation of a private sidewalk of which 40 SF will encroach upon a portion of the Public Utility Easement.

Attachments

- Encroachment Agreement
- Exhibit A

After Recording Mail To: Development Services
Town of Apex
PO Box 250
Apex, NC 27502

STATE OF NORTH CAROLINA **ENCROACHMENT AGREEMENT**
COUNTY OF WAKE

THIS ENCROACHMENT AGREEMENT, being made this _____ day of _____, 2020, by and between Tri Pointe Homes, Inc. hereinafter referred to as "Grantee," and the Town of Apex, hereinafter referred to as the "Town."

WHEREAS, the Grantee is the owner of a certain residential lot of land in the County of Wake, State of North Carolina, which is designated as PIN #0742-68-5065 by the Wake County Revenue Department and more particularly described as **Lot 87** of the subdivision known as **Townes At North Salem Phase 2B** as shown on that certain plat recorded in **Book of Maps 2020, Page 205**, Wake County Registry (hereinafter the **"Subdivision Plat"**). The residential lot is also known as **816 Amley Place, Apex, NC 27523.** The residential lot described in this paragraph is hereinafter referred to as the **"Residential Lot."**

WHEREAS, the Town is the owner of a **New 10' Public Utility Easement** as shown on the **Subdivision Plat** hereinafter referred to as the **"Public Utility Easement."**

WHEREAS, Grantee wishes to install certain improvements, more particularly described as a **private sidewalk of which 40 SF will encroach upon a portion of the Public Utility Easement** which

serves the Residential Lot, hereinafter referred to as the "**Encroachment**", all as shown on the attached **Exhibit A**. Grantee's desire to make certain agreements and covenants regarding the Encroachment.

WHEREAS, the Town, under the terms and conditions herein set forth, is willing to allow the above-described Encroachment upon the **Public Utility Easement.**

NOW, THEREFORE, in consideration of these promises and other consideration, the receipt and sufficiency of which is hereby acknowledged, Grantee and the Town hereby covenant and agree:

1. Subject to the terms herein, the Town agrees to allow Grantee, and Grantees' successors and assigns at Grantee sole risk and expense, to encroach into the **Public Utility Easement** of the Town as shown in the attached **Exhibit A**, and incorporated by reference as though fully set forth herein.

2. The Encroachment shall not be enlarged or increased beyond the Encroachment shown in **Exhibit A** and described in this Encroachment Agreement. Grantee is responsible for any and all expenditures of labor or materials required for the installation, erection, repair, removal, or maintenance of the above-referenced Encroachment.

3. Grantee is fully responsible for any and all property damage or injury or death of any person which results from any and all negligence, omission, defect in design, maintenance, or workmanship created by the Encroachment described herein, or any cause of action arising out of the installation, maintenance, removal, destruction, or location of said Encroachment.

4. Grantee agrees to and does hereby hold the Town, its officers, council members and employees harmless from any and all liability arising out of such negligence, omission, defect or other cause of action; that it will defend the Town, its officers, council members and employees, and pay all attorney fees in any and all actions brought as a result of such; and that it will indemnify the Town, its officers, council members, and employees against any and all loss sustained by reason of such negligence, omission, defect, or other cause of action, claim, cost, or expense arising out of the installation, maintenance, removal, or location of said Encroachment.

5. Sections 3 and 4 shall survive the termination of this Encroachment Agreement for any reason.

6. All notices required herein shall be deemed given by depositing such in the United States mail, first class, and addressed to:

To Town: Town Manager
Town of Apex
PO Box 250
Apex, NC 27502

To Grantee: Tri Pointe Homes, Inc.
Leslie Graham Shell, IV
1401 Sunday Drive, Suite 105
Raleigh, NC 27607

7. In the event there is a dispute between the parties concerning the interpretation of the terms of this Encroachment Agreement or their respective rights and obligations hereunder, such dispute or controversy shall be adjudged pursuant to the laws of the State of North Carolina.

8. Grantee agrees to abide by all applicable laws, regulations, statutes and ordinances.

9. This Encroachment Agreement shall not divest the Town of any rights or interest in said **Public Utility Easement** and the Town may terminate this Encroachment Agreement by giving Grantee ninety (90) days written notice of termination. Prior to the termination date, Grantee shall remove, at its own expense, all or part of the Encroachment as specified by the Town.

10. If the Town deems, within its sole discretion, that there is not time to give the Grantee notice as provided in Paragraph 9 and that removal of the Encroachment is necessary in order to operate, protect, maintain, modify, replace, add-to or improve its facilities located within the **Public Utility Easement,** then no notice shall be required and the Town may remove the Encroachment from the **Public Utility Easement** without cost, risk or liability to the Town.

11. Grantee agrees to pay and reimburse the Town the entire expense and cost of removal of the Encroachment in the event that the Town removes the Encroachment as provided in the Paragraph 10 or if Grantee fails to remove the Encroachment within the time limit after receiving notice under Paragraph 9.

12. Grantee, during the life of this Encroachment Agreement, agrees to procure or cause to be procured from a responsible insurance carrier or carriers authorized under the laws of the State of North Carolina, insurance in the minimum amounts of $300,000/$500,000/$300,000 covering full liability for any and all personal injury, property damage or wrongful death caused by the construction, maintenance, location, repair or visual obstruction of said Encroachment. Grantee shall furnish the Town, without demand, each July a certification from the insurance carrier or carriers with whom the insurance herein mentioned is carried, stating that such compensation is covered by such carrier or carriers and showing such insurance to be in full force and effect. Both Grantee and the Town shall be named as insured parties by endorsement of the policy. In the event of any change in the insurance policy, Grantee shall give the Town thirty (30) days notice of such change. Should Grantee fail to pay premiums upon said insurance or to perform any of the agreement, terms or conditions herein contained, the Town, at its option, by written notice may declare this Encroachment Agreement canceled and terminated and all rights acquired hereunder by Grantee shall thereupon terminate.

13. Notwithstanding Section 14 below, Grantee shall be released from its obligation under this Encroachment Agreement only upon the assumption of said obligations either by a successor in title to real property known as **Lot 87, Townes At North Salem, PH2B (816 Amley Place, Apex, NC 27523)**, or by assumption of said obligations by an incorporated property or condominium owners association for **Townes At North Salem, Phase 2B.** The Town's consent to such assumption and release shall be required but shall not be withheld, conditioned or delayed if, as reasonably determined by the Town, the party assuming Grantee obligations possesses adequate financial resources and ownership interest, and Grantee delegate and proposed assignee assume and agree to fulfill, in writing, all of Grantee duties set forth in this Encroachment Agreement.

14. The right to encroach is appurtenant to and runs with the land hereinabove referred to and shall forever by subject to the conditions above agreed on between the parties. This Encroachment Agreement is binding upon the heirs, assigns, transferees, and successors in interest of the Grantee and shall, upon execution, be recorded in the Office of the Register of Deeds of Wake County, North Carolina.

In testimony whereof, said Grantee and said Town have here unto set their hands and seals, the day and year first above written.

GRANTEE

Tri Pointe Homes, Inc.

By: _____ (SEAL)
Leslie Graham Shell, IV.
Division President - Carolinas

NORTH CAROLINA
COUNTY OF Wake *[county in which acknowledgement taken]*

I, Mandy Briley, a Notary Public of Wake County, North Carolina, certify that Leslie Graham Shell, IV., personally appeared before me this day and acknowledged that he is the Division President – Carolinas for TRI Pointe Homes, Inc., a corporation, and that he as Division President – Carolinas being authorized to do so, executed the foregoing on behalf of the corporation.

Witness my hand and official stamp or seal, this 11 day of June, 2020.

_____
[Signature of Notary Public]

(Affix Notarial Stamp-Seal)

My Commission Expires: Dec. 15, 2024

MANDY BRILEY
NOTARY
PUBLIC
WAKE COUNTY, NC

TOWN OF APEX

_____

Andrew L. Havens
Town Manager

(Corporate Seal)

ATTEST:

_____

Donna B. Hosch, MMC, NCCMC
Town Clerk

STATE OF NORTH CAROLINA

COUNTY OF _____ *[county in which acknowledgement taken]*

I, _____, a Notary Public of _____ County, North Carolina, certify that Donna B. Hosch personally came before me this day and acknowledged that she is Town Clerk of the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by her as its Town Clerk.

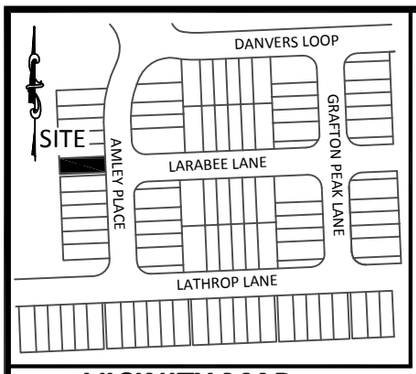
Witness my hand and official stamp or seal, this _____ day of _____, 2020.

_____

[Signature of Notary Public] *(Seal)*

My Commission Expires: _____

Exhibit A



VICINITY MAP

(Not to Scale)

NOTE:
THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVEIWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS.

0 10 20

SCALE:
1" = 20 ft.

LOT INFORMATION:

PIN: 0742685065
TOTAL LOT AREA = 0.057 AC = 2,465 SF
HOUSE = 928 SF
DRIVEWAY = 328 SF
SIDEWALK = 116 SF
PORCH = 22 SF
COVERED PORCH = 76 SF
AC PAD = 9 SF
PROPOSED IMPERVIOUS = 1,479 SF
PERCENT IMPERVIOUS = 60.0 %

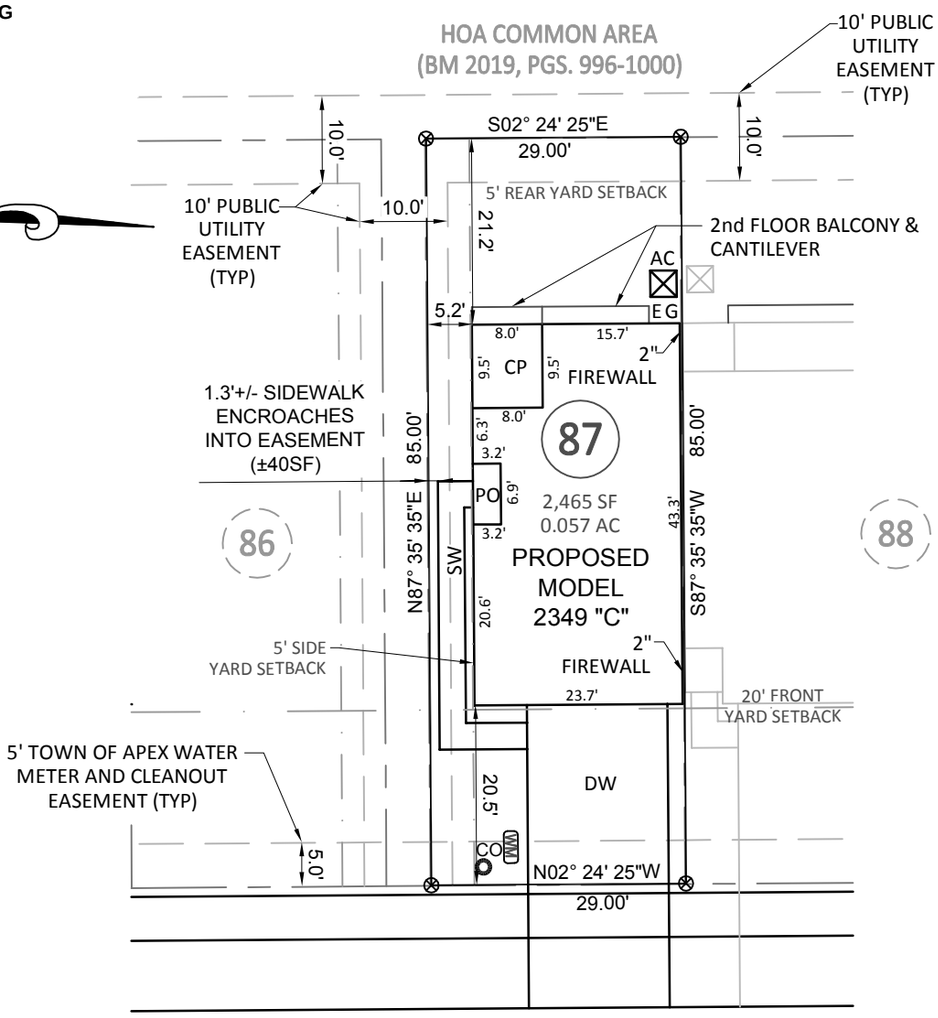
MINIMUM BUILDING SETBACKS:

FROM BUFFER OR RCA:	10'
FRONT YARD:	5'
SIDE YARD (END UNITS):	5'
REAR YARD:	5'
PUBLIC R/W:	18' **(WHERE NO SIDEWALK IS PRESENT)**
PUBLIC R/W TO GARAGE:	20' **(WHERE SIDEWALK IS PRESENT)**
BUILDING SIDE TO SIDE:	10'
BUILDING SIDE TO REAR:	30'
BUILDING REAR TO REAR:	40'

BM2020PG205

LEGEND

PO = PORCH
S = CONCRETE STOOP
SW = SIDEWALK
DW = CONC DRIVEWAY
SP = SCREENED PORCH
CP = COVERED PORCH
P = CONCRETE PATIO
⊗ = COMPUTED POINT
○ = IRON PIPE FOUND(EIP)
◉ = IRON PIPE SET(IPS)
● = DRILL HOLE FOUND
WM = WATER METER
CO = CLEAN OUT
AC = AIR CONDITIONER
C = CABLE BOX
S = SEWER MANOLE
T = TS HANDHOLE
TP = TELEPHONE PEDESTAL
CB = CATCH BASIN
= LIGHT POLE
G = GAS METER
E = ELECTRIC METER
= FIRE HYDRANT (FH)
YI = YARD INLET
= WATER VALVE (WV)
EB = ELECTRIC BOX
G = GAS VALVE
FP = FIREPLACE
ST = STORAGE
W = WATER VALVE



Bateman Civil • Survey Company, PC
Engineers • Surveyors • Planners
2524 Reliance Avenue, Apex, NC 27539
(919) 577-1080
NCBELS C 2378

PLOT PLAN
EXCLUSIVELY FOR: TRI POINTE HOMES
TOWNES AT NORTH SALEM, PHASE 2B - LOT 87
816 AMLEY PLACE, APEX, NC
WHITE OAK TOWNSHIP, WAKE COUNTY
DATE: 5/08/2020 DRAWN BY: JKF CHECKED BY: SPC

REFERENCE: BOOK 2020, PG 205 BCS# 200201 SCALE: 1" = 20'

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Marty Stone, Assistant Town Manager
Department(s): Administration

Requested Motion

Motion to approve and authorize the Town Manager to execute the same for and Encroachment Agreement between the Town and property owner, Tri Pointe Homes, Inc. regarding Wake County, NC PIN#0742-68-5061, 820 Amley Place, as recorded in Book of Maps 2020, Page 205, Wake County Register of Deeds.

Approval Recommended?

Yes

Item Details

Approve Encroachment Agreement between the Town and Tri Pointe Homes, Inc. (Grantee) for the property described as a residential lot known as Wake County PIN#0742-68-5061, Book of Maps 2020, Page 205, Lot 86, 820 Amley Place, Apex, NC 27523. Grantee desires to encroach through installation of a private sidewalk of which 40 SF will encroach upon a portion of the Public Utility Easement.

Attachments

- Encroachment Agreement
- Exhibit A

After Recording Mail To: Development Services
Town of Apex
PO Box 250
Apex, NC 27502

STATE OF NORTH CAROLINA **ENCROACHMENT AGREEMENT**
COUNTY OF WAKE

THIS ENCROACHMENT AGREEMENT, being made this _____ day of _____, 2020, by and between Tri Pointe Homes, Inc. hereinafter referred to as "Grantee," and the Town of Apex, hereinafter referred to as the "Town."

WHEREAS, the Grantee is the owner of a certain residential lot of land in the County of Wake, State of North Carolina, which is designated as PIN #0742-68-5061 by the Wake County Revenue Department and more particularly described as **Lot 86** of the subdivision known as **Townes At North Salem Phase 2B** as shown on that certain plat recorded in **Book of Maps 2020, Page 205**, Wake County Registry (hereinafter the **"Subdivision Plat"**). The residential lot is also known as **820 Amley Place, Apex, NC 27523.** The residential lot described in this paragraph is hereinafter referred to as the **"Residential Lot."**

WHEREAS, the Town is the owner of a **New 10' Public Utility Easement** as shown on the **Subdivision Plat** hereinafter referred to as the **"Public Utility Easement."**

WHEREAS, Grantee wishes to install certain improvements, more particularly described as a **private sidewalk of which 40 SF will encroach upon a portion of the Public Utility Easement** which

serves the Residential Lot, hereinafter referred to as the "**Encroachment**", all as shown on the attached **Exhibit A**. Grantee's desire to make certain agreements and covenants regarding the Encroachment.

WHEREAS, the Town, under the terms and conditions herein set forth, is willing to allow the above-described Encroachment upon the **Public Utility Easement.**

NOW, THEREFORE, in consideration of these promises and other consideration, the receipt and sufficiency of which is hereby acknowledged, Grantee and the Town hereby covenant and agree:

1. Subject to the terms herein, the Town agrees to allow Grantee, and Grantees' successors and assigns at Grantee sole risk and expense, to encroach into the **Public Utility Easement** of the Town as shown in the attached **Exhibit A**, and incorporated by reference as though fully set forth herein.

2. The Encroachment shall not be enlarged or increased beyond the Encroachment shown in **Exhibit A** and described in this Encroachment Agreement. Grantee is responsible for any and all expenditures of labor or materials required for the installation, erection, repair, removal, or maintenance of the above-referenced Encroachment.

3. Grantee is fully responsible for any and all property damage or injury or death of any person which results from any and all negligence, omission, defect in design, maintenance, or workmanship created by the Encroachment described herein, or any cause of action arising out of the installation, maintenance, removal, destruction, or location of said Encroachment.

4. Grantee agrees to and does hereby hold the Town, its officers, council members and employees harmless from any and all liability arising out of such negligence, omission, defect or other cause of action; that it will defend the Town, its officers, council members and employees, and pay all attorney fees in any and all actions brought as a result of such; and that it will indemnify the Town, its officers, council members, and employees against any and all loss sustained by reason of such negligence, omission, defect, or other cause of action, claim, cost, or expense arising out of the installation, maintenance, removal, or location of said Encroachment.

5. Sections 3 and 4 shall survive the termination of this Encroachment Agreement for any reason.

6. All notices required herein shall be deemed given by depositing such in the United States mail, first class, and addressed to:

To Town: Town Manager
Town of Apex
PO Box 250
Apex, NC 27502

To Grantee: Tri Pointe Homes, Inc.
Mr. Leslie Graham Shell, IV.
1401 Sunday Drive, Suite 105
Raleigh, NC 27607

7. In the event there is a dispute between the parties concerning the interpretation of the terms of this Encroachment Agreement or their respective rights and obligations hereunder, such dispute or controversy shall be adjudged pursuant to the laws of the State of North Carolina.

8. Grantee agrees to abide by all applicable laws, regulations, statutes and ordinances.

9. This Encroachment Agreement shall not divest the Town of any rights or interest in said **Public Utility Easement** and the Town may terminate this Encroachment Agreement by giving Grantee ninety (90) days written notice of termination. Prior to the termination date, Grantee shall remove, at its own expense, all or part of the Encroachment as specified by the Town.

10. If the Town deems, within its sole discretion, that there is not time to give the Grantee notice as provided in Paragraph 9 and that removal of the Encroachment is necessary in order to operate, protect, maintain, modify, replace, add-to or improve its facilities located within the **Public Utility Easement,** then no notice shall be required and the Town may remove the Encroachment from the **Public Utility Easement** without cost, risk or liability to the Town.

11. Grantee agrees to pay and reimburse the Town the entire expense and cost of removal of the Encroachment in the event that the Town removes the Encroachment as provided in the Paragraph 10 or if Grantee fails to remove the Encroachment within the time limit after receiving notice under Paragraph 9.

12. Grantee, during the life of this Encroachment Agreement, agrees to procure or cause to be procured from a responsible insurance carrier or carriers authorized under the laws of the State of North Carolina, insurance in the minimum amounts of $300,000/$500,000/$300,000 covering full liability for any and all personal injury, property damage or wrongful death caused by the construction, maintenance, location, repair or visual obstruction of said Encroachment. Grantee shall furnish the Town, without demand, each July a certification from the insurance carrier or carriers with whom the insurance herein mentioned is carried, stating that such compensation is covered by such carrier or carriers and showing such insurance to be in full force and effect. Both Grantee and the Town shall be named as insured parties by endorsement of the policy. In the event of any change in the insurance policy, Grantee shall give the Town thirty (30) days notice of such change. Should Grantee fail to pay premiums upon said insurance or to perform any of the agreement, terms or conditions herein contained, the Town, at its option, by written notice may declare this Encroachment Agreement canceled and terminated and all rights acquired hereunder by Grantee shall thereupon terminate.

13. Notwithstanding Section 14 below, Grantee shall be released from its obligation under this Encroachment Agreement only upon the assumption of said obligations either by a successor in title to real property known as **Lot 86, Townes At North Salem, PH2B (820 Amley Place, Apex, NC 27523)**, or by assumption of said obligations by an incorporated property or condominium owners association for **Townes At North Salem, Phase 2B.** The Town's consent to such assumption and release shall be required but shall not be withheld, conditioned or delayed if, as reasonably determined by the Town, the party assuming Grantee obligations possesses adequate financial resources and ownership interest, and Grantee delegate and proposed assignee assume and agree to fulfill, in writing, all of Grantee duties set forth in this Encroachment Agreement.

14. The right to encroach is appurtenant to and runs with the land hereinabove referred to and shall forever by subject to the conditions above agreed on between the parties. This Encroachment Agreement is binding upon the heirs, assigns, transferees, and successors in interest of the Grantee and shall, upon execution, be recorded in the Office of the Register of Deeds of Wake County, North Carolina.

In testimony whereof, said Grantee and said Town have here unto set their hands and seals, the day and year first above written.

GRANTEE

Tri Pointe Homes, Inc.

By: _____ (SEAL)
Leslie Graham Shell, IV.
Division President - Carolinas

NORTH CAROLINA
COUNTY OF Wake. *[county in which acknowledgement taken]*

I, Mandy Briley, a Notary Public of Wake County, North Carolina, certify that Leslie Graham Shell, IV., personally appeared before me this day and acknowledged that he is the Division President – Carolinas for TRI Pointe Homes, Inc., a corporation, and that he as Division President – Carolinas being authorized to do so, executed the foregoing on behalf of the corporation.

Witness my hand and official stamp or seal, this 11 day of June, 2020.

Mandy Briley
[Signature of Notary Public]

(Affix Notarial Stamp-Seal)

My Commission Expires: Dec. 15, 2024

MANDY BRILEY
NOTARY
PUBLIC
WAKE COUNTY, NC

TOWN OF APEX

_____

Andrew L. Havens
Town Manager

(Corporate Seal)

ATTEST:

_____

Donna B. Hosch, MMC, NCCMC
Town Clerk

STATE OF NORTH CAROLINA

COUNTY OF _____ *[county in which acknowledgement taken]*

I, _____, a Notary Public of _____ County, North Carolina, certify that Donna B. Hosch personally came before me this day and acknowledged that she is Town Clerk of the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by her as its Town Clerk.

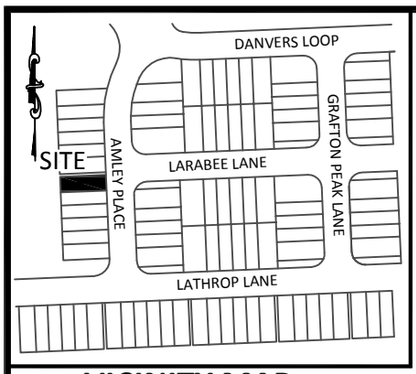
Witness my hand and official stamp or seal, this _____ day of _____, 2020.

_____

[Signature of Notary Public] *(Seal)*

My Commission Expires: _____

Exhibit A



VICINITY MAP

(Not to Scale)

NOTE:
THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS

BM2020PG205

LEGEND

PO = PORCH
S = CONCRETE STOOP
SW = SIDEWALK
DW = CONC DRIVEWAY
CP = COVERED PORCH
P = CONCRETE PATIO
⊗ = COMPUTED POINT
O = IRON PIPE FOUND(EIP)
◉ = IRON PIPE SET(IPS)
● = DRILL HOLE FOUND
WM = WATER METER
CO = CLEAN OUT
AC = AIR CONDITIONER
C = CABLE BOX
S = SEWER MANOLE
T = TS HANDHOLE
TP = TELEPHONE PEDESTAL
CB = CATCH BASIN
= LIGHT POLE
G = GAS METER
E = ELECTRIC METER
= FIRE HYDRANT (FH)
YI = YARD INLET
= WATER VALVE (WV)
EB = ELECTRIC BOX
G = GAS VALVE
FP = FIREPLACE
ST = STORAGE
W = WATER VALVE

0 10 20

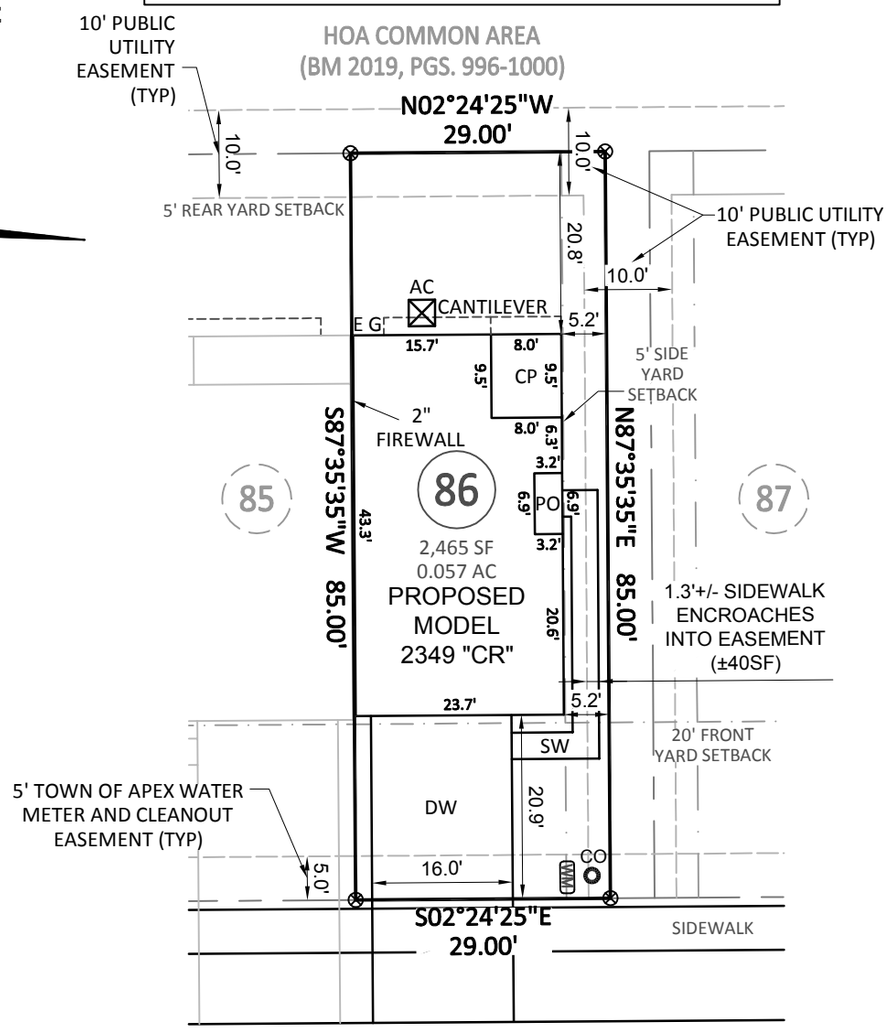
SCALE:
1" = 20 ft.

LOT INFORMATION:

PIN: 0742685061
TOTAL LOT AREA = 0.057 AC = 2,465 SF
HOUSE = 928 SF
DRIVEWAY = 335 SF
SIDEWALK = 116 SF
PORCH = 22 SF
COVERED PORCH = 76 SF
AC PAD = 9 SF
PROPOSED IMPERVIOUS = 1,486 SF
PERCENT IMPERVIOUS = 60.3 %

MINIMUM BUILDING SETBACKS:

FROM BUFFER OR RCA:	10'
FRONT YARD:	5'
SIDE YARD (END UNITS):	5'
REAR YARD:	5'
PUBLIC R/W:	18' **(WHERE NO SIDEWALK IS PRESENT)**
PUBLIC R/W TO GARAGE:	20' **(WHERE SIDEWALK IS PRESENT)**
BUILDING SIDE TO SIDE:	10'
BUILDING SIDE TO REAR:	30'
BUILDING REAR TO REAR:	40'



AMLEY PLACE
50' PUBLIC R/W

Bateman Civil • Survey Company, PC
Engineers • Surveyors • Planners
2524 Reliance Avenue, Apex, NC 27539
(919) 577-1080
NCBELS C 2378

PRELIMINARY PLOT PLAN
EXCLUSIVELY FOR: TRI POINTE HOMES
TOWNES AT NORTH SALEM, PHASE 2B - LOT 86
820 AMLEY PLACE, APEX, NC
WHITE OAK TOWNSHIP, WAKE COUNTY
DATE: 5/13/2020 DRAWN BY: MJA CHECKED BY: SPC

REFERENCE: BOOK 2020, PG 205 BCS# 200201 SCALE: 1" = 20'

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Marty Stone, Assistant Town Manager
Department(s): Administration

Requested Motion

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owners, James T. Macdonell and wife Katharine G. Macdonell regarding Wake County, NC PIN#0722-64-5123, 2671 Timken Forest Drive, as recorded in Book of Maps 2008, Page 34, Wake County Register of Deeds.

Approval Recommended?

Yes

Item Details

Approve Encroachment Agreement between the Town and property owners James T. Macdonell and wife, Katherine G. Macdonell (Grantees) for the property described as a residential lot known as Wake County PIN#0722-64-5123, Book of Maps 2008, Page 34, Lot 55, 2671 Timken Forest Drive, Apex, NC 27502. Grantees wish to install a fence of which 115 SF will encroach into the Public Sanitary Sewer Easement.

Attachments

- Encroachment Agreement
- Exhibit A

After Recording Mail To: Development Services
Town of Apex
PO Box 250
Apex, NC 27502

STATE OF NORTH CAROLINA **ENCROACHMENT AGREEMENT**
COUNTY OF WAKE

THIS ENCROACHMENT AGREEMENT, being made this _____ day of _____, 2020, by and between James T. Macdonell and wife, Katharine G. Macdonell, hereinafter referred to as "Grantees," and the Town of Apex, hereinafter referred to as the "Town."

WHEREAS, the Grantees are the owners of a certain residential lot of land in the County of Wake, State of North Carolina, which is designated as PIN #0722-64-5123 and more particularly described as **Lot 55** of the subdivision known as **Stratford at Abbington Ph. 2,** which is shown on that certain plat recorded in **Book of Maps 2008, Page 34**, Wake County Registry (hereinafter the **"Subdivision Plat"**). The residential lot is also known as **2671 Timken Forest Drive, Apex, NC 27502**. The residential lot described in this paragraph is hereinafter referred to as the **"Residential Lot."**

WHEREAS, the Town is the owner of a 30' Public Utility Easement as shown on the **Subdivision Plat** hereinafter referred to as the **"Public Utility Easement."**

WHEREAS, Grantees wishes to install certain improvements, more particularly described as a **fence with a portion of the fence encroaching 115 LF into the Public Utility Easement** which serves the Residential Lot, hereinafter referred to as the "**Encroachment,**" all as shown on the attached **Exhibit A**. Grantees desire to make certain agreements and covenants regarding the Encroachment.

WHEREAS, the Town, under the terms and conditions herein set forth, is willing to allow the above-described Encroachment upon the **Public Utility Easement.**

NOW, THEREFORE, in consideration of these promises and other consideration, the receipt and sufficiency of which is hereby acknowledged, Grantees and the Town hereby covenant and agree:

1. Subject to the terms herein, the Town agrees to allow Grantees, and Grantees' successors and assigns at Grantees' sole risk and expense, to encroach into the **Public Utility Easement** of the Town as shown in the attached **Exhibit A**, and incorporated by reference as though fully set forth herein.

2. The Encroachment shall not be enlarged or increased beyond the Encroachment shown in **Exhibit A** and described in this Encroachment Agreement. Grantees are responsible for any and all expenditures of labor or materials required for the installation, erection, repair, removal, or maintenance of the above-referenced Encroachment.

3. Grantees are to be fully responsible for any and all property damage or injury or death of any person which results from any and all negligence, omission, defect in design, maintenance, or workmanship created by the Encroachment described herein, or any cause of action arising out of the installation, maintenance, removal, destruction, or location of said Encroachment.

4. Grantees agree to and does hereby hold the Town, its officers, council members and employees harmless from any and all liability arising out of such negligence, omission, defect or other cause of action; that it will defend the Town, its officers, council members and employees, and pay all attorney fees in any and all actions brought as a result of such; and that it will indemnify the Town, its officers, council members, and employees against any and all loss sustained by reason of such negligence, omission, defect, or other cause of action, claim, cost, or expense arising out of the installation, maintenance, removal, or location of said Encroachment.

5. Sections 3 and 4 shall survive the termination of this Encroachment Agreement for any reason.

6. All notices required herein shall be deemed given by depositing such in the United States mail, first class, and addressed to:

To Town: Town Manager
Town of Apex
PO Box 250
Apex, NC 27502

To Grantees: James T. Macdonell and Katharine G. Macdonell
2671 Timken Forest Drive
Apex, NC 27502

7. In the event there is a dispute between the parties concerning the interpretation of the terms of this Encroachment Agreement or their respective rights and obligations hereunder, such dispute or controversy shall be adjudged pursuant to the laws of the State of North Carolina.

8. Grantees agree to abide by all applicable laws, regulations, statutes and ordinances.

9. This Encroachment Agreement shall not divest the Town of any rights or interest in said **Public Utility Easement** and the Town may terminate this Encroachment Agreement by giving Grantees ninety (90) days written notice of termination. Prior to the termination date, Grantees shall remove, at its own expense, all or part of the Encroachment as specified by the Town.

10. If the Town deems, within its sole discretion, that there is not time to give Grantees notice as provided in Paragraph 9 and that removal of the Encroachment is necessary in order to operate, protect, maintain, modify, replace, add-to or improve its facilities located within the **Public Utility Easement,** then no notice shall be required and the Town may remove the Encroachment from the **Public Utility Easement** without cost, risk or liability to the Town.

11. Grantees agree to pay and reimburse the Town the entire expense and cost of removal of the Encroachment in the event that the Town removes the Encroachment as provided in the Paragraph 10 or if Grantees fail to remove the Encroachment within the time limit after receiving notice under Paragraph 9.

12. Grantees, if not self-performing the installations that are the subject of this Agreement, agree to purchase or cause to be procured from a responsible insurance carrier or carriers authorized under the laws of the State of North Carolina, valid general liability insurance in the minimum amount of $500,000 and provide a certificate of such insurance naming the Town of Apex as additional insured by endorsement to the policy. Where the Grantees are self-performing the installations, Grantees shall show proof of homeowner's insurance with personal liability coverage in a minimum amount of at least $300,000. Grantees shall provide notice of cancellation, non-renewal or material change in coverage to the Town of Apex within 10 days of their receipt of notice from the insurance company.

13. Notwithstanding Section 14 below, Grantees shall be released from its obligation under this Encroachment Agreement only upon the assumption of said obligations either by a successor in title to real property known as **Lot 55 Stratford at Abbington Phase 2 (2671 Timken Forest Drive, Apex, NC 27502)**, or by assumption of said obligations by an incorporated property or condominium owners association for **Stratford at Abbington Phase 2.** The Town's consent to such assumption and release shall be required but shall not be withheld, conditioned or delayed if, as reasonably determined by the Town, the party assuming Grantees' obligations possesses adequate financial resources and ownership interest, and Grantees' delegate and proposed assignee assume and agree to fulfill, in writing, all of Grantees' duties set forth in this Encroachment Agreement.

14. The right to encroach is appurtenant to and runs with the land hereinabove referred to and shall forever by subject to the conditions above agreed on between the parties. This Encroachment Agreement is binding upon the heirs, assigns, transferees, and successors in interest of the Grantees and shall, upon execution, be recorded in the Office of the Register of Deeds of Wake County, North Carolina.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

In testimony whereof, said Grantees and said Town have here unto set their hands and seals, the day and year first above written.

GRANTEES

By: _____
James T. Macdonell

By: _____
Katharine G. Macdonell

STATE OF NORTH CAROLINA

COUNTY OF Wake [*county in which acknowledgement taken*]

I, do hereby certify that James T. Macdonell, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 29 day of June, 2020.

_____
[*Signature of Notary Public*]

My Commission Expires: April 25, 2023

LAURA A. WATSON
NOTARY PUBLIC
WAKE COUNTY, N.C.

****

STATE OF NORTH CAROLINA

COUNTY OF Wake [*county in which acknowledgement taken*]

I, do hereby certify that Katharine G. Macdonell, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 29 day of June, 2020.

_____
[*Signature of Notary Public*]

My Commission Expires: April 25, 2023

LAURA A. WATSON
NOTARY PUBLIC
WAKE COUNTY, N.C.

TOWN OF APEX

_____

Andrew L. Havens
Town Manager

(Corporate Seal)

ATTEST:

_____

Donna B. Hosch, MMC, NCCMC
Town Clerk

STATE OF NORTH CAROLINA

COUNTY OF _____ *[county in which acknowledgement taken]*

I, _____, a Notary Public of _____ County, North Carolina, certify that Donna B. Hosch personally came before me this day and acknowledged that she is Town Clerk of the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by her as its Town Clerk.

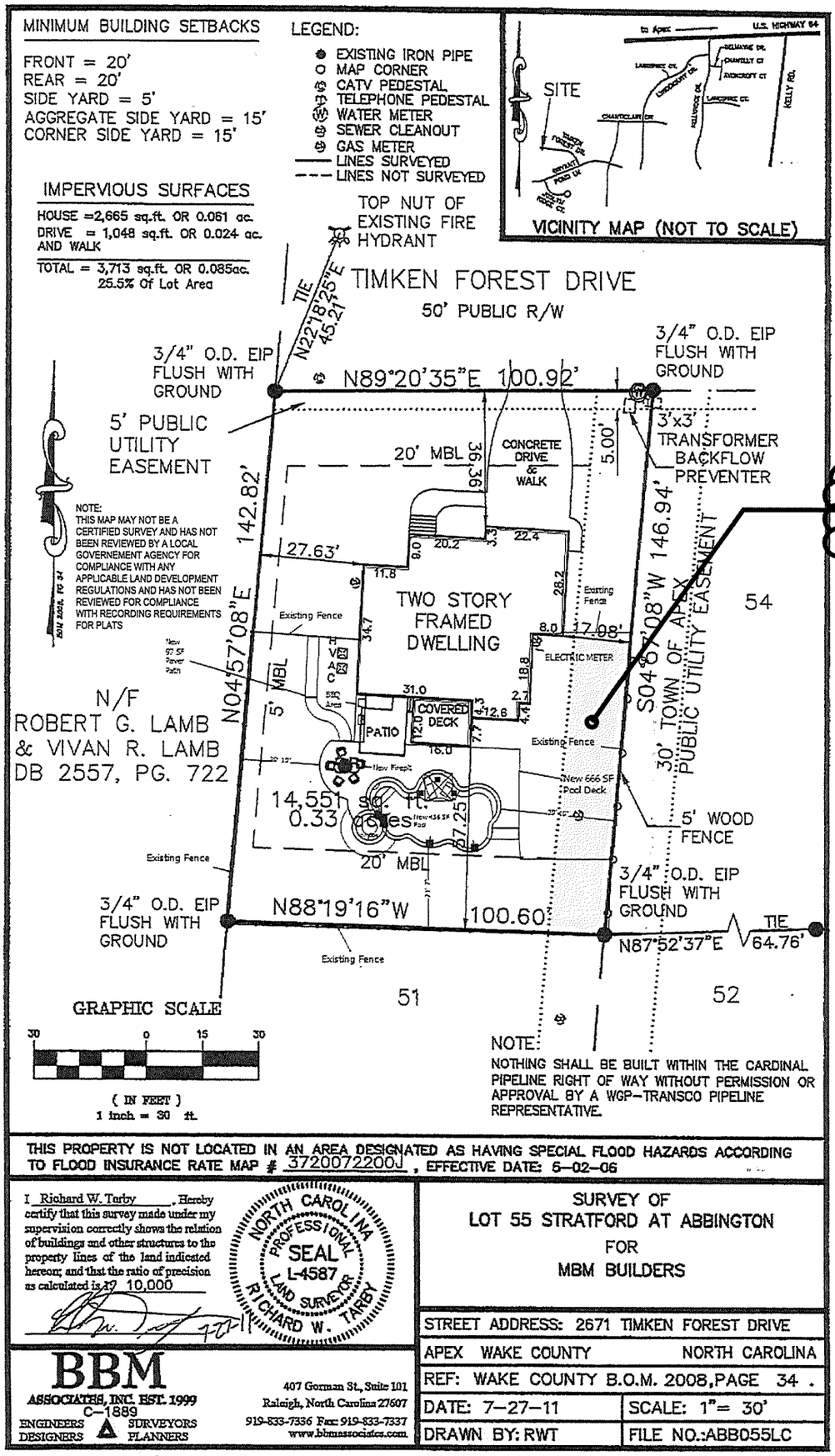
Witness my hand and official stamp or seal, this _____ day of _____, 2020.

_____

[Signature of Notary Public] *(Seal)*

My Commission Expires: _____

EXHIBIT A


MINIMUM BUILDING SETBACKS
FRONT = 20'
REAR = 20'
SIDE YARD = 5'
AGGREGATE SIDE YARD = 15'
CORNER SIDE YARD = 15'
IMPERVIOUS SURFACES
HOUSE =2,665 sq.ft. OR 0.061 ac.
DRIVE = 1,048 sq.ft. OR 0.024 ac.
AND WALK
TOTAL = 3,713 sq.ft. OR 0.085ac.
25.5% Of Lot Area
LEGEND:
EXISTING IRON PIPE
MAP CORNER
CATV PEDESTAL
TELEPHONE PEDESTAL
WATER METER
SEWER CLEANOUT
GAS METER
LINES SURVEYED
LINES NOT SURVEYED
TOP NUT OF EXISTING FIRE HYDRANT
SITE
U.S. HIGHWAY 64
VICINITY MAP (NOT TO SCALE)
TIMKEN FOREST DRIVE
50' PUBLIC R/W
TIE N22°18'25"E 45.21'
3/4" O.D. EIP FLUSH WITH GROUND
N89°20'35"E 100.92'
3/4" O.D. EIP FLUSH WITH GROUND
5' PUBLIC UTILITY EASEMENT
20' MBL
CONCRETE DRIVE & WALK
3'x3' TRANSFORMER BACKFLOW PREVENTER
115 LF of Fence will Encroach Into PUE
NOTE: THIS MAP MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNEMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS
142.82'
N04°57'08"E
27.63'
TWO STORY FRAMED DWELLING
Existing Fence
ELECTRIC METER
S04°57'08"W 146.94'
30' TOWN OF APEX PUBLIC UTILITY EASEMENT
54
5' MBL
PATIO
COVERED DECK
31.0
12.6
16.0
New Firepit
New 666 SF Pool Deck
14,551 sq. ft.
0.33 acres
97.25'
5' WOOD FENCE
20' MBL
N/F ROBERT G. LAMB & VIVAN R. LAMB DB 2557, PG. 722
3/4" O.D. EIP FLUSH WITH GROUND
N88°19'16"W 100.60'
3/4" O.D. EIP FLUSH WITH GROUND
TIE N87°52'37"E 64.76'
51
52
GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 ft.
NOTE:
NOTHING SHALL BE BUILT WITHIN THE CARDINAL PIPELINE RIGHT OF WAY WITHOUT PERMISSION OR APPROVAL BY A WGP-TRANSCO PIPELINE REPRESENTATIVE.
THIS PROPERTY IS NOT LOCATED IN AN AREA DESIGNATED AS HAVING SPECIAL FLOOD HAZARDS ACCORDING TO FLOOD INSURANCE RATE MAP # 3720072200J , EFFECTIVE DATE: 6-02-06
I Richard W. Tarby , Hereby certify that this survey made under my supervision correctly shows the relation of buildings and other structures to the property lines of the land indicated hereon; and that the ratio of precision as calculated is 1/ 10,000
NORTH CAROLINA PROFESSIONAL SEAL L-4587 LAND SURVEYOR RICHARD W. TARBY
SURVEY OF LOT 55 STRATFORD AT ABBINGTON FOR MBM BUILDERS
STREET ADDRESS: 2671 TIMKEN FOREST DRIVE
APEX WAKE COUNTY NORTH CAROLINA
REF: WAKE COUNTY B.O.M. 2008,PAGE 34 .
DATE: 7-27-11
SCALE: 1"= 30'
DRAWN BY: RWT
FILE NO.:ABB055LC
BBM ASSOCIATES, INC. EST. 1999 C-1889
ENGINEERS SURVEYORS DESIGNERS PLANNERS
407 Gorman St., Suite 101
Raleigh, North Carolina 27607
919-833-7336 Fax: 919-833-7337
www.bbmassociates.com

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Marty Stone, Assistant Town Manager
Department(s): Administration

Requested Motion

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement between the Town and property owner, Pulte Home Company, LLC., regarding Greenmoor Phase 1B Subdivision as shown on the plat recorded in Book of Maps 2017, Pages 1027-1031, Wake County Register of Deeds.

Approval Recommended?

Yes

Item Details

Approve Encroachment Agreement between the Town and property owner Pulte Home Company, LLC. (Grantee). Grantee desires to encroach on a certain street right(s) of way under the Town's jurisdiction in the subdivision known as Greenmoor Phase 1B as shown on the plat recorded in Book of Maps 2017, Pages 1027-1031, Wake County Registry. Pulte Home Company, LLC (Grantee) wishes to install certain improvements, more particularly described as (2) Mail cluster box units, ±31"W X 18"D each, total height ±62" ("CBU"), HOA private mail kiosk maintenance easement (7.5' x 8.0'), ±49 SF concrete pad adjacent to the public sidewalk for CBU access, which will encroach into the Town's Right of Way on Balmoor Trace.

Attachments

- Encroachment Agreement
- Exhibit A

After Recording Mail To: Development Services
Town of Apex
PO Box 250
Apex, NC 27502

STATE OF NORTH CAROLINA **ENCROACHMENT AGREEMENT**
COUNTY OF WAKE

THIS ENCROACHMENT AGREEMENT, being made this _____ day of _____, 2020, by and between Pulte Home Company, LLC., hereinafter referred to as "Grantee," and the Town of Apex, hereinafter referred to as the "Town."

WHEREAS, Grantee desires to encroach on a certain street right(s) of way (hereinafter **collectively "ROW")** under the Town's jurisdiction in the subdivision known as **Greenmoor Phase 1B**, as shown on the plat recorded in **Book of Maps 2017, Pages 1027-1031**, Wake County Registry (hereinafter the **"Subdivision Plat"**); and

WHEREAS, Grantee wishes to install certain improvements, more particularly described as **(2) MAIL CLUSTER BOX UNITS, ±31"W X 18"D EACH, TOTAL HEIGHT ±62" ("CBU"), HOA PRIVATE MAIL KIOSK MAINTENANCE EASEMENT (7.5' x 8.0'), ±49 SF CONCRETE PAD ADJACENT TO THE PUBLIC SIDEWALK FOR CBU ACCESS,which will encroach into the Town's Right of Way on Balmoor Trace**, hereinafter referred to as the "**Encroachment**", as shown on the attached **Exhibit A**.

WHEREAS, the Town, under the terms and conditions herein set forth, is willing to allow the above-described Encroachment upon the **ROW for Balmoor Trace.**

NOW, THEREFORE, in consideration of these promises and other consideration, the receipt and sufficiency of which is hereby acknowledged, Grantee and the Town hereby covenant and agree:

1. Subject to the terms herein, the Town agrees to allow Grantee, and Grantees' successors and assigns at Grantee sole risk and expense, to encroach into the **ROW** of the Town as shown in the attached **Exhibit A**, and incorporated by reference as though fully set forth herein.

2. The Encroachment shall not be enlarged or increased beyond the Encroachment shown in **Exhibit A** and described in this Encroachment Agreement. Grantee is responsible for any and all expenditures of labor or materials required for the installation, erection, repair, removal, or maintenance of the above-referenced Encroachment.

3. Grantee is fully responsible for any and all property damage or injury or death of any person which results from any and all negligence, omission, defect in design, maintenance, or workmanship created by the Encroachment described herein, or any cause of action arising out of the installation, maintenance, removal, destruction, or location of said Encroachment.

4. Grantee agrees to and does hereby hold the Town, its officers, council members and employees harmless from any and all liability arising out of such negligence, omission, defect or other cause of action; that it will defend the Town, its officers, council members and employees, and pay all attorney fees in any and all actions brought as a result of such; and that it will indemnify the Town, its officers, council members, and employees against any and all loss sustained by reason of such negligence, omission, defect, or other cause of action, claim, cost, or expense arising out of the installation, maintenance, removal, or location of said Encroachment.

5. Sections 3 and 4 shall survive the termination of this Encroachment Agreement for any reason.

6. All notices required herein shall be deemed given by depositing such in the United States mail, first class, and addressed to:

To Town: Town Manager
Town of Apex
PO Box 250
Apex, NC 27502

To Grantee: Pulte Home Company, LLC
1401 Sunday Drive, Suite 105
Raleigh, NC 27607

7. In the event there is a dispute between the parties concerning the interpretation of the terms of this Encroachment Agreement or their respective rights and obligations hereunder, such dispute or controversy shall be adjudged pursuant to the laws of the State of North Carolina.

8. Grantee agrees to abide by all applicable laws, regulations, statutes and ordinances.

9. This Encroachment Agreement shall not divest the Town of any rights or interest in said **ROW** and the Town may terminate this Encroachment Agreement by giving Grantee ninety (90) days written notice of termination. Prior to the termination date, Grantee shall remove, at its own expense, all or part of the Encroachment as specified by the Town.

10. If the Town deems, within its sole discretion, that there is not time to give the Grantee notice as provided in Paragraph 9 and that removal of the Encroachment is necessary in order to operate, protect, maintain, modify, replace, add-to or improve its facilities located within the **ROW,** then no notice shall be required and the Town may remove the Encroachment from the **ROW** without cost, risk or liability to the Town.

11. Grantee agrees to pay and reimburse the Town the entire expense and cost of removal of the Encroachment in the event that the Town removes the Encroachment as provided in the Paragraph 10 or if Grantee fails to remove the Encroachment within the time limit after receiving notice under Paragraph 9.

12. Grantee, during the life of this Encroachment Agreement, agrees to procure or cause to be procured from a responsible insurance carrier or carriers authorized under the laws of the State of North Carolina, insurance in the minimum amounts of $300,000/$500,000/$300,000 covering full liability for any and all personal injury, property damage or wrongful death caused by the construction, maintenance, location, repair or visual obstruction of said Encroachment. Grantee shall furnish the Town, without demand, each July a certification from the insurance carrier or carriers with whom the insurance herein mentioned is carried, stating that such compensation is covered by such carrier or carriers and showing such insurance to be in full force and effect. Both Grantee and the Town shall be named as insured parties by endorsement of the policy. In the event of any change in the insurance policy, Grantee shall give the Town thirty (30) days notice of such change. Should Grantee fail to pay premiums upon said insurance or to perform any of the agreement, terms or conditions herein contained, the Town, at its option, by written notice may declare this Encroachment Agreement canceled and terminated and all rights acquired hereunder by Grantee shall thereupon terminate.

13. Notwithstanding Section 14 below, Grantee shall be released from its obligation under this Encroachment Agreement only upon the assumption of said obligations either by a successor in title to real property known as Public Right of Way or by assumption of said obligations by an incorporated property or condominium owners association for **Greenmoor Phase 1B subdivision.** The Town's consent to such assumption and release shall be required but shall not be withheld, conditioned or delayed if, as reasonably determined by the Town, the party assuming Grantee obligations possesses adequate financial resources and ownership interest, and Grantee delegate and proposed assignee assume and agree to fulfill, in writing, all of Grantee duties set forth in this Encroachment Agreement.

14. The right to encroach is appurtenant to and runs with the land hereinabove referred to and shall forever by subject to the conditions above agreed on between the parties. This Encroachment Agreement is binding upon the heirs, assigns, transferees, and successors in interest of the Grantee and shall, upon execution, be recorded in the Office of the Register of Deeds of Wake County, North Carolina.

In testimony whereof, said Grantee and said Town have here unto set their hands and seals, the day and year first above written.

GRANTEE

Pulte Home Company, LLC

By: Chris Raughley (SEAL)
Chris Raughley
Division Vice President of Land Planning & Development

NORTH CAROLINA
COUNTY OF Wake [*county in which acknowledgement taken*]

I, do hereby certify that Chris Raughley personally appeared before me this day and acknowledged that he is Division Vice President of Land Planning & Development for Pulte Home Company, LLC Grantee herein, and that by authority duly given as Division Vice President of Land Planning & Development for the company, the foregoing instrument was signed and sealed by him on behalf of the company and acknowledged said writing to be the act and deed of said company.

Witness my hand and official stamp or seal, this 7th day of July, 2020.

Shannon C. Elderdice
[*Signature of Notary Public*]

(Affix Notarial Stamp-Seal)

My Commission Expires: 7-1-24

SHANNON C ELDERDICE
NOTARY
PUBLIC
WAKE COUNTY, NC

TOWN OF APEX

_____

Andrew L. Havens
Town Manager

(Corporate Seal)

ATTEST:

_____

Donna B. Hosch, MMC, NCCMC
Town Clerk

STATE OF NORTH CAROLINA

COUNTY OF _____ [*county in which acknowledgement taken]*

I, _____, a Notary Public of _____ County, North Carolina, certify that Donna B. Hosch personally came before me this day and acknowledged that she is Town Clerk of the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by her as its Town Clerk.

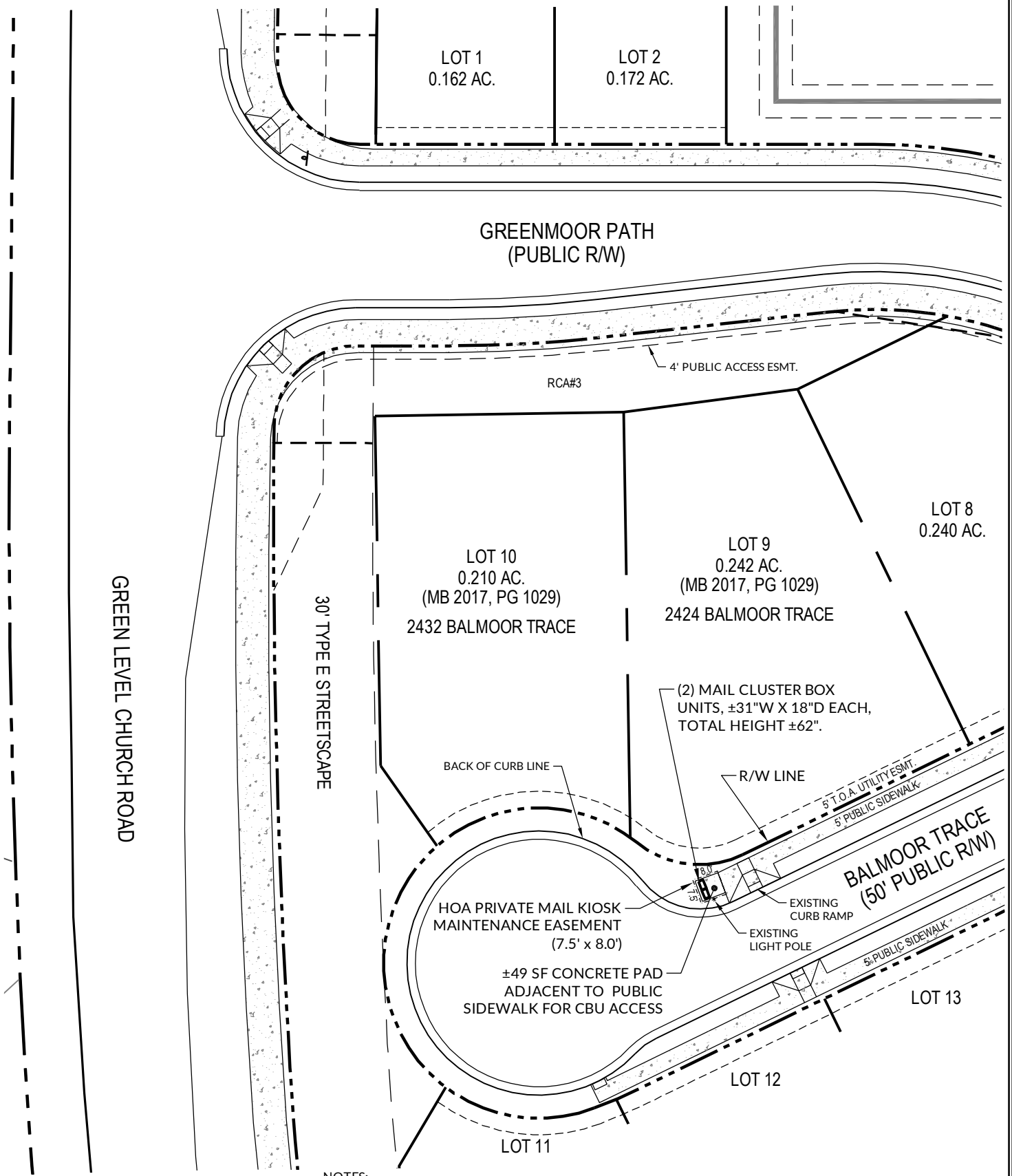
Witness my hand and official stamp or seal, this _____ day of _____, 2020.

_____

[Signature of Notary Public] *(Seal)*

My Commission Expires: _____

Exhibit A



GRAPHIC SCALE

0 20' 40'

1 inch = 40 ft.

NOTES:

1. THIS DRAWING IS NOT AN OFFICIAL SURVEY OR ENGINEERING DOCUMENT. THE SOLE PURPOSE OF THIS EXHIBIT IS TO ILLUSTRATE THE LOCATION AND AND GENERAL CONFIGURATION OF THE PROPOSED MAIL BOX KIOSK/CLUSTER BOX UNITS TO BE PLACED WITHIN THE PUBLIC RIGHT-OF-WAY OF BALMOOR TRACE.
2. REFER TO MAP BOOK 2017, PAGE 1029 OF THE WAKE COUNTY REGISTER OF DEEDS FOR THE RECORDED PLAT INFORMATION FOR THIS SECTION OF GREENMOOR.

GREENMOOR - PHASE 1B

TOWN OF APEX WAKE COUNTY NORTH CAROLINA

CBU ENCRO[illegible]EXHIBIT FOR
BALMOO[illegible]BLIC R/W

05/16/2020

WithersRavenel
Engineers | Planners | Surveyors
115 MacKenan Drive | Cary, NC 27511
t: 919.469.3340 | license #: C-0832 | www.withersravenel.com

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter: David Wood, Halle Cultural Arts Center Manager
Department: Parks, Recreation and Cultural Resources

Requested Motion

Motion to approve resolution designating Apex, North Carolina as a BEE CITY USA® affiliate.

Approval Recommended?

Yes

Item Details

Bee City USA fosters ongoing dialogue in urban areas to raise awareness of the role native pollinators play in our communities and what each of us can do to provide them with healthy habitat. Research has shown significant declines in pollinator population sizes and ranges globally.

The Bee City USA program endorses a set of commitments, defined in the attached resolution, for creating sustainable habitats for native pollinators, which are vital to feeding the planet.

Attachments

- Resolution

RESOLUTION NO. 20-0721--07
A RESOLUTION of Apex Town Council
Designating Apex, North Carolina as a BEE CITY USA® Affiliate

WHEREAS, the mission of BEE CITY USA is to galvanize communities to sustain pollinators, responsible for the reproduction of 90% of the world's wild plant species, by providing them with healthy habitat, rich in a variety of native plants and free to nearly free of pesticides; and

WHEREAS, due in part to the tremendous diversity of wild native bees, along with the honey bees that were brought to the United States from Europe in the 1700s, we have very diverse dietary choices rich in fruits, nuts, vegetables and even dairy products--one in every three bites of food we eat is courtesy of insect pollination; and

WHEREAS, bees and other pollinators have experienced population declines due to a combination of habitat loss, use of pesticides, and the spread of pests and diseases; and

WHEREAS, pollinator-friendly communities can benefit local and regional economies through healthier ecosystems, increased vegetable and fruit crop yields, and increased demand for pollinator-friendly plant materials from local nurseries and growers; and

WHEREAS, ideal pollinator-friendly habitat:

- Provides diverse and abundant nectar and pollen from plants blooming in succession throughout the growing season;
- Provides water for drinking, nest-building, cooling, diluting stored honey, and butterfly puddling;
- Provides undisturbed spaces (leaf and brush piles, un-mowed fields or field margins, fallen trees and other dead wood) for nesting and overwintering for wild pollinators
- Is pesticide-free or has pesticide use carried out with least ill effects on pollinators;
- Is comprised of mostly, if not all, native species of annual and perennial forbs, grasses, vines, shrubs, and trees in landscapes because many wild pollinators prefer or depend on the native plants with which they co-adapted;
- Includes, where possible, designated pollinator zones in public spaces with signage to educate the public and build awareness; and,
- Provides for safe and humane removal of honey bees when required.

WHEREAS, supporting pollinators fosters environmental awareness and sustainability, and increases interactions among community stewards, backyard beekeepers, farmers, children, educators, Master Gardeners, local businesses, faith-based organizations, and nature-related organizations; and

WHEREAS, in order to enhance understanding among local government staff and the public about the vital role that pollinators play and what each of us can do to sustain them Town of Apex chooses to support and encourage pollinator habitat creation and enhancement on both public and private land; and

WHEREAS, Town of Apex should be certified a *BEE CITY USA* community because:

- The goals of BEE CITY USA are consistent with Town adopted polices and goals.
- Becoming a BEE CITY USA affiliate publicly announces Apex's intent to support bees and other pollinators on both public and private land and provides a platform for outreach to the community.
- The Apex Bee City committee supports designation and is willing to serve as the citizen's group required by BEE CITY USA.
- The Town's staff plays an important role in the integration of methods to support and encourage pollinator habitat creation, and has agreed it is feasible to provide support.

NOW, THEREFORE, the Town of Apex resolves as follows:

1. The Town of Apex Parks, Recreation and Cultural Resources Department is hereby designated as the BEE CITY USA sponsor.
2. The Halle Cultural Arts Center Manager of Town of Apex is designated as the BEE CITY USA liaison.
3. Facilitation of the Town of Apex BEE CITY USA program is assigned to the Town of Apex Bee City Committee.
4. The Bee City Committee is authorized to, and should:
    a. **Celebration**: Annually celebrate National Pollinator Week (third full week of June) or some other appropriate occasion with educational events, pollinator habitat plantings or restoration, proclamations or promotions that showcase the Town of Apex commitment to enhancing pollinator health and habitat.
    b. **Publicity & Information**: Install and maintain at least one authorized BEE CITY USA street sign in a prominent location, and create and maintain a webpage on the Town of Apex's website which includes, at minimum, a copy of this resolution, links to the national BEE CITY USA website, contact information for the local government's BEE CITY USA liaison Halle Cultural Arts Center Manager contact information for the Bee City Committee, and reports of the pollinator-friendly activities the community has accomplished the previous year(s).
    c. **Habitat**: Develop and implement a program to create or expand pollinator-friendly habitat, which can include, but is not limited to:
        i. Identification and inventory of Town of Apex real property that can be enhanced with pollinator-friendly plantings.
        ii. Creation of a recommended locally native species list to include forbs, grasses, vines, shrubs.
        iii. Creation of a least toxic integrated pesticide management plan, and
        iv. Dissemination of informational and educational materials to the public.
        v. Tracking annual area of pollinator habitat created or enhanced by square footage and/or acreage.
    d. **Plan Review:** Review Town plans, policies and procedures and other relevant documents to review pesticide management policies and practices as they relate to pollinator conservation, identify appropriate locations for pollinator-friendly plantings, and consider other appropriate measures.
    e. **Renewal:** After completing the first full year as a BEE CITY USA affiliate, each January, apply for renewal of the Apex's BEE CITY USA designation following the format provided by BEE CITY USA, including a report of the previous year's BEE CITY USA activities, and paying the renewal fee based on Apex's population.

ADOPTED by the Apex Town Council of the Apex, North Carolina, this 21st day of July 2020.

_____
Jacques K. Gilbert
Mayor

Approved as to form:

_____
Laurie Hohe
Town Attorney

Attest:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager
Department(s): Planning and Community Development

Requested Motion

Motion to approve Resolution reaffirming Sarah Van Every as a Wake County Review Officer subsequent to her changing her name from Sarah M. Rayfield to Sarah Van Every. She is already recognized as a Wake County Review Officer in order to certify that each map and plat presented to the Wake County Register of Deeds for recording satisfies the statutory requirements for recording.

Approval Recommended?

The Planning and Community Development Department recommends approval.

Item Details

Attachments

- Resolution

RESOLUTION NO. 20-0721-06

RESOLUTION RECOMMENDING THE REAFFIRMATION OF A REVIEW OFFICER FOR THE TOWN OF APEX

WHEREAS, Article 2 of Chapter 47 (§47-30.2 Review Officer) of the North Carolina General Statutes requires the Board of Commissioners of each county, by resolution, designate by name one or more persons experienced in mapping or land records management to be appointed as a Review Officer to certify the maps or plats presented to the Register of Deeds as complying with all statutory requirements for recording; and

WHEREAS, the review of statutory requirements is of a technical nature; and

WHEREAS, one of the services of the Town of Apex staff provides to the community is a similar technical process for subdivision plat review in order to verify compliance with the Town's development regulations; and

WHEREAS, it appears most efficient for the Town of Apex to avoid adding another layer of development review by providing for the certification of statutory compliance for all maps or plats to be presented to the register of deeds for recording within the context of subdivision review procedures; and

WHEREAS, on or about September 5, 2017 the Apex Town Council recommended that Sarah M. Rayfield, Senior Planner, be appointed or reaffirmed by the Wake County Board of Commissioners to serve as a Review Officer for all lands within the municipal and extraterritorial jurisdiction of the Town of Apex in order to certify each map and plat presented to the Wake County Register of Deeds for recording satisfies the statutory requirements for recording; and

WHEREAS, Sarah M. Rayfield's last name has recently changed.

NOW THEREFORE, BE IT RESOLVED by the Apex Town Council that the following person, subsequent to a change of last name, is recommended to be reaffirmed by the Wake County Board of Commissioners to serve as a Review Officer for all lands within the municipal and extraterritorial jurisdiction of the Town of Apex in order to certify each map and plat presented to the Wake County Register of Deeds for recording satisfies the statutory requirements for recording:

NAME	**POSITION/TITLE**
Sarah Van Every, AICP	Senior Planner

A motion was made by Council Member _____ and seconded by Council Member _____ to adopt this resolution, and upon being put to a vote was unanimously approved and duly adopted, this the 21st day of July 2020.

Attest:

_____	_____
Donna Hosch, MMC, NCCMC	Jacques K. Gilbert
Town Clerk	Mayor

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21,2020

Item Details

Presenter(s): Russell Dalton, Senior Transportation Engineer
Department(s): Public Works & Transportation

Requested Motion

Motion to adopt a Resolution to Support Vision Zero Apex.

Approval Recommended?

Yes

Item Details

Vision Zero provides a framework for reducing traffic deaths to zero and increasing roadway safety through a combination of education, engineering, encouragement, evaluation, and enforcement. A staff committee with members from Administration, Public Works, Planning, and Police was formed in spring 2020 to begin a Vision Zero program for the Town of Apex. Part of that effort included developing a draft program framework, preparing a Resolution to Support Vision Zero Apex, and identifying potential stakeholders that will help to guide the program. Upon adoption of the resolution, staff will contact potential stakeholders to involve them in the process and continue to develop the program while working toward a Vision Zero Apex Action Plan. The program will include an annual progress report.

Staff has identified the following groups thus far as potential stakeholders:
Capital Area MPO, Wake County Safe Routes to School, Wake County School System, NC Vision Zero (NCDOT), Apex Chamber of Commerce, Apex Police Department (representatives on staff committee already), and Apex Fire Department (representative on staff committee already)

Attachments

- Resolution
- Draft Program Framework

RESOLUTION NO. ___

RESOLUTION TO SUPPORT VISION ZERO APEX

WHEREAS, approximately 6,709 motor vehicle-related crashes have occurred in Apex, North Carolina, Wake County from 01/01/2015 to 12/31/2019 resulting in 9 serious injury crashes and 4 fatalities; and

WHEREAS, deaths and serious injuries on our roadways are unacceptable as crashes are preventable; and

WHEREAS, traffic-related deaths and serious injuries in the United States have disproportionately impacted people of color, low-income households, older adults and youth, people with disabilities, and households with limited motor vehicle access; and

WHEREAS, streets and transportation systems have traditionally been designed primarily for maximum motor vehicle capacity and mobility, rather than the safe accommodation of all modes and users; and

WHEREAS, measures to make Apex's transportation network safer should encourage Apex residents and visitors to take more trips by walking, bicycling, transit and by using multiple modes such as walking to transit; and

WHEREAS, residents embracing multiple transportation modes will contribute to the Town of Apex's ability to foster thriving, healthy, livable neighborhoods; and

WHEREAS, Vision Zero provides a framework for reducing traffic deaths to zero and increasing roadway safety through a combination of education, engineering, encouragement, evaluation, and enforcement; and

WHEREAS, Vision Zero is an ethical imperative by which the responsibility for eliminating traffic deaths and increasing roadway safety is shared by transportation system designers and system users; and

WHEREAS, while transportation system users are responsible for following the rules for using the road, transportation system designers are responsible for the design, operation and use of the transportation system and are thereby responsible for the level of safety within that system; and

WHEREAS, successful Vision Zero programs are a result of a complete government approach and community support of Vision Zero objectives in recognition of the shared responsibility of designers and users; and

WHEREAS, building safe and secure communities is a key tenet of the Town of Apex's Strategic Plan; and

WHEREAS, the Town of Apex seeks to improve transit, pedestrian, bicyclist, and roadway safety in its area; and

WHEREAS, the Town operates a Traffic Calming Program available for citizen requests and has implemented traffic calming requirements in the Unified Development Ordinance for proposed subdivisions, requiring evaluation through the planning and design process; and

WHEREAS, the Town supports and participates in Watch for Me NC, a bicycle and pedestrian safety program; and

WHEREAS, the Town is an active partner with the Governor's Highway Safety Program (GHSP), a state program that provides support and resources to law enforcement agencies to reduce traffic crashes and promote highway safety awareness through a variety of grants, traffic safety/awareness, messages and safe driving initiatives; and

WHEREAS, the Town utilizes both the Data-Driven Approach to Crime and Traffic Safety (DDACTS) law enforcement operational model and the Traffic Incident Management Systems (TIMS) national program; and

WHEREAS, The Town has established a partnership with Mothers Against Drunk Driving (MADD), and participates in the VIP for a VIP Program (Vehicle Injury Prevention for a Very Important Person) educating teen drivers about the dangers of driving impaired and/or distracted driving; and

WHEREAS, in 2012, the Town began a Traffic Safety Improvement Program to identify, monitor, and recommend countermeasures for Potentially Hazardous locations identified by the North Carolina Highway Safety Improvement Program on an annual basis; and

WHEREAS, in 2016, the Town installed a School Zone Time of Day Flashing Beacon System currently serving ten (10) schools to improve school zone visibility, provide real-time updates with school schedule changes, and increase driver compliance with school zone speed limits; and

WHEREAS, in 2018, the Town began a Safe Routes to School Improvement Program identifying needs in the walk and bike to school transportation network for 15 school sites, to prioritize and program a minimum of $500,000 annually in the Capital Improvement Program; and

WHEREAS, in 2019, the Town adopted Advance Apex, an updated long-range transportation plan and future land use map, and Bike Apex, a comprehensive bicycle plan identifying opportunities and constraints for bicycling in Apex, to inform planning efforts and recommendations for the Capital Improvement Program as well as support the NCDOT Complete Streets initiative; and

WHEREAS, in 2020, the Town began a Crosswalk Lighting Improvement Program to identify, prioritize, and recommend improvements to lighting at crosswalks throughout Apex; and

WHEREAS, the Town is working toward making transit a viable mode of transportation in Apex, and anticipates operating the first local bus route in 2021; and

WHEREAS, Vision Zero Apex provides an additional framework for reducing traffic deaths and serious injuries to zero, while increasing safe, healthy, and equitable mobility for all.

NOW, THEREFORE, be it resolved by the Town Council of the Town of Apex that:

1. The Apex Town Council adopts Vision Zero Apex as a comprehensive and holistic approach to achieving the goal of zero fatalities on Apex roadways.

2. The Town Council directs the Town Manager to form an interdepartmental working group to develop a Vision Zero Apex Action Plan based on a comprehensive analysis of traffic deaths and injuries in Apex.

3. The Town Council directs the Town Manager to ensure that the Vision Zero Apex Action Plan addresses any inequity in traffic deaths and serious injuries through a combination of equitable engineering, enforcement, education, encouragement, and evaluation.

4. The Town Council directs the Town Manager to engage community stakeholders in the development and implementation of a Vision Zero Apex Action Plan.

5. The Town Council directs staff to provide an annual report on the implementation of the Vision Zero Apex Action Plan including progress toward eliminating traffic deaths and serious injuries.

6. This Resolution shall take effect immediately upon its adoption.

Witness my hand and official seal, this the 21st day of July 2020.

_____

Jacques K. Gilbert
Mayor

Attest:

_____

Donna B. Hosch, MMC, NCCMC
Town Clerk

Vision Zero Apex

The local program formed in 2020 is part of a state-wide program which aims to eliminate roadway deaths and severe injuries using data-driven prevention strategies.

The state-wide resource page can be found at:

https://ncvisionzero.org/get-involved/communities/

To qualify as a NC Vision Zero Community, a city/town must meet the following requirements:

- Set a clear goal of eliminating traffic fatalities and severe injuries.
- Mayor (or top official) has publicly, officially committed to Vision Zero and adopted a Resolution.
- Develop Plan of Action or strategy, with commitment from top official.
- Engage with key city departments (including Police, Transportation, and Public Health) for multi-agency support for national, state, and local traffic safety campaigns.

Departmental Committee Members

Administration

- Stacie Galloway, Communications Manager

Public Works and Transportation

- Russell Dalton, PE, Sr. Transportation Engineer
- Serge Grebenschikov, PE, Traffic Engineer

Planning and Community Development

- Shannon Cox, AICP, Long Range Planning Manager (primary)
- Jenna Shouse, Long Range Planner (alternate)

Police

- Sgt. Matthew Kutcher, Traffic Safety Unit Supervisor
- Jennifer Conley, Crime Analyst

Fire

- David Dillon, Deputy Fire Marshal

Public Works and Transportation Department – Traffic

The Traffic group is responsible for:

- Traffic Impact Analysis, traffic safety recommendations, and traffic ordinances
- School time-of-day beacon warning system and crosswalk warning devices
- Transportation infrastructure review of plans, plats, and record drawings
- Programming and planning for transportation capital projects
- Traffic signal administrative duties and agency coordination
- Traffic Calming Program and traffic data collection

Both of the Traffic Division staff members are registered Professional Engineers and are part of the Transportation Division. This unit assists the Town with programming, planning, design, and management of transportation infrastructure related to both public and private development.

Traffic Calming Program

The Apex Unified Development Ordinance provides for traffic calming requests to be studied and implemented when warranted on residential streets as well as evaluation for proposed residential streets in the plan review process. More information can be found on the traffic calming webpage.

Traffic Safety Improvement Program

This program began in 2012. Public Works staff summarize information from the annually published North Carolina Highway Safety Improvement Program lists below, tracking from year-to-year, and request Police input. Locations identified are compared to planned local and state projects and considered for possible countermeasures. Improvements identified are proposed for funding through the Capital Improvement Program.

- Potentially Hazardous Intersection Locations
- Potentially Hazardous Section Locations
- Potentially Hazardous Bicycle and Pedestrian Intersection Locations

School Zone Time of Day Flashing Beacon System

This town wide system became operational in 2016. Ten (10) schools are currently served by time of day flashing school speed reduction beacons. The beacons provide enhanced visibility and more accurate warnings based on actual varying school bell times compared to static signs. Access to the system via desktop computer and mobile app with real-time adjustments based on alerts from the school system makes the beacons both flexible and easy to monitor.

Rectangular Rapid Flashing Beacon (RRFB) System

The first RRFB system in Apex was installed for the crosswalk across Apex Barbecue Road at Scotts Ridge Elementary School in 2016. In 2019, three additional crosswalk locations received RRFBs,

and at least two more locations will receive RRFBs in 2020. RRFBs allow pedestrians to press a button that activates a flashing warning to alert oncoming motorists. This device provides enhanced visibility for crossings with higher pedestrian volumes and serves as a potential countermeasure where data has shown a crash history despite warning signs and markings.

Planning and Community Development Department – Long Range Planning

The Long Range Planning group is responsible for:

- Developing, maintaining and updating long range transportation plans addressing all modes.
- Coordinating with regional partners including the Capital Area Metropolitan Planning Organization, the Wake Transit Planning Advisory Committee, and the Triangle J Council of Governments.
- Collaborating with Public Works and Transportation to prioritize, fund, and implement transportation projects.
- Working with planners in the Current Planning Division to ensure long range plans are reflected in development.
- Integrating transportation planning with land use, small area plans, and community issues such as affordable housing.

The Long Range Planning Division of the Planning and Community Development Department includes certified planners and Geographic Information Systems professionals. The division collaborates extensively with the public, across Town departments, and with regional partners to ensure that the Town's long range vision for the transportation network addresses anticipated growth, travel demand, multi-modal needs, land use patterns, health and safety concerns, and quality of life.

Long Range Transportation Planning

Advance Apex: The 2045 Comprehensive Transportation Plan and Bike Apex: The Comprehensive Bicycle Plan were developed concurrently and adopted in early 2019. These plans are not financially constrained – rather they establish a vision for the Town's transportation network and establish a framework for prioritizing projects. Crash data inform the facility type and prioritization recommendations in both plans.

Crosswalk Lighting Improvement Program

This program began in 2020. Planning staff prioritize locations through use of GIS and take measurements on site. Public Works staff confirm recommendations for Electric staff to install/upgrade lighting.

Safe Routes to School Improvement Program

This program began in 2018. The initial study identified gaps in infrastructure for 17 schools. Recommendations from the report along with ongoing evaluation are used to inform the CIP with annual SRTS expenditures over $250k /year. Requests for state funding is also based in part on this program. Improvements include new and enhanced facilities (crosswalks, sidewalks, paths, and greenways) to promote walking and biking to school.

GoApex Bus Service Implementation

This initiative began 2019. Planning staff, in collaboration with other departments and regional partners, have been working to implement the Town's first local bus route. An implementation study was primarily completed in 2019, work to design and build bus stops will take place over 2020-2021 and the route is anticipated to begin operating in 2021. The local route will serve the areas with the greatest need for transit in Apex and connect to regional routes between Apex and the Town of Cary, City of Raleigh, Town of Holly Springs, and Research Triangle Park.

Police Department – Traffic Safety Unit

The Traffic Safety Unit is part of the Special Operations Section of the department's Patrol Division. This unit is responsible for:

- Traffic safety education
- Addressing traffic complaints
- Investigating vehicle crashes
- Traffic enforcement based on enforcement and crash data
- Reduction of traffic crashes

Traffic Safety Unit staff receive advanced training in crash investigation and reconstruction as well as traffic safety education and enforcement. This unit provides several services to the community including a DWI simulator and the placement of portable speed signs in the community for citizen awareness.

North Carolina Governor's Highway Safety Program

The Apex Police Department supports and is an active partner with the Governor's Highway Safety Program (GHSP). The GHSP provides support and resources to law enforcement agencies to reduce traffic crashes and promote highway safety awareness through a variety of grants, traffic safety/awareness messages and safe-driving initiatives. The program addresses such issues as impaired driving, seat belt use, speeding, distracted driving, motorcycle safety, bicycle safety, pedestrian safety and other aspects of highway safety. In addition to this partnership, the Patrol Captain represents law enforcement on the NC GHSP Traffic Safety Symposiums board. This board develops the biennial training symposium to keep law enforcement abreast of current traffic related trends and enhances their training on enforcement and crash reduction.

Watch For Me NC Program:

The Apex Police Department is committed to the safety of pedestrians and bicyclists within our community and has partnered with Watch For Me NC Program to help enhance pedestrian and bicycle safety. The program focuses on safety and educational messages directed towards drivers, pedestrians and bicyclists, and high visibility enforcement in an effort to reduce violations of traffic safety laws in Apex.

BikeSafe NC:

The Apex Police Department supports and is an active in the BikeSafe-NC. This program invites motorcyclists to participate in rider skills sessions that offer rider assessments on driving skills and provides recommendations to help make rider safety a priority. Experienced motorcycle officers from local and state law enforcement agencies deliver this program. The unit conducts several BikeSafe courses within our community annually to enhance rider skills.

VIP for a VIP Program (**V**ehicle **I**njury **P**revention for a **V**ery **I**mportant **P**erson)

The Apex Police supports and participates in the VIP for a VIP Program (Vehicle Injury Prevention for a Very Important Person). This program educates teen drivers about the dangers of driving impaired and/or distracted driving. The program exposes high school students to a mock fatal vehicle crash embedding the consequences into the minds of teenage drivers. The vision is that, by the end of the day, students will have a realistic picture of what can happen due to a moment of inattention and/or impaired driving. Volunteers from local fire, EMS, Police as well as the North Carolina State Highway Patrol, deliver this program. This program is typically offered twice a year at both Apex high schools.

Mothers Against Drunk Driving (MADD)

The Apex Police Department supports and has established a partnership with Mothers Against Drunk Driving (MADD). This organization and the Apex Police Department collectively seek to stop drunk driving, prevent underage drinking and strive for stricter impaired driving laws, whether the cause of impairment was from alcohol or drugs. The Apex Police Department Traffic Safety Unit is actively involved in MADD's Power of Parents and Power of Youth Education Programs. The programs target middle and high school students and their parents and focuses around the dangers of the consequences of underage drinking. Power of Youth is taught at every driver's education class at both Apex high schools.

Data-Driven Approach to Crime and Traffic Safety Model

Data-Driven Approach to Crime and Traffic Safety (DDACTS) is a law enforcement operational model supported by a partnership with the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) as well as two Department of Justice agencies, the Bureau of Justice Assistance (BJA) and the National Institute of Justice (NIJ). The Apex Police Department has integrated this Data-driven approach into its operations. DDACTS has allowed the Apex Police

Department to incorporate location-based crime and traffic crash data to determine the most effective methods for deploying law enforcement and other resources. Drawing on the deterrent value of highly visible traffic enforcement and the knowledge that crimes often involve motor vehicles, the goal of DDACTS is to reduce crime, crashes, and traffic violations across the country.

Traffic Incident Management Systems (TIMS)

Traffic Incident Management Systems (TIMS) is a national program that uses a planned and coordinated process to detect, respond to, and remove traffic incidents and restore traffic capacity as safely and quickly as possible. The program is designed through its implementation to prevent secondary crashes. The Apex Police Department, Apex Fire Department and other Town of Apex resources utilized this traffic management program to respond to and resolve traffic incidents within Apex. All sworn personnel and Fire personnel are trained in this national program.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21,2020

Item Details

Presenter(s): Drew Havens, Town Manager
Department(s): Economic Development

Requested Motion

Motion to approve amending the current Apex Farmers Market Special Event Permit to allow for drive-thru pickup along Seaboard Street on each Saturday, beginning July 11, 2020 and ending April 24, 2021, to close marked parking spaces along the east side of Seaboard Street from 8:00 a.m. until 1:00 p.m. these days, and rescind the prior approval to close the Depot parking lot for the Farmer's Market.

Approval Recommended?

Yes

Item Details

The Apex Farmers Market created a drive-thru farmers' market along Seaboard Street for the Feed Apex program and operated this successfully in May and June of 2020. The Farmers' Market created an online store where customers can pre-order their items for pick-up. Then on Saturday mornings between 9:00am-1:00pm customers are able to drive-up and pick-up their orders from vendors in a contact free transaction. In light of the continued COVID-19 health crisis, this new drive-thru is in place of the typical Apex Farmer's Market.

Attachments

- Photo/Map Location of event space

Exit
Spaces Closed for Vendors
Entrance

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): John Letteney, Chief of Police
Department(s): Police Department

Requested Motion

Motion to approve Contract for Off-Duty Police Officer Services provided to the Wake County Public School System (WCPSS) and to authorize the Chief of Police to execute the contract.

Approval Recommended?

[Yes]

Item Details

The Police Department provides law enforcement services to the Wake County Public School System for afterhours school events (i.e. football games, dances, etc.). These events are staffed with off-duty personnel who are paid directly by the school system. This contract outlines the responsibilities and agreements by the Town of Apex and the WCPSS and the services to be provided.

Attachments

- Contract

Type of Contract:

Master Contract

WAKE COUNTY PUBLIC SCHOOL SYSTEM
Contract Routing Form 1950

Fiscal Year (FY): 2020-2021

Person to Call for Pick up: Sharon Ferguson Phone: 919-533-7748

Name of Contract: Town of Apex Secondary Employment for Apex Police Officers

If Change Order - (Amount +/-): Total Contract Amount:

Board Action: (Required at $100,000) ☐ Yes ☑ No Board Meeting Date:

Budget Code:

Items of Special Note: Off Duty Master Template/Agreement - no funds encumbered. Agency shall conduct annual check of Officers approved to work for the Board on the NC Dept. of Justice Sex Offender Registry and US Dept. of Justice Sex Offender Registry. Attachment A required for each event.

To be completed by the School or Department required for all contracts $2,500 and up
INITIAL/DATE THIS FORM AFTER YOU HAVE REVIEWED AND APPROVED THE ATTACHED CONTRACT:

	Initial	Date
Administrator ($2,500 - $9,999 and All MOAs)	RS	5/19/2020
Fiscal Administrator ($2,500 and up and all MOAs)		5/20/20
Assistant Superintendent or Area Superintendent ($10,000 - $99,999 and all MOAs)		
Chief Officer ($100,000+ and All MOAs)	LH	5/27/2020

To be completed by the Administrative Services required for all contracts $2,500 and up

	Initial	Date
Risk Management (Insurance Review)	gcb	6/1/20
Finance Officer *	mbw	5/29/20
Chief Operating Officer (Required at $100,000 +)	//	
School Board Attorney (As required by the Chief Officer or Superintendent)		

Comments: Master-no funds. mbw

*** "This instrument has been preaudited in the manner required by the School Budget and Fiscal Control Act." G.S. 115C-441(a).**

FIN 23466

STA TE OF NORTH CAROLINA

CONTRACT FOR OFF-DUTY POL ICE OFFICER SERVICES

COUNTY OF WAKE

This Agreement is made this the 1st day of July 2020 by and between the Wake County Board of Education, hereinafter known as Board, and The Town of Apex hereinafter known as Agency.

WITNESSETH:

WHEREAS, the Board wishes to secure law enforcement services to enhance the safety and security of the community at large through the increased presence of law enforcement at events and activities of the Wake County Public School System (WCPSS); and

WHEREAS, Agency wishes to provide such law enforcement services to the Board using off-duty Officer(s) employed with the Agency (hereinafter "Officer"); and

WHEREAS, the Board and Agency each desire to enter into a contract for their mutual benefit; and

WHEREAS, each party recognizes that the hiring of an off-duty Officer imposes unusual restraints and responsibilities on the parties.

NOW, THEREFORE, in consideration of these premises and the mutual considerations and promises set out herein and for other good and valuable consideration the parties agree as follows:

1. The Board agrees to hire Agency-approved Officer(s) during certain periods when Officer(s) is off duty from regular employment by the Agency. The Board shall submit a request for service to the Agency at least seven (7) days in advance of the event to the contact designated by the Agency. Agency will review and approve or deny the request in accordance with the terms of this Agreement and Agency rules, regulations, and policies.

2. Agency agrees to provide Officer(s) to work for the Board in an off-duty capacity to perform the work described herein and on Attachment A.

3. Board is contracting with the Agency because the Agency employs Officers who have territorial and geographic jurisdiction in the Town of Apex and have the power of arrest. Board expects Officer(s) to use law enforcement powers in carrying out the services anticipated pursuant to this Agreement. The Board wishes to engage the services of the Officer(s) to increase the safety of school events through the presence and law enforcement activity of the Officer(s) on Board property, including utilization, when necessary, of the power of arrest pursuant to North Carolina General Statutes§ 1 SA401 and authority to use reasonable force in accordance with North Carolina law and policies promulgated by the Agency. It is understood and agreed that the Officer(s) is not an employee of the Board, and that Board employees do not supervise any Officer(s) providing services pursuant to this Agreement in the execution of his or her law enforcement functions and that any Officer(s) working pursuant to this Agreement exercise discretion in carrying out their law enforcement functions. The Agency and the Board shall be independent contractors, and nothing herein shall be construed as creating a partnership or joint venture between the Agency and the Board. Officer(s) employed as part of this Agreement remain employees of the Town of Apex under the supervision and control of the Apex Police Department.

4. It is specifically understood and agreed that the function of the Officer(s) shall not be outside the scope of any North Carolina, federal or local laws or Agency rules and regulations. Officer(s) is subject to all such North Carolina, federal or local laws and Agency rules and regulations while performing functions pursuant to this Agreement.

5. Agency agrees to provide Workers' Compensation insurance coverage for Officer(s) for law enforcement functions performed in the course and scope of services for Board as described in this Agreement. WCPSS shall not require or request Officer(s) to direct traffic or to assist pedestrians in crossing any street, highway, or public vehicular area or to perform any duties that are not customarily performed by sworn law enforcement officers. Board shall instruct WCPSS administration and staff that requests of Officer(s) to perform non-law enforcement functions are not permitted and outside the scope of this agreement. In the event that WCPSS requests or directs Officer(s) to do so, Officer(s) must inform WCPSS that the requested activity is not a traditional law enforcement duty and is outside the scope of this Agreement.

6. The Agency shall conduct an annual check of Officer(s) approved to work for the Board on the North Carolina Department of Justice State Sex Offender Registry (http://sexoffender.ncdoj.gov/) and the United States Department of Justice National Sex Offender Registry (www.nsopw.gov), which include and incorporate checks of the North Carolina Sex Offender and Public Protection Registration Program, the North Carolina Sexually Violent Predator Registration Program, and the National Sex Offender Registry. The Agency shall certify that the registry checks were conducted prior to the commencement of services under this Agreement. The Agency acknowledges it may not approve Officer(s) to provide services to Board under this Agreement if the Officer(s) appears on any of the sex offender registries. In addition, the Agency acknowledges that the school system may conduct additional criminal records checks at the school system's expense. If the school system exercises this right to conduct additional criminal records checks, Agency agrees to provide within seven (7) days of request the Officer(s) full name, date of birth, state of residency for the past ten years, and any additional information requested by the school system consistent with all applicable laws.

7. Agency agrees to notify the Board if any legal action is instituted against Officer(s) as a result of the Officer's performance of this Agreement. The Board agrees to indemnify the Agency and/or Officer for any loss or cost as a result of any third party claims regarding the Agency and/or the Officer due to the Officer acting in the scope of his or her employment while providing services under this Agreement, but only to the extent that such loss is directly attributable to the negligent act or omission of the Board, WCPSS, or one or more Board employee(s) and as permitted and limited by North Carolina law.

8. Board agrees that Officer(s) working under this Agreement will complete records, reports and documentation as required by the Agency and that the Agency will maintain all such records relating to the provision of police services. Board, or designee, will maintain any record it deems appropriate regarding the performance of Officer(s) working under this Agreement and shall furnish all records pertaining to the Officer's performance of this Agreement.

9. Board agrees to provide equipment and facilities as needed for the proper provision of police services under this Agreement. This may include parking for police vehicles, access to school buildings as necessary and/or specific equipment, such as a school radio, that may be necessary. Agency agrees to provide all standard police equipment required for the Officer(s) to carry out their duties such as uniforms, service weapon, police radio, police vehicle, etc. and will request use of school equipment and/or facilities in advance of an event unless an emergency occurs making advance notice impractical.

10. The term of this Agreement will be from the date first written above through June 30, 2021.

11. This Agreement may be canceled by either party, at any time, upon delivery of written notice to the other party at the addresses below.

FOR AGENCY:	**FOR BOARD:**
John Letteney	Russ Smith
Chief of Police	Senior Director of Security
Town of Apex PO	5625 Dillard Drive
Box 250	Cary, NC 27518
Apex, NC 27502	

12. The Board shall compensate the Officer(s) at the rate of pay of $35 per hour at a minimum of three hours per event. If a supervisor is required due to the nature of the event or the anticipated crowd size, the Board shall compensate the supervisory officer at the rate of pay of $40 per hour at a minimum of three (3) hours per event. For purposes of this Agreement, a "supervisory officer" is defined as a sworn Apex Police Officer at the rank of Corporal or higher. Officer(s), including Supervisory Officer(s), are responsible for the payment of taxes, etc. as required by law.

13. If, in the Board sole discretion, it is necessary to cancel an event requiring the provision of services under this agreement, the Board will be under no obligation to compensate the Officer(s). Provided however, if the event has begun prior to the notice of cancellation, the Board shall compensate the Officer(s) in accordance with Paragraph 12 herein.

14. No party to this Agreement may assign, subcontract, or otherwise transfer any interest in this Agreement. Either party may request, in writing, for a review and revision of this Agreement at any time during the contract term. This Agreement may be modified only by written amendments duly executed by and between the Board and the Agency. North Carolina law will govern the interpretation and construction of this Agreement. This Agreement constitutes and expresses the entire agreement and understanding between the parties concerning the subject matter of this Agreement. If any provision of this Agreement shall be declared invalid or unenforceable, the remainder of the Agreement shall continue in full force and effect.

[REMAINDER OF PAGE INTENTIONALLY BLANK
SIGNATURE PAGE FOLLOWS]

FOR WCPSS BOARD:

Russ Smith, Sr. Director, Security	**Date**

FOR AGENCY:

Signature	**Date**
Title	

"ATTACHMENT A"

OFF-DUTY REQUEST

FOR AGENCY

John Letteney
Chief of Police
Town of Apex
PO Box 250
Apex, NC 27502

FOR WAKE COUNTY BOARD OF EDUCATION

Russ Smith
Senior Director of Security
5625 Dillard Drive
Cary, NC 27518
(919) 431-7777

To Provide Services for: The Wake County Board of Education
Address: 5625 Dillard Drive, Cary, NC 27518

Exact Location of Services: _____
Beginning Date and Time: _____
Ending Date and Time: _____
Services to be Performed: POLICE SERVICES FOR _____

_____ _____
Russ Smith, Senior Director of Security Date

TOWN OF APEX POLICE DEPARTMENT

Assigned Officer's Name: _____
Address: _____
_____
Phone: _____
SSN# _____

This the _____ day of _____, _____.

_____
John Letteney, Chief of Police

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): John Letteney, Chief of Police
Department(s): Police

Requested Motion

Motion to approve NC Governor's Highway Safety Program Local Government Resolution.

Approval Recommended?

Yes

Item Details

Second year of NC Governor's Highway Safety Program Traffic Safety Grant. Funding in the second year is 85% / 15% split. Approval will provide the Police Department with $69,900.00 (85%) of funding for DWI Traffic Enforcement.

Attachments

- Agreement of Conditions
- Resolution
- Copy of grant continuation application

North Carolina Governor's Highway Safety Program

Agreement of Conditions

This Agreement is made by and between the North Carolina Department of Transportation, hereinafter referred to as the "Department", to include the Governor's Highway Safety Program, hereinafter referred to as "GHSP"; and the applicant agency, for itself, its assignees and successors in interest, hereinafter referred to as the "Agency". During the performance of this contract, and by signing this contract, the Agency agrees as follows:

A. Federal Provisions

1. **Equal Opportunity/Nondiscrimination.** The Agency will agree to comply with all Federal statutes and implementing regulations relating to nondiscrimination concerning race, color, sex, religion, national origin, handicaps, and age. These include but are not limited to:
   (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq., 78 stat. 252);
   (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. 4601)
   (c) Federal-Aid Highway Act of 1973, (23 U.S.C. 324 et seq.), and Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681-1683 and 1685-1686);
   (d) Non-Discrimination in Federally-assisted programs of the United States Department of Transportation - Effectuation of Title VI of the Civil Rights Act of 1964 (49 CFR Part 21), hereinafter referred to as "USDOT", as amended;
   (e) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. 794 et seq.), as amended, and 49 CFR Part 27; and
   (f) The Age Discrimination Act of 1975, as amended (42 U.S.C. 6101 et seq.);
   (g) The Civil Rights Restoration Act of 1987, (Pub. L. 100-209);
   (h) Titles II and III of the Americans with Disabilities Act (42 U.S.C. 12131-12189) and 49 CFR parts 37 and 38;
   (i) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
   (j) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
2. **Drug Free Workplace.** The Agency agrees to comply with the provisions cited in the Drug-Free Workplace Act of 1988 (41 U.S.C. 8103).
3. **Federal Grant Requirements and Contracts.** The Agency shall comply with the following statutes and implementing regulations as applicable:
   (a) Highway Safety Act of 1966 (23 U.S.C. Chapter 4 -), as amended;
   (b) Sec. 1906, Pub. L.109-59, as amended by Sec. 4011, Pub. L. 114-94;
   (c) Uniform Procedures for State Highway Safety Grant Programs (23 CFR part 1300);
   (d) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR Part 1201);
   (e) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR Part 200) and all other relevant Federal regulations covering the Highway Safety Program;
   (f) NHTSA Highway Safety Grant Funding Guidance, as revised, July 2015 (www.nhtsa.gov) and additions or amendments thereto.
4. **Political Activity (Hatch Act)** The Agency will comply with provisions of the Hatch Act (5 U.S.C. 1501-1508), which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
5. **Lobbying.**

   (a) Certification Regarding Federal Lobbying. The undersigned certifies, to the best of his or her knowledge and belief, that:

   (i) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(ii) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(iii) The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including subcontracts, subgrants, and contracts under grant, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure

(b) Restriction on State Lobbying. None of the funds under this program will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., "grassroots") lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

6. Audits.

(a) Audit Required. Non-Federal entities that expend $750,000 or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the provisions of 2 CFR, Subpart F, §200.500. Guidance on determining Federal awards expended is provided in 2 CFR, Subpart F, §200.502.

(b) Single Audit. Non-Federal entities that expend $750,000 or more in a year in Federal awards shall have a single audit conducted in accordance with 2 CFR, Subpart F, §200.501, except when they elect to have a program-specific audit conducted in accordance with 2 CFR, Subpart F, §200.501, paragraph (c).

(c) Non-Governmental Entities. Non-governmental entities (not-for-profit and for-profit entities) must adhere to North Carolina General Statute 143C-6.22 and 09 NCAC Subchapter 03M.

7. Instructions for Lower Tier Certification.

(a) By signing and submitting this proposal, the prospective lower tier participant (the Agency) is providing the certification set out below and agrees to comply with the requirements of 2 CFR Parts 180 and 1200.

(b) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

(c) The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(d) The terms covered transaction, civil judgement, debarment, suspension, ineligible, participant, person, principal, and voluntarily excluded, as used in this clause, are defined in 2 CFR Part 180 and 1200. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.

(e) The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred,

suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

(f) The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Instructions for Lower Tier Participant Certification" including the "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR Parts 180 and 1200.

(g) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any prospective lower tier participants, each participant may, but is not required to, check the System for Award Management Exclusions website (https://www.sam.gov/).

(h) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(i) Except for transactions authorized under paragraph 7(e) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies including suspension or debarment.

(j) Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Covered Transactions.

(i) The prospective lower tier participant (the Agency) certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in covered transactions by any Federal department or agency.

(ii) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participants shall attach an explanation to this contract proposal.

8. **Buy America Act.** The Agency and each subrecipient will comply with the Buy America requirement (23 U.S.C. 313) when purchasing items using Federal funds. Buy America requires a State, or subrecipient, to purchase with Federal funds only steel, iron and manufactured products produced in the United States, unless the Secretary of Transportation determines that such domestically produced items would be inconsistent with the public interest, that such materials are not reasonably available and of a satisfactory quality, or that inclusion of domestic materials will increase the cost of the overall project contract by more than 25 percent. In order to use Federal funds to purchase foreign produced items, the State must submit a waiver request that provides an adequate basis and justification for approval by the Secretary of Transportation.

9. **Prohibition On Using Grant Funds To Check For Helmet Usage.** The Agency and each subrecipient will not use 23 U.S.C. Chapter 4 grant funds for programs to check helmet usage or to create checkpoints that specifically target motorcyclists.

10. **Conditions for State, Local and Indian Tribal Governments.** State, local and Indian tribal government Agencies shall adhere to the standards established by 2 CFR Part 225, Cost Principles for State, Local, and Indian Tribal Governments and additions or amendments thereto, for principles for determining costs applicable to grants and contracts with state, local and Indian tribal governments.

11. **Conditions for Institutions of Higher Education.** If the Agency is an institution of higher education, it shall adhere to the standards established by 2 CFR Part 215 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations and 2 CFR 220 Cost Principles for Educational Institutions for determining costs applicable to grants and contracts with educational institutions.

12. **Conditions for Non-Profit Organizations.** If the Agency is a non-profit organization, it shall adhere to the standards established by 2 CFR Part 215 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations and 2 CFR Part 230 Cost Principles for Non-Profit Organizations for determining costs applicable to grants and contracts with non-profit organizations.
13. **Conditions for Hospitals.** If the Agency is a hospital, it shall adhere to the standards established by 2 CFR Part 215 Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations.

B. General Provisions

1. **Contract Changes.** This document contains the entire agreement of the parties. No other contract, either oral or implied, shall supercede this Agreement. Any proposed changes in this contract that would result in any change in the nature, scope, character, or amount of funding provided for in this contract, shall require a written addendum to this contract on a form provided by the Department.
2. **Subcontracts Under This Contract.** The Agency shall not assign any portion of the work to be performed under this contract, or execute any contract, amendment or change order thereto, or obligate itself in any manner with any third party with respect to its rights and responsibilities under this contract without the prior written concurrence of the Department. Any subcontract under this contract must include all required and applicable clauses and provisions of this contract. Subcontracting does not relieve the Agency of any of the duties and responsibilities of this agreement. The subcontractor must comply with standards contained in this agreement and provide information that is needed by the Agency to comply with these standards. The Agency must submit any proposed contracts for subcontracted services to the Governor's Highway Safety Program for final approval no less than 30 days prior to acceptance.
3. **Solicitation for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations, either by competitive bidding or negotiation, made by the Agency for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Agency of the Agency's obligations under this contract. Additionally, Agencies making purchases or entering into contracts as provided for by this contract must adhere to the policies and procedures of 2 CFR Part 200 and North Carolina General Statute 143-128.4. Historically underutilized business defined; statewide uniform certification as it pertains to Historically Underutilized Businesses.
4. **Incorporation of Provisions in Subcontracts.** The Agency shall include the provisions of section A-1 through A-13 of this Agreement in every subcontract, including procurements of materials and leases of equipment, unless exempted by the regulations, or directives issued pursuant thereto. The Agency shall take such action with respect to any subcontract or procurement as the Department, the State of North Carolina, hereinafter referred to as the "State", the National Highway Traffic Safety Administration, hereinafter referred to as "NHTSA", or the Federal Highway Administration, hereinafter referred to as "FHWA", may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event the Agency becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Agency may request the Department or the State to enter into such litigation to protect the interests of the Department or the State. In addition, the Agency may request the NHTSA or FHWA to enter into such litigation to protect the interests of the United States.
5. **Outsourcing.** All work shall be performed in the United States of America. No work will be allowed to be outsourced outside the United States of America.
6. **Property and Equipment.**
   (a) **Maintenance and Inventory.** The Agency shall maintain and inventory all property and equipment purchased under this contract.
   (b) **Utilization.** The property and equipment purchased under this contract must be utilized by the Agency for the sole purpose of furthering the traffic safety efforts of the Agency for the entire useful life of the property or equipment.
   (c) **Title Interest.** The Department and NHTSA retain title interest in all property and equipment purchased under this contract. In the event that the Agency fails or refuses to comply with the provisions of this Agreement or terminates this contract, the Department, at its discretion, may take either of the following actions:
      (i) Require the Agency to purchase the property or equipment at fair market value or other mutually agreed to amount; or

(ii) Require the Agency to transfer the property or equipment and title of said property or equipment, if any, to the Department or to another Agency, as directed by the Department.

(d) **Non-expendable Property.** Non-expendable property is defined as property or equipment having a value of $5000 or more with a life expectancy of more than one year. Non-expendable property purchased under this contract cannot be sold, traded, or disposed of in any manner without the expressed written permission of the Department.

7. **Educational or Other Materials.** If allowed, any educational or other materials developed using funds from this contract must be reviewed and approved by the GHSP prior to their production or purchase. The cost of these materials is generally limited to a maximum of $5.00 per item. The purchase of promotional items and memorabilia are not an allowable cost.

8. **Review of Reports and Publications.** Any reports, papers, publications, or other items developed using funds from this contract must be reviewed and approved by the GHSP prior to their release.

9. **Reimbursement.**
   (a) **General.** Payments are made on a reimbursement basis. There is no schedule of advance payments. Only actual allowable costs are eligible for reimbursement. Claims for reimbursement must be made a minimum of quarterly and no more than once a month via the Grants Management System. Claims for reimbursement not made within the three month threshold are subject to denial. The itemized invoice shall be supported by documentation of costs as prescribed by the Department. Reimbursements will not be processed if other required reports are incomplete or have not been submitted. Failure to submit complete reports by the required deadline may result in denial of reimbursement.
   (b) **Approval.** The Governor's Highway Safety Program and the Department's Fiscal Section shall approve the itemized invoice prior to payment.
   (c) **Unapproved Costs.** Any rejected or unaccepted costs shall be borne by the Agency. The Agency agrees that in the event the Department determines that, due to Federal or State regulations that grant funds must be refunded, the Agency will reimburse the Department a sum of money equal to the amount of Federal and State participation in the rejected costs.
   (d) **Final Claims for Reimbursement.** Final claims for reimbursement must be received by the GHSP within 30 days following the close of the approved contract period. Project funds not claimed by this date are subject to reversion.
   (e) **Expending Funds Under This Contract.** Under no circumstances will reimbursement be made for costs incurred prior to the contract effective date or after the contract ending date.

10. **Project Costs.** It is understood and agreed that the work conducted pursuant to this contract shall be done on an actual cost basis by the Agency. The amount of reimbursement from the Department shall not exceed the estimated funds budgeted in the approved contract. The Agency shall initiate and prosecute to completion all actions necessary to enable the Agency to provide its share of the project costs at or prior to the conclusion of the project.

11. **Program Income.** The Agency shall account for program income related to projects financed in whole or in part with federal funds in accordance with 2 CFR 200.307. Program income earned during the contract period shall be retained by the Agency and deducted from the federal funds committed to the project by the GHSP unless approved in advance by the Federal awarding agency as an addition to the project. Program income must be accounted for separately and the records made available for audit purposes.

12. **Project Directors.** The Project Director, as specified on the signature page of this Agreement, must be an employee of the Agency or the Agency's governing body. Any exception to this provision must have the expressed written approval of GHSP.

13. **Reports Required.**
   (a) **Quarterly Progress Reports.** Unless otherwise directed, the Agency must submit Quarterly Progress Reports to the GHSP, on forms provided by the Department, which reflect the status of project implementation and attainment of stated goals. Each progress report shall describe the project status by quarter and shall be submitted to GHSP no later than fifteen (15) days after the end of each quarter. If the Agency fails to submit a Quarterly Progress Report or submits an incomplete Quarterly Progress Report, the Agency will be subject to having claims for reimbursement withheld. Once a Quarterly Progress Report that substantiates adequate progress is received, cost reimbursement requests may be processed or denied at the discretion of GHSP.
   (b) **Final Accomplishments Report.** A Final Accomplishments Report must be submitted to the GHSP within fifteen (15) days of completion of the project, on forms provided by the Department, unless otherwise directed. If the Agency fails to submit a Final Accomplishments Report or submits an

incomplete Final Accomplishments Report, the Agency will be subject to having claims for reimbursement withheld. Once a Final Accomplishments Report that substantiates adequate progress is received, claims for reimbursement may be processed or denied at the discretion of GHSP.

(c) **Audit Reports.** Audit reports required in Section A-6 above shall be provided to the Department within thirty (30) days of completion of the audit.

14. **Out-of-State Travel.**
    (a) **General.** All out-of-state travel funded under this contract must have prior written approval by the Governor's Highway Safety Program.
    (b) **Requests.** Requests for approval must be submitted to the GHSP, on forms provided by the Department, no less than thirty (30) days prior to the intended departure date of travel.
    (c) **Agency Travel Policy Required.** For Agencies other than state agencies, out-of-state travel requests must include a copy of the Agency's travel policy, to include allowances for lodging, meals, and other travel-related expenses. For state agencies, maximum allowable subsistence is limited to the prevailing per diem rates as established by the North Carolina General Assembly.
    (d) **Agenda Required.** Out-of-state travel requests must include a copy of the agenda for the travel requested.

15. **Conditions for Law Enforcement.** In addition to the other conditions provided for in this Agreement, grants to law enforcement agencies are subject to the following:
    (a) **Certifications Required.**
        (i) **In-car Camera or Video System.** For any in-car camera or video system purchased under this contract, it is required that the operator of that equipment has successfully completed Standardized Field Sobriety Testing training (SFST). A copy of this certificate must be filed with GHSP prior to reimbursement of in-car camera or video systems.
        (ii) **Radar.** For any radar equipment purchased under this contract, it is required that the operator of that equipment has successfully completed Radar Certification Training. A copy of this certificate must be filed with GHSP prior to reimbursement of radar equipment.
        (iii) **Alcohol Screening Devices.** For any preliminary alcohol screening devices purchased under this contract, it is required that the operator of that equipment has successfully completed the Alcohol Screening Test Device training offered by the Forensic Test for Alcohol Branch.
    (b) **Report Required - Monthly Enforcement Data Report.** In addition to the reports mentioned above, law enforcement agencies engaging in enforcement activities must submit a Monthly Enforcement Data Report on the form provided by the Department no later than fifteen (15) days after the end of each month. If the Agency fails to submit a Monthly Enforcement Data Report or submits an incomplete Monthly Enforcement Data Report, the Agency will be subject to having cost reimbursement requests withheld. Once a Monthly Enforcement Data Report that substantiates adequate progress is received, cost reimbursement requests will be processed. The agency head must sign the form. However, the agency head may assign a designee to sign the form by providing written signature authority to the GHSP.

16. **Conditions for Local Governmental Agencies.**
    (a) **Resolution Required.** If the Agency is a local governmental entity, a resolution from the governing body of the Agency is required on a form provided by the Department.
    (b) **Resolution Content.** The resolution must contain a commitment from the governing body to provide the local funds as indicated in this contract. Additionally, the resolution is required even if the funding is one hundred percent from federal sources, as it serves as recognition by the governing body of federal funding for purposes of Section A-6 above.

17. **Seat Belt Policy and Use.** Agency must adopt and enforce a seat belt use policy required for all seating positions unless exempted by state law.

18. **Text Messaging Policy.** Agency must adopt and enforce a policy banning text messaging while driving unless exempted by state law.

19. **Prohibited Interests.** No member, officer, or employee of the Agency during his or her tenure, and for at least one (1) year thereafter, shall have any interest, direct or indirect, in this contract or the proceeds thereof or therefrom.

20. **Continued Federal and State Funding.**
    (a) **Federal Funding.** The Agency agrees and understands that continuation of this project with Federal funds is contingent upon Federal funds being appropriated by the United States Congress specifically for that purpose. The Agency further agrees and understands that in the event funds originally

appropriated by Congress for these grants are subsequently reduced by further acts of Congress, funding to the Agency may be proportionately reduced.

(b) **State Funding.** The Agency agrees and understands that continuation of this project with funds from the State of North Carolina is contingent upon State funds being appropriated by the General Assembly specifically for that purpose. The Agency also agrees that any state funds received under this contract are subject to the same terms and conditions stated in this Agreement.

21. **Performance.** All grants provided by the Governor's Highway Safety Program are performance-based and, as such, require that continual progress be made toward the reduction of the number and severity of traffic crashes. Any agency, whose performance is deemed unsatisfactory by the GHSP, shall be subject to the sanctions as provided for in this contract. Additionally, unsatisfactory performance shall be cause for the Department to reduce or deny future funding.

22. **Resolution of Disputes.** Any dispute concerning a question of fact in connection with the work not disposed of by contract by and between the Agency and the Department, or otherwise arising between the parties to this contract, shall be referred to the Secretary of the North Carolina Department of Transportation and the authorized official of the Agency for a negotiated settlement. In any dispute concerning a question of fact in connection with the project where such negotiated settlement cannot be resolved in a timely fashion, the final decision regarding such dispute shall be made by the Secretary of the North Carolina Department of Transportation, with the concurrence of the Federal funding agency, and shall be final and conclusive for all parties.

23. **Department Held Harmless.**
    (a) **For State Agencies.** Subject to the limitations of the North Carolina Tort Claims Act, the Agency shall be responsible for its own negligence and holds harmless the Department, its officers, employees, or agents, from all claims and liability due to its negligent acts, or the negligent acts of its subcontractors, agents, or employees in connection with their services under this contract.
    (b) **For Agencies Other Than State Agencies.** The Agency shall be responsible for its own negligence and holds harmless the Department, its officers, employees, or agents, from all claims and liability due to its negligent acts, or the negligent acts of its subcontractors, agents, or employees in connection with their services under this contract.

24. **Records Access and Retention.** The Agency shall provide all information and reports required by the regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department, the State, NHTSA, or FHWA, as appropriate, to be pertinent to ascertain compliance with such regulations, orders and instructions. Furthermore, the Agency shall maintain such materials during the contract period, and for five (5) years from the date of final payment from the Department or until all audit exceptions have been resolved, for such inspection and audit. Where any information required of the Agency is in the exclusive possession of another who fails or refuses to furnish this information, the Agency shall so certify to the Department, State, NHTSA, or FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information. Pursuant to N.C.G.S. §147-64.7, the Department, the State Auditor, appropriate federal officials, and their respective authorized employees or agents are authorized to examine all books, records, and accounts of the Agency insofar as they relate to transactions with any department, board, officer, commission, institution, or other agency of the State of North Carolina pursuant to the performance of this Agreement or to costs charged to this Agreement.

25. **Sanctions for Non-Compliance.** The applicant Agency agrees that if it fails or refuses to comply with any provisions and assurances in this contract, the Department may take any or all of the following actions:
    (a) Cancel, terminate, or suspend this contract in whole or in part;
    (b) Withhold reimbursement to the Agency until satisfactory compliance has been attained by the Agency;
    (c) Refrain from extending any further funding to the Agency under this contract with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from the Agency;
    (d) Refer the case to the United States Department of Justice for appropriate legal proceedings.

26. **Cancellation, Termination, or Suspension of Contract.**
    (a) **By the Department.** For noncompliance with any of the said rules, regulations, orders or conditions, due to management deficiencies or criminal activity this contract may be immediately canceled, terminated, or suspended in whole or in part by the Department. For noncompliance not indicative of management deficiencies or criminal activity the Department shall give sixty (60) days written notice

to take corrective action. If the Agency has not taken the appropriate corrective action after sixty (60) days the Department may cancel, terminate, or suspend this contract in whole or in part.

(b) By mutual consent. The Agency or the Department may terminate this contract by providing sixty (60) days advanced written notice to the other party.

(c) Unexpended funds. Any unexpended funds remaining after cancelation or termination will revert to the Department.

27. **Completion Date.** Unless otherwise authorized in writing by the Department, the Agency shall commence, carry on, and complete the project as described in the approved Highway Safety Project Contract by September 30 of the Federal fiscal year for which it was approved.

28. **E-Verify requirements.** If this contract is subject to NCGS 143-133.3, the contractor and its subcontractors shall comply with the requirements of Article 2 of Chapter 64 of the NC General Statutes.

29. **Certification of Eligibility Under the Iran Divestment Act.** Pursuant to G.S. 147-86.59, any person identified as engaging in investment activities in Iran, determined by appearing on the Final Divestment List created by the State Treasurer pursuant to G.S. 147-86.58, is ineligible to contract with the State of North Carolina or any political subdivision of the State. The Iran Divestment Act of 2015, G.S. 147-55 et seq. requires that each Agency, prior to contracting with the State certify, and the undersigned Agency Authorizing Official on behalf of the Agency does hereby certify, to the following:

(a) that the Agency is not now and was not at the time of the execution of the Contract dated below identified on the Final Divestment List of entities that the State Treasurer has determined engages in investment activities in Iran;

(b) that the Agency shall not utilize on any contract with the State agency any subcontractor that is identified on the Final Divestment List; and

(c) that the undersigned Agency Authorizing Official is authorized by the Agency to make this Certification.

30. **Agency Fiscal Year.** The end date for the Agency's fiscal year is 06/30/2021.

31. **Signature.** By signing below, the Agency agrees to adhere to the terms and conditions of this Agreement.

AGENCY PROJECT DIRECTOR		
NAME: John Letteney	TITLE: Chief of Police	ADDRESS: 205 Saunders St. Apex
SIGNATURE: John Letteney	DATE: 7/6/2020	TELEPHONE NUMBER: 919-249-3447
AGENCY AUTHORIZING OFFICIAL		
NAME: Jacques Gilbert	TITLE: Mayor	ADDRESS: 73 Hunter St. Apex
SIGNATURE:	DATE:	TELEPHONE NUMBER: 919-249-3304
AGENCY OFFICIAL AUTHORIZED TO RECEIVE FUNDS		
NAME: Vance Holloman	TITLE: Finance Director	ADDRESS: 73 Hunter Street Apex
SIGNATURE: Vance Holloman	DATE: 7/8/2020	TELEPHONE NUMBER: 919-249-3345

North Carolina Governor's Highway Safety Program

LOCAL GOVERNMENTAL RESOLUTION

WHEREAS, the Apex Police Department (herein called the "Agency")
(The Applicant Agency)

has completed an application contract for traffic safety funding; and that Apex Town Council
(The Governing Body of the Agency)

_____ (herein called the "Governing Body") has thoroughly considered the problem identified and has reviewed the project as described in the contract;

THEREFORE, NOW BE IT RESOLVED BY THE Apex Town Council IN OPEN MEETING ASSEMBLED IN THE CITY OF Apex, NORTH CAROLINA, THIS _____ DAY OF _____, 20 _____, AS FOLLOWS:
(Governing Body)

1. That the project referenced above is in the best interest of the Governing Body and the general public; and
2. That John Letteney, Chief of Police is authorized to file, on behalf of the Governing Body, an application contract in the form prescribed by the Governor's Highway Safety Program for federal funding in the amount of $ 69,900.00 to be made to the Governing Body to assist in defraying the cost of the project described in the contract application; and
   (Name and Title of Representative)
   (Federal Dollar Request)
3. That the Governing Body has formally appropriated the cash contribution of $12,335.00 as required by the project contract; and
   (Local Cash Appropriation)
4. That the Project Director designated in the application contract shall furnish or make arrangement for other appropriate persons to furnish such information, data, documents and reports as required by the contract, if approved, or as may be required by the Governor's Highway Safety Program; and
5. That certified copies of this resolution be included as part of the contract referenced above; and
6. That this resolution shall take effect immediately upon its adoption.

DONE AND ORDERED in open meeting by _____
(Chairperson/Mayor)

ATTESTED BY _____ **SEAL**
(Clerk)

DATE _____

Rev. 7/11

North Carolina Governor's Highway Safety Program
Traffic Safety Project Contract – Form GHSP-01
SECTION A – GENERAL INFORMATION

1. Agency: TOWN OF APEX POLICE DEPARTMENT	4. Contact Person for Agency: Eric Buchanan
2. Agency Address: PO Box 250 APEX, NC 27502-0250	5. Telephone Number: * +1 (919) 249-3455
	6. Cell Phone:
3. Physical Location of Agency * 205 Saunders Street, Apex, NC 27502	7. Email of Contact Person * eric.buchanan@apexnc.org
8. Federal Tax ID Number / Type of Agency Federal Tax ID Number: *56-6001166 DUNS No : * 097722102 County: *WAKE COUNTY Type of Agency ◉ State ○ Non-Profit ○ County ○ Higher Education ○ Municipality ○ Hospital	9. Project Year * ○ New ◉ Continuation Year: ○ 1 ◉ 2 ○ 3 ○ 4+ 10. Allocation of Funding * Federal % 85.00 Local % 15.00

COPY

11. Project Title: * Highway Safety Project with DWI Personnel

12. Budget	Total Project Amount	Source of Funds: Federal Amount	Source of Funds: State/Local Amount
Personnel Costs	$78,235.00	$66,500.00	$11,735.00
Contractual Services			
Commodities Costs			
Other Direct Costs	$4,000.00	$3,400.00	$600.00
Indirect Costs			
Total Project Costs	**$82,235.00**	**$69,900.00**	**$12,335.00**

13. Specify How Non-Federal Share Will Be Provided: *
The Apex Police Department will use funds from the Town of Apex general fund to subsidize the non-federal share.

Project Number:	CFDA#: 20. Work Type:

SECTION B – DESCRIPTION OF PROJECT

Statement of Problem *(Provide detailed information of the highway safety problems in your area to be addressed through this project. Include countywide crash data for the last three years and any other relevant information to validate the statements. For more detailed information see "How to write an effective traffic safety project" located at:*

https://connect.ncdot.gov/municipalities/Law-Enforcement/Pages/Law-Enforcement-Reporting.aspx)

Apex has seen an increase in reportable crashes from 2018 (1,409) compared to 2019 (1,470) including a 4.3% rise in driving while impaired crashes. This increase is directly related to a rise in residential and commuting population. The Apex Police Department requests the assistance of GHSP to aid us in the funding necessary to have a positive impact on traffic crash reduction and Driving While Impaired (DWI) enforcement.

The Town of Apex is located in the southern area of Wake County, North Carolina. Apex has a current population of approximately 61,180 residents. Apex has four major highways (US 1, US 64, NC 55, and I-540) that serve residents of numerous surrounding cities (Cary, Durham, Fayetteville, Fuquay-Varina, Holly Springs, Lillington, Morrisville, Pittsboro, Raleigh, Sanford, and other cities). These highways have become a daily thoroughfare for commuting. These highways increase the motoring traffic significantly during the workweek, which produces heavy traffic congestion along the major corridors. Based on

data provided by the U.S. Census Bureau, the average employee in Apex has an average commute time of 22.7 minutes and 1.49% (912) of the workforce in Apex have a commute time over 90 minutes. These major corridors are also thoroughfares to Raleigh's nightlife and events in the region.

Apex has many shopping centers, with the largest being Beaver Creek Commons and a growing population of breweries. Beaver Creek Commons shopping center contains various restaurants, which serve alcohol, and retail stores that attract consumers not only from Wake County but surrounding counties as well (Chatham, Harnett, Durham, and Lee). Costco, located on US 64 Hwy, draws commuting traffic from surrounding areas. This area alone has increased our traffic crashes with the influx of traffic in a tight area along a major thoroughfare.

Apex is one of the fastest-growing communities in Wake County, both commercially and residentially. Apex had a population increase of 29.71% from 2015 (47,165) to 2019 (61,180). Within the last year, the population has increased by 10.16%.
Our agency's multi-year strategic plan includes special initiatives, community education, and enforcement to reduce crashes. The agency's Traffic Safety Unit currently participates in all GHSP events, maintains a 100% reporting rate, works with the Wake County DWI task force team, has a strong partnership with Mothers Against Drunk Driving (M.A.D.D.), conducts multiple licenses and impaired driving checkpoints annually, and conducts seat belt and texting while driving enforcement initiatives.

Problem:

In 2019, the Apex Police Department investigated 1,470 motor vehicle crashes. In 2017 and 2018 we had two fatalities for each year. However, in 2019 we had no fatal crashes within the corporate city limits of Apex. During 2019, our traffic safety unit, working with the Patrol Division, has worked toward our enforcement, education, and participation efforts. In 2019, the Apex Police Department issued 3,131 speeding citations, cited 154 individuals with seatbelt and/or child restraint violations, and made 134 DWI arrests. During this same time frame, the traffic unit has conducted twenty-seven (27) Power of Youth instructional courses through M.A.D.D.'s national program, and fourteen (14) other educational outreach events. In addition, the Traffic Safety Unit has conducted and/or participated in thirty-nine (39) traffic safety initiatives, which include thirteen (13) DWI checking stations. Because of these efforts, in 2019, the Apex Police Department had zero fatalities, a 200% decrease from 2018. However, reportable collisions are up by 4.3% and impaired driving crashes have not decreased. With the funding from NC GHSP, the Apex Police Department Traffic Safety Unit has begun their increased efforts to impact impaired driving offenses.

Request:

We are submitting a request to continue our current grant from GHSP that will allow the Apex Police Department to continue the grant funding from 2019. This funding will continue to aid in funding the ninth (9th) Traffic Safety officer, which will have a direct focus on impaired driving reduction. This officer, along with the Traffic Safety Unit, will continue their efforts through vigorous enforcement, special initiatives, and education efforts.

The continuation grant funding will allow the unit to have more enforcement efforts in the identified "hot-spot" crash areas, and to direct their efforts to the causes of our crashes, in attempts to reduce impaired driving crashes. The grant officer will continue to participate in the Wake County Task Force as well as North Carolina's Governor's Highway Safety Program initiatives.

Through the grant, we would also like to obtain additional funding to enhance training for officers on the Traffic Safety Unit. The training funding would allow us to send the grant officer to the NC GHSP Traffic Safety Symposium in Raleigh, NC, which will be held in 2021. The training funding would also allow us to send the grant officer to the LifeSavers Conference in 2021 in Long Beach, CA. This funding would include registration fees, hotel accommodations, travel expenses, and meals that are not included at the symposium or conference.

To be completed by law enforcement agencies seeking first year grant:

Provide the agency's number of sworn officers	96
Does the agency currently have a dedicated traffic or DWI unit?	Yes ◉ No ○
If a dedicated traffic or DWI unit exists, how many officers are assigned to the unit?	9

For applicants requesting enforcement grants, please provide the following county fatality rankings:
Information can be located at:

https://connect.ncdot.gov/municipalities/Law-Enforcement/Pages/Law-Enforcement-Reporting.aspx)

Overall Fatality Ranking:	2
Alcohol Fatality Ranking:	2
Unrestrained Fatality Ranking:	2

Speed Related Fatalities:	3
Other Applicable Rankings: *(Specify)*	2 in young driver fatalities; 3 in motorcycle fatalities

As part of this project all law enforcement agencies must enter traffic enforcement citations data of their agency for the past three years.

Year 2019	Occupant Protection Citations	154	DWI Citations	134	Speed Citations	3,131
Year 2018	Occupant Protection Citations	327	DWI Citations	110	Speed Citations	2,763
Year 2017	Occupant Protection Citations	369	DWI Citations	103	Speed Citations	4,015

Goals and Objectives *(Provide at least one SMART (Specific, Measurable, Attainable, Realistic and Timely) goals and objectives. For more detailed information see "How to write an effective traffic safety project" located at: https://connect.ncdot.gov/municipalities/Law-Enforcement/Pages/Law-Enforcement-Reporting.aspx)*

Goal #1: To reduce fatal crashes in Wake County by 10% from the 2014-2018 5 year average of 65 to 59 by the end of FY21.

Objectives:
- Conduct special initiatives (speed, seatbelt, texting while driving, and checking stations) to target high crash areas.
- Attend community events to address neighborhood traffic safety concerns as well as to educate the public on various traffic safety issues we observe in the community.
- Use departmental social media pages to send out traffic safety messages throughout the year.
- Deploy radar trailers and traffic officers to heighten speed awareness in high crash areas.
- Work with the high schools to educate young drivers of the dangers that await them on North Carolina Highways.
- Participate in all GHSP campaigns and sponsored events.

Goal #2: To reduce alcohol-related fatalities in Wake County by 20% from the 2014-2018 5 year average of 20 to 16 by the end of FY21.

Objectives:
- Host a minimum of two (2) multi-agency DWI checking stations per year.
- Conduct educational events in neighborhoods to address impaired driving safety issues (i.e. safety concerns driving from community pool to residence, while impaired).
- Use departmental social media pages to send out traffic safety messages throughout the year.
- Partner and participate in the Wake County DWI Task Force initiatives.
- Attend other agency checking stations.
- Participate in all GSHP Campaigns and sponsored events.

Goal #3:

Objectives:

Below are the 5-year goals of the NC Governor's Highway Safety Program (GHSP). To be eligible for funding, your traffic safety project should match one or more of the GHSP goals. Check all that apply.

- ☒ Reduce NC's traffic-related fatalities by 12% from the 2014-2018 average of 1,392 to 1,228 by December 31, 2021.
- ☒ Reduce NC's alcohol-related fatalities by 10% from the 2014-2018 average of 401 to 361 by December 31, 2021.
- ☐ Reduce NC's unrestrained fatalities by 10% from the 2014-2018 average of 398 to 358 by December 31, 2021.
- ☐ Reduce NC's speed-related fatalities by 5% from the 2014-2018 average of 472 to 448 by December 31, 2021.
- ☐ Reduce NC's young driver-involved fatal crashes by 10% from the 2014-2018 average of 170 to 153 by December 31, 2021.
- ☐ Reduce NC's motorcycle fatalities by 5% from the 2014-2018 average of 187 to 178 by December 31, 2021.
- ☒ Increase NC's seat belt usage rate 2.9 percentage points from the 2015-2019 average of 90.5% to 93.4% by December 31, 2021.

SECTION C – BUDGET DETAIL

Personnel Costs

#	Personnel Position	Salary
1	Activity hours for Traffic Officer	$54,229.00
2		
3		
4		

5		
6		
7		
8		
9		
10		
	Total Salaries Cost:	$54,229.00

#	Personnel Fringe Benefits	Cost
1	Traffic Safety Specialist Fringe Benefits	$24,006.00
2		
3		
4		
5		
6		
7		
8		
9		
10		
	Total Fringe Benefits Cost:	$24,006.00
	Total Personnel Costs:	$78,235.00

Contractual Services

#	Contractual Service To Be Provided	Cost
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
	Total Contractual Services:	

Commodities Costs

#	Commodities	Cost
1		
2		
3		
4		
5		
6		
7		

8		
9		
10		
11		
12		
	Total Commodities Cost:	

Other Direct Costs

#	Equipment	Quantity	Cap/Amount	Cost
1				
2				
3				
4				
5				
6				
7				
8				
			Total Equipment Cost	

#	Other Items and Equipment Direct Cost (Cost Limited to Less Than $5000 Per Item)	Cost
1		
2		
3		
4		
5		
6		
7		
8		
	Total Other Items and Equipment Direct Cost:	

#	Travel	Cost
1	In-State Travel	$1,500.00
2	Out-of-State Travel	$2,500.00
	Total Travel Cost:	$4,000.00
	Total Other Direct Costs:	$4,000.00

Indirect Costs

#	Indirect Costs	Cost
1		
2		
3		
4		
	Total Indirect Costs	

SECTION D – SCHEDULE OF TASKS BY QUARTERS

List the schedule of tasks by quarters, referring specifically to the objectives in Section B. Tasks should be a bulleted list of activities to be performed in each quarter.

Conditions for Enforcement Projects Only

☒ *By checking this box, the above agency agrees to the terms below as additional activities to be performed as part of this project.*

- A minimum of one (1) nighttime and one (1) daytime seat belt initiative per month;
- A minimum of one (1) impaired driving checkpoint per month;
- A minimum of 50% of seat belt initiatives must be conducted at night between the hours of 7:00 p.m. and 7:00 a.m.;
- Participation in all "Click It or Ticket" and "Booze It & Lose It" campaigns;
- Participation in any event or campaign as required by the GHSP;
- Attempt to utilize one of the Forensic Tests for Alcohol Branch's Mobile Breath Alcohol Testing (BATMobiles) units during at least one of the impaired driving checkpoints.

First Quarter (October, November, December)

•Schedule and conduct a community traffic safety education session once per month.
•Using crash data and citizen complaints, deploy our RADAR trailers and traffic officers in these areas to increase citizen awareness.
• Send out traffic safety messages regarding GHSP's Campaign focus's via departmental social media sites.
• Assist other agencies in their monthly campaign efforts.
• Participate in any Wake County DWI Task Force Initiatives.
• Participate in all GHSP Campaigns and sponsored events.
• Host or Participate in (3) DWI Checking Stations.
• Host or Participate in (3) daytime seatbelt initiatives.
• Host or participate in (3) nighttime seatbelt initiatives.
• Complete and submit Monthly Enforcement Reports before GHSP deadline.
• Complete and submit GHSP Quarterly Progress Report by the established deadline
• Complete a minimum of one claim for reimbursement

Second Quarter (January, February, March)

• Schedule and conduct community traffic safety education session.
• Using crash data and citizen complaints, deploy our RADAR trailers and traffic officers in these areas to increase citizen awareness.
• Send out traffic safety messages regarding GHSP's Campaign focus's via departmental social media sites.
• Assist other agencies in their monthly campaign efforts.
• Participate in any Wake County DWI Task Force Initiatives.
• Participate in all GHSP Campaigns and sponsored events.
• Conduct (1) In-house DWI Checking Station.
• Host or Participate in (3) DWI Checking Stations.
• Host or Participate in (3) daytime seatbelt initiatives.
• Host or participate in (3) nighttime seatbelt initiatives.
• Complete and submit Monthly Enforcement Reports before GHSP deadline.
• Complete and submit GHSP Quarterly Progress Report by the established deadline
• Complete a minimum of one claim for reimbursement

Third Quarter (April, May, June)

• Schedule and conduct community traffic safety education session
• Using crash data and citizen complaints, deploy our RADAR trailers and traffic officers in these areas to increase citizen awareness.
• Send out traffic safety messages regarding GHSP's Campaign focus's via departmental social media sites.
• Assist other agencies in their monthly campaign efforts.
• Participate in any Wake County DWI Task Force Initiatives.
• Participate in all GHSP Campaigns and sponsored events.
• Host or Participate in (3) DWI Checking Stations.
• Host or Participate in (3) daytime seatbelt initiatives.
• Host or participate in (3) nighttime seatbelt initiatives.
• Complete and submit Monthly Enforcement Reports before GHSP deadline.
• Complete and submit GHSP Quarterly Progress Report by the established deadline
• Complete a minimum of one claim for reimbursement

Fourth Quarter (July, August, September)

• Schedule and conduct community traffic safety education session.
• Using crash data and citizen complaints, deploy our RADAR trailers and traffic officers in these areas to increase citizen awareness.
• Send out traffic safety messages regarding GHSP's Campaign focus's via departmental social media sites.
• Assist other agencies in their monthly campaign efforts.
• Participate in any Wake County DWI Task Force Initiatives.
• Participate in all GHSP Campaigns and sponsored events.

- Conduct (1) In-house DWI Checking Station.
- Host or Participate in (3) DWI Checking Stations.
- Host or Participate in (3) daytime seatbelt initiatives.
- Host or participate in (3) nighttime seatbelt initiatives.
- Complete and submit Monthly Enforcement Reports before GHSP deadline.
- Complete and submit GHSP Quarterly Progress Report by the established deadline
- Complete a final claim for reimbursement by October 15, 2021
- Complete Final Accomplishments Report by October 15, 2021

Note:
1. Submitting grant application is not a guarantee of grant being approved.
2. Once form has been submitted, it cannot be changed unless it has a status of "Return".

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Dennis Brown, Construction Project Manager
Department(s): Administration

Requested Motion

Motion to approve the renewal of lease with NC SECU and authorization for the Town Manager to sign lease for new ATM to be located in the new Mason Street parking lot near the Community Center.

Approval Recommended?

Yes

Item Details

The original location of the ATM required that it be removed for the new driveway and parking construction related to the Senior Center project. Planning and SECU have agreed on the new location in the new Mason Street parking lot, which is in the general area of where it was originally located.

Attachments

- Copy of proposed lease
- Copy of map showing location
- Resolution authorizing lease
- Copy of Notice of Intended Lease

North Carolina

Wake County

LEASE AGREEMENT

This lease agreement, made and entered into this 1st day of, June 2020 by and between, Town of Apex, hereinafter referred to as "Lessor"; and State Employees' Credit Union a North Carolina credit union, hereinafter referred to as "Lessee."

WITNESSETH:

That subject to the terms and conditions hereinafter set out, Lessor does hereby let and lease unto Lessee, and Lessee does hereby accept as tenant of Lessor that certain tract or parcel of land located at 73 Hunter Street, Apex, County of Wake, State of North Carolina, and as more fully described and/or depicted in Exhibit A (the "Leased Premises").

The terms and conditions of this Lease Agreement are as follows:

1) The term of this Lease Agreement shall be for a period of five (5) years beginning on the FIRST day of August, 2020 and ending on the LAST day of July, 2025, unless extended or terminated under the other provisions of this Lease Agreement.

2) Lessor shall provide space to the Lessee for an annual rent in the amount of Twelve Dollars ($12.00) per year for the term of this Lease Agreement. **Rental payments shall be made payable to** Town of Apex, P.O. Box 250 Apex, NC 27502.

3) Lessee shall use and occupy the premises for the purpose of constructing and operating a kiosk ATM, and Lessee shall have exclusive control and possession of the Leased Premises for the entire term of this Lease Agreement.

4) Lessor shall be responsible for the repair and/or maintenance of the parking lot area on or immediately surrounding the Leased Premises including but not limited to repairing any potholes, removing any debris, and performing all landscaping such as maintaining and trimming any shrubs and trees in close proximity of the ATM. In addition, Lessor shall ensure that reasonably adequate lighting, parking, and access are available for the Leased Premises at all times. Upon written notice from Lessee to Lessor requesting any repairs and/or maintenance described above on the Leased Premises, Lessor shall perform any requested repairs and/or maintenance within thirty (30) days. If Lessor fails to perform any requested repairs and/or maintenance within thirty (30) days, then Lessee has the option to provide a forty-five (45) day written notice of its intent to terminate this Lease Agreement (such 45-day window to include the 30-day repair and maintenance window). Except as otherwise agreed to in writing by both parties, Lessee will be responsible for the construction of the ATM and any necessary upkeep, repairs, and maintenance of the ATM during the term of this Lease Agreement. Upon termination of the Lease Agreement, Lessee will be responsible for removing the ATM and the structure from the "Leased Premises" and will restore the premises back to substantially the same condition as existed prior to the installation of the ATM.

5) During the term of this Lease Agreement, Lessee shall maintain comprehensive general liability insurance on an occurrence basis with minimum limits of liability in the amount of

Three Hundred Thousand Dollars ($300,000.00) for property damage, bodily injury, personal injury or death to any one person; Lessee shall also maintain excess liability coverage with a per occurrence limit of at least One Million Dollars ($1,000,000.00); and Lessee shall keep the kiosk structure on the Leased Premises together with the equipment in the structure insured against loss or damage by fire or other casualties.

6) Lessee shall neither use nor occupy the Leased Premises or any part thereof for any unlawful or hazardous purpose.

7) Lessor shall pay prior to delinquency all taxes and assessments of every kind and nature which may be imposed or assessed upon or with respect to the Leased Premises.

8) If the Leased Premises are wholly or partially destroyed by fire or other casualty, rental payments shall abate in proportion to the loss of use thereof, and Lessee shall, at its own expense, promptly restore the Leased Premises to substantially the same condition as existed before damage or destruction, whereupon full rental shall resume. Should Lessee elect not to repair or replace the ATM, then Lessee shall provide to Lessor at least thirty (30) days written notice of its intent to terminate this Lease Agreement. Upon such termination, Lessee shall restore the premises to substantially the same condition as existed prior to the installation of the ATM. After the premises are restored, Lessee and Lessor shall not have any responsibility to each other under the terms of the Lease Agreement.

9) If the whole of the Leased Premises, or such portion thereof as will make the Leased Premises unsuitable for use contemplated hereby, shall be taken under the power of eminent domain (including any conveyance in lieu thereof), then the term hereof shall cease as of the date possession thereof is taken by the condemnor, and rental payments shall be accounted for as between Lessor and Lessee as of that date.

10) All applications in connection with necessary utility services on the Leased Premises shall be made in the name of Lessee only, and Lessee shall be solely liable for utility charges as they become due, including those for electricity, gas, and telephone/data services. Lessor shall reasonably cooperate with Lessee's efforts in furtherance of this provision, including, but not limited to, promptly responding to any requests for information or access by a utility provider.

11) Lessee shall defend, indemnify and hold harmless Lessor from and against any claims, damages, or expenses (including reasonable attorney's fees), whether due to damage to the Leased Premises, claims for injuries to persons or property, or administrative or criminal action by governmental authority, where such claims, damages, or expenses result from the negligence or misconduct by Lessee, its agents, or employees. Lessor shall defend, indemnify and hold harmless Lessee from and against any claims, damages, or expenses (including reasonable attorney's fees) where such claims, damages, or expenses result from the negligence or misconduct by Lessor, its agents, employees or invitees.

12) Lessor hereby grants unto Lessee the option to extend the term of this Lease Agreement for an additional One-Five-year period commencing at the expiration of the primary term hereof at a Yearly rental amount of Twelve Dollars ($12.00). All payable Annually on or before the first day of each calendar month, provided Lessee shall provide to Lessor at

least ninety (90) days prior to the expiration of the primary term written notice of its intention to extend.

13) It is expressly understood and agreed that if any monthly installment of rent as herein called for shall remain overdue and unpaid for thirty (30) days, Lessor may, at its option, at any time during such default, declare this Lease Agreement terminated and canceled and take possession of the Leased Premises, and require the Lessee to remove the structure from the premises and restore the Leased Premises back to substantially the same condition as existed prior to the installation of the ATM.

14) If Lessee shall pay the rent and perform and observe all the other covenants and conditions to be performed and observed by it hereunder, Lessee shall at all times during the term hereof have the peaceable and quiet enjoyment of the premises without interference from Lessor or any person lawfully claiming through Lessor.

15) All notices provided for in this Lease Agreement shall be in writing and shall be deemed to have been given when sent by registered or certified mail addressed to Lessor at:

TOWN OF APEX
P.O. BOX 250
APEX, NC 27502

and to Lessee at:

State Employees' Credit Union
Attn: SVP, Facilities Management
PO BOX 26807
Raleigh, NC 27611

16) This Lease Agreement shall be construed and enforced in accordance with the laws of the State of North Carolina without regard to any conflict of laws provisions.

17) This Lease Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns. In addition, this Lease Agreement may be assigned by Lessee, without further consent or approval required, to a third party that is regularly in the business of operating ATMs.

18) This Lease Agreement contains the complete agreement of the parties regarding the terms and conditions of the lease of the premises, and there are no oral or written conditions, terms, warranties, understandings or other agreements pertaining thereto which have not been incorporated herein. This Lease Agreement may be modified only by written instrument duly executed by both parties or their respective successors in interest or assigns.

19) If any provision of this Lease Agreement shall be declared invalid or unenforceable, the remainder of this Lease Agreement shall continue in full force and effect.

20) Lessee, and any of its subcontractors under this Lease, shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify).

21) Lessee warrants and agrees that no labor supplied by the Lessee or the its subcontractors in the performance of this Lease shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

22) Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this Lease Agreement and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The Parties hereby consent to use electronic or digitized signatures in accordance with the Town of Apex's Electronic Signature Policy and intend to be bound by the Lease Agreement and any related documents. If electronic signatures are used the Lease Agreement shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

THIS SPACE INTENTIONALLY LEFT BLANK

In testimony whereof, the parties have caused this Lease Agreement to be executed as of the day and year first above written.

LESSOR:
Town of Apex

BY: _____
President

LESSEE:
State Employees' Credit Union

BY: Karen High
Senior Vice-President
Facilities Services

NORTH CAROLINA:
WAKE COUNTY:

This the 23 day of June, 2020, before me, Nakesha L Pierce a Notary Public, personally came Karen High, who, being duly sworn, says that she is Senior Vice-President, Facilities Services of State Employees' Credit Union and the said writing was signed and sealed by her on behalf of the said credit union by its authority duly given and the Senior Vice-President, Facilities Services acknowledged the said writing to be the act and deed of said credit union.

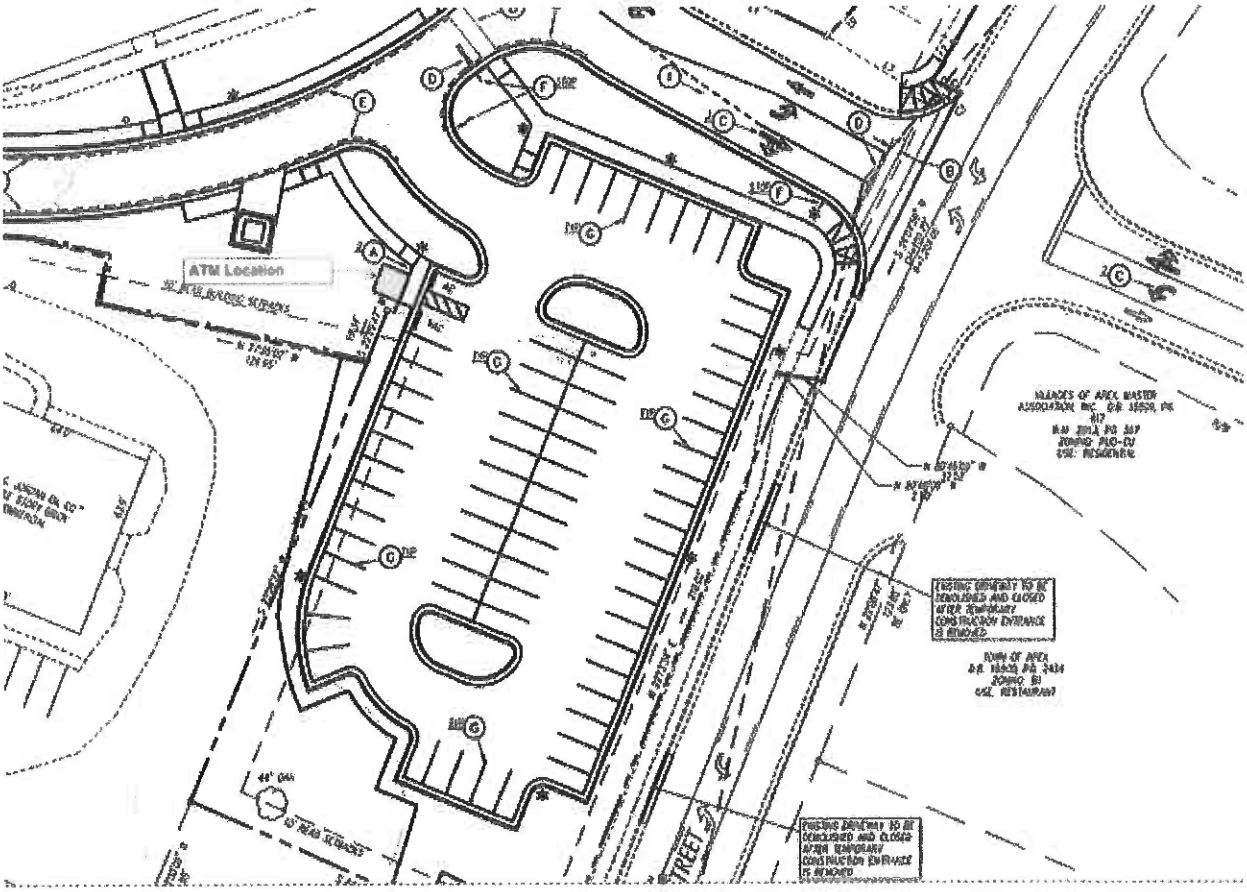
Witness my hand and notarial seal, this the 23 day of June, 2020.

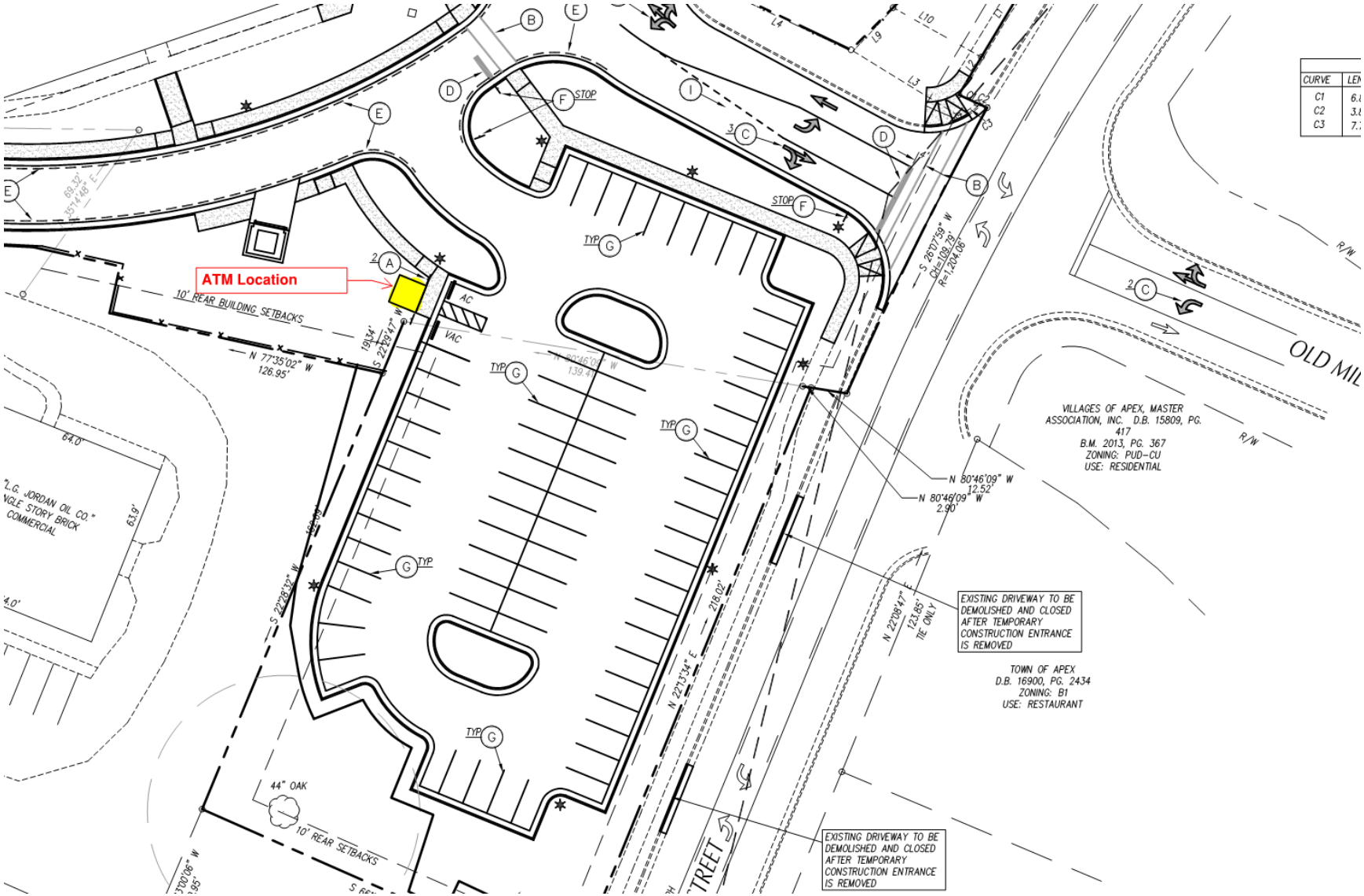
Nakesha L Pierce
NOTARY PUBLIC

My Commission Expires:
07/22/2023

NAKESHA L PIERCE NOTARY PUBLIC WAKE COUNTY, NC

Exhibit A




ATM Location
10' REAR BUILDING SETBACKS
N 77°35'02" W
126.95'
S 22°29'47" W
191.14'
AC
VAC
TYP
STOP
S 26°07'59" W
CH=109.79'
R=1,204.08'
N 80°46'09" W
12.52'
N 80°46'09" W
2.90'
VILLAGES OF APEX, MASTER ASSOCIATION, INC. D.B. 15809, PG. 417
B.M. 2013, PG. 367
ZONING: PUD-CU
USE: RESIDENTIAL
EXISTING DRIVEWAY TO BE DEMOLISHED AND CLOSED AFTER TEMPORARY CONSTRUCTION ENTRANCE IS REMOVED
TOWN OF APEX
D.B. 16900, PG. 2434
ZONING: B1
USE: RESTAURANT
N 22°08'47" E
123.85'
TIE ONLY
N 22°13'34" E
218.02'
S 22°28'32" W
183.30'
64.0'
63.9'
44" OAK
10' REAR SETBACKS
R/W
OLD MIL
TREET

RESOLUTION NO. 20-0721-08

RESOLUTION OF THE APEX TOWN COUNCIL AUTHORIZING THE LEASE OF A PORTION OF TOWN PROPERTY TO NC SECU FOR USE AS AUTOMATED TELLER MACHINE (ATM) SITE

WHEREAS, the Town of Apex ("Town") owns property which is used primarily for parking and is located at the corner of Mason Street and Old Mill Village Drive and is more particularly described as PIN # 0742-52-5165 by the Wake County Revenue Department ("Property"); and

WHEREAS, the North Carolina State Employees' Credit Union ("NC SECU") desires to install and operate an Automated Teller Machine (ATM) upon a portion of the Property; and

WHEREAS, the Town has received an offer from NC SECU to lease a portion of the Property for a term of five years, with the option to renew the lease for an additional term of five years; and

WHEREAS, in consideration of leasing a portion of the Property as described in the proposed lease, NC SECU has agreed to install, operate, and maintain an ATM for use by the public and pay annual rent of $12.00 to the Town; and

WHEREAS, North Carolina General Statute § 160A-272 authorizes the Town to enter into leases of up to 10 years upon resolution of the Town Council adopted at a regular meeting after 10 days' public notice; and

WHEREAS, the required notice has been published and the Town Council is convened in a regular meeting.

NOW, THEREFORE, be it resolved by the Town Council of the Town of Apex as follows:

The Town Council hereby approves the lease of a portion of the Property described above and in the proposed lease to NC SECU for five years, with the lessee holding a right to renew for an additional five-year term, and authorizes and directs the Town Manager to execute the lease and any instruments necessary to the lease. This Resolution is effective upon adoption.

Motion made by Council Member _____

Motion Seconded by Council Member _____

Approved by a vote of ____ to ____.

Adopted by the Apex Town Council this the 21st day of July 2020.

By:_____
Jacques K. Gilbert, Mayor

ATTEST:

_____
Donna B. Hosch, Town Clerk, MMC, NCCMC

PUBLIC NOTICE

LEASE OF TOWN PROPERTY FOR USE AS AN ATM SITE

The Town of Apex has been offered $12.00 per year to lease out for an automated teller machine (ATM) installation and operation a portion of Town owned land located at the corner of Mason Street and Old Mill Village Drive in the parking lot that will be adjacent to the future Town of Apex Senior Center, being the Wake County Revenue Department tax parcel designated as PIN# 0742525165.

The Town intends to lease the property to the North Carolina State Employees' Credit Union (NC SECU) for a term of five years; NC SECU will also have the option to renew the lease for one additional term of five years. In consideration of the lease, NC SECU will install an ATM, repair and/or maintain the parking lot area on or immediately surrounding the leased premises as described in the lease, and will pay the city an annual rent of $12.00. If NC SECU renews the lease, the annual rent during the second term will be $12.00. The proposed lease, which includes additional detailed terms, may be viewed and a copy obtained at the Town of Apex Town Clerk's Office at 73 Hunter St., Apex, NC 27502.

All persons interested in this lease are invited to attend the regular meeting of the Town Council to be held in the Town Council Chambers, Town Hall, 73 Hunter St., Apex N.C. 27502 at 6:00 P.M., on Tuesday, July 21, 2020. At that time the Town Council intends to authorize by resolution the lease of the property described above.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21, 2020

Item Details

Presenter(s): Eric Neumann
Department(s): Electric Utilities

Requested Motion

Motion to approve and authorize the Town Manager to execute the same for an Encroachment Agreement and a Utility Relocation Agreement between the Town and NCDOT. Remove overhead fiber line and relocate to underground.

Approval Recommended?

Yes

Item Details

Removal of overhead fiber line and relocating to underground at the NC55 and I540 overpass. Overhead facilities are in conflict with proposed bridge and need to be relocated due to project R-2721A. Approximately 732' of underground proposed installation of 4" conduit with fiber line.

Attachments

- NCDOT Utility Relocation Agreement
- Cost Exhibits
- NCDOT Encroachment Agreement
- Storm Water Compliance Certification

ROUTE I540 / NC55 | STATE PROJECT R-2721A | FEDERAL PROJECT 37673.5.TA2 | STATE OF NORTH CAROLINA | COUNTY Wake

DEPARTMENT OF TRANSPORTATION
-AND-
Town of APEX North Carolina
PO Box 250, Apex NC 27502

RIGHT OF WAY
ENCROACHMENT AGREEMENT
INTERSTATE AND OTHER CONTROLLED
ACCESS HIGHWAYS

THIS AGREEMENT, made and entered into this the _____ day of _____ , 20 _____ , by and between the Department of Transportation, party of the first part; and Town of Apex party of the second part,

W I T N E S S E T H

THAT WHEREAS, the party of the second part desires to encroach on the right of way of the public road designated as Route(s) As Above , located East Williams Overpass

with the construction and/or erection of: Removal of Overhead Fiber Line and relocating to underground. Overhead facilities are in conflict with proposed bridge and need to be relocated due to project R-2721A. Approximately 732' of underground proposed installation of 4" conduit with Fiber

WHEREAS, it is to the material advantage of the party of the second part to effect this encroachment, and the party of the first part in the exercise of authority conferred upon it by statute, is willing to permit the encroachment within the limits of the right of way as indicated, subject to the conditions of this agreement;

NOW, THEREFORE, IT IS AGREED that the party of the first part hereby grants to the party of the second part the right and privilege to make this encroachment as shown on attached plan sheet(s), specifications and special provisions which are made a part hereof upon the following conditions, to wit:

That the installation, operation, and maintenance of the above described facility will be accomplished in accordance with the party of the first part's latest POLICIES AND PROCEDURES FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHTS-OF-WAY, and such revisions and amendments thereto as may be in effect at the date of this agreement. Information as to these policies and procedures may be obtained from the Division Engineer or State Utility Agent of the party of the first part.

That the said party of the second part hereby agrees that access for servicing its facilities will be limited to access via (a) frontage roads where provided, (b) nearby or adjacent public roads and street, or (c) trails along or near the highway right of way lines, connecting only to an intersecting road; from any one or all of which entry may be made to the outer portion of the highway right of way. The party of the second part's rights of access to the through-traffic roadways and ramps shall be subject to the same rules and regulations as apply to the general public, except if an emergency situation occurs, and the usual means of access for service operation as herein provided will not permit the immediate action required by the party of the second part in making emergency repairs as required for the safety and welfare of the public, the party of the second part shall have a temporary right of access to and from the through-traffic roadways and ramps as necessary to accomplish the required emergency repairs, provided that the party of the second part complies with the regulations established by the party of the first part for policing and control to protect the highway users.

That the said party of the second part binds and obligates himself to install and maintain the encroaching facility in such safe and proper condition that it will not interfere with or endanger travel upon said highway, nor obstruct nor interfere with the proper maintenance thereof, to reimburse the party of the first part for the cost incurred for any repairs or maintenance to its roadways and structures necessary due to the installation and existence of the facilities of the party of the second part, and if at any time the party of the first part shall require the removal of or changes in the location of the said facilities, that the said party of the second part binds himself, his successors and assigns, to promptly remove or alter the said facilities, in order to conform to the said requirement, without any cost to the party of the first part.

That the party of the second part agrees to provide during construction and any subsequent maintenance proper signs, signal lights, flagmen and other warning devices for the protection of traffic in conformance with the latest Manual on Uniform Traffic Control Devices for Streets and Highways and Amendments or Supplements thereto. Information as to the above rules and regulations may be obtained from the Division Engineer of the party of the first part.

That the party of the second part hereby agrees to indemnify and save harmless the party of the first part from all damages and claims for damage that may arise by reason of the installation and maintenance of this encroachment.

That the party of the second part agrees to restore all areas disturbed during installation and maintenance to the satisfaction of the Division Engineer of the party of the first part. The party of the second part agrees to exercise every reasonable precaution during construction and maintenance to prevent eroding of soil; silting or pollution of rivers, streams, lakes, reservoirs, other water impoundments, ground surfaces or other property; or pollution of the air. There shall be compliance with applicable rules and regulations of the North Carolina Division of Environmental Management, North Carolina Sedimentation Control Commission, and with ordinances and regulations of various counties, municipalities and other official agencies relating to pollution prevention and control. When any installation or maintenance operation disturbs the ground surface and existing ground cover, the party of the second part agrees to remove and replace the sod or otherwise reestablish the grass cover to meet the satisfaction of the Division Engineer of the party of the first part.

That the party of the second part agrees to assume the actual cost of any inspection of the work considered to be necessary by the Division Engineer of the party of the first part.

That the party of the second part agrees to have available at the construction site, at all times during construction, a copy of this agreement showing evidence of approval by the party of the first part. The party of the first part reserves the right to stop all work unless evidence of approval can be shown.

Provided the work contained in this agreement is being performed on a completed highway open to traffic; the party of the second part agrees to give written notice to the Division Engineer of the party of the first part when all work contained herein has been completed. Unless specifically requested by the party of the first part, written notice of completion of work on highway projects under construction will not be required.

That in the case of noncompliance with the terms of this agreement by the party of the second part, the party of the first part reserves the right to stop all work until the facility has been brought into compliance or removed from the right of way at no cost to the party of the first part.

That it is agreed by both parties that this agreement shall become void if actual construction of the work contemplated herein is not begun within one (1) year from the date of authorization by the party of the first part unless written waiver is secured by the party of the second part from the party of the first part.

During the performance of this contract, the second party, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor"), agrees as follows:

a. Compliance with Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

b. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to,

   (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
   (2) cancellation, termination or suspension of the contract, in whole or in part.

f. Incorporation of Provisions: The contractor shall include the provisions of paragraphs "a" through "f" in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

R/W (162) : Party of the Second Part certifies that this agreement is true and accurate copy of the form R/W (162) incorporating all revisions to date.

IN WITNESS WHEREOF, each of the parties to this agreement has caused the same to be executed the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY: _____
ASSISTANT MANAGER OF RIGHT OF WAY

ATTEST OR WITNESS:

_____ Town of Apex

_____ _____

_____ Town Manager
Second Party

INSTRUCTIONS

When the applicant is a corporation or a municipality, this agreement must have the corporate seal and be attested by the corporation secretary or by the empowered city official, unless a waiver of corporate seal and attestation by the secretary or by the empowered City official is on file in the Raleigh office of the Manager of Right of Way. In the space provided in this agreement for execution, the name of the corporation or municipality shall be typed above the name, and title of all persons signing the agreement should be typed directly below their signature.

When the applicant is not a corporation, then his signature must be witnessed by one person. The address should be included in this agreement and the names of all persons signing the agreement should be typed directly below their signature.

GENERAL REQUIREMENTS

1. Wherever possible, freeway crossing should be parallel to and within the prevailing right of way of intersecting roads.
2. Crossings should be as near as possible normal to the center line of the freeway.
3. Parallel encroachments will not be permitted except outside of control of access lines.
4. The Department's Division Engineer should be given notice by the applicant prior to actual starting of installations included in this agreement.

For Overhead Wire Lines

1. Minimum vertical clearances of overhead wires above all roadways must conform to clearances set out in the National Electric Safety Code.
2. Supporting poles or structures must be clear of control of access lines, and be at least 30 feet clear of the edge of shoulders of through lanes and 20 feet clear of the shoulders of interchange ramps.

For Underground Utilities

1. Open-cut installation for crossings will be permitted only when a highway project is in rough grading stage prior to paving. Generally, on rough grading projects, open-cut will not be permitted in fills of over 10 feet in depth and back filled material must be compacted to maximum density meeting Department requirements.
2. Encasements under an existing freeway must be installed by means of tunneling, jacking, or boring and any voids outside the encasement must be filled with lean concrete grout and the ends of encasements be satisfactorily closed.
3. In cut section, encasement must extend continuously from ditch line to ditch line and in fill section, encasement must extend continuously five feet beyond toe to slopes.
4. Vents for encasement should be extended to the right of way line or as otherwise required by the Department.
5. All pipe encasements as to material and strength shall meet the standards and specifications of the Department.
6. When trenching is carried down cut slopes, excavation must be backfilled to maximum density and the disturbed portion of the slope be stabilized and sodded to the satisfaction of the Department's Engineer.

Plans

This Encroachment agreement must be accompanied, in the form of an attachment, by a plan showing the following:

1. All roadways and ramps
2. Right of way and control of access lines
3. Drainage structures or bridges if affected by encroachment
4. Location of the proposed encroachment
5. Length, size and type of encroachment
6. Dimensions, showing the distance from the encroachment to roadways, shoulders, structures, etc.
7. Location by highway survey station number. If station number cannot be obtained, location should be shown by distance from some identifiable point, such as a bridge, road intersection, etc. (To assist in preparation of the encroachment plan, Department roadway plans may be seen at the various Highway Division Offices or at the Raleigh Office.)

All encroachment agreements involving the crossing of the right of way, roadways and/or ramps of a freeway, must be accompanied, in the form of an attachment, by a profile showing the following information:

1. The profile should extend from right of way line to right of way line and show all slopes (cut or fill), ditches, shoulders, pavements, medians, etc.
2. A vertical dimension from bottom of road ditches and from surface of pavement to encroaching structures.
3. Length, size, and type of encasement where required.
4. Notation of portion to be installed by open-cut.
5. For underground encroachments involving encasements that must be vented, the location of vents must be shown.
6. Method of installation must be shown in detail on either the plan or profile.
7. Any attachment to a bridge or other drainage structure must be approved by the Department's Bridge Design Unit.
8. Where profile is required, it should be on same sheet with the plan.

SPECIAL PROVISIONS OR SPECIFICATIONS

Any special provisions or specifications as to the performance of the work or the method of construction that may be required by the Department must be shown on a separate sheet attached to encroachment, provided that such information cannot be shown on the plan and profile sheet.

Telecommunications Resource Management, Inc
Phone: (919) 779-0776
Fax: (919) 779-6061
156 Annaron Court
Raleigh, NC 27603

Quote
No.: **16394**
Date: 6/30/2020

Prepared for:
Erika Sacco (919) 249-3312
Town of Apex
P.O. Box 250
Apex, NC 27502 U.S.A.

Prepared by: Don Rosa
Account No.: 616
Phone: (919) 249-3310
Fax: (919) 249-3313
Job: Hwy 55 Holly Springs Fiber Splice

Quantity	Part Number	Description	UOM	Sell	Total
2	FBRTBDXXNC6X	Fiber Splice Enclosure	EA	$239.99	$479.98
4	CL-B30-01	Cablelok Seal for Splice Enclosure	EA	$15.99	$63.96
1	SUMI FPS-1-BX	Splice Protection Sleeves 60mm 500PK	EA	$195.00	$195.00
40.00	TECHLABOR	Technical Labor	EA	$110.00	$4,400.00

Your Price:	**$5,138.94**
Sales Tax	$372.57
SubTotal:	**$5,511.51**
Total:	**$5,511.51**

Prices are firm until 7/30/2020 Terms: Net 30

Prepared by: Don Rosa, drosa@trminc.net **Date:** 6/30/2020

Scope of Work:
Splice 72 strand fiber in two locations where it is rerouted for the new 540 project on old 55 to Holly Springs.

Accepted by: _____ **Date:**_____

Town of Apex
Electrical Materials List

Construction Point								I540/NC55
Construction Point	**In:**	**Re:**	**Tr:**	**LABOR**	**Install Price**	**Remove Price**	**Transf. Price**	**Total**
1	732			TR36	5.90			4,318.80
	732			COND-PVC4	1.25			915.00
	732			MARK TAPE	0.21			153.72
	782			FIBER-IN-COND	0.35			656.88
	832	660		72 COUNT FIBER	0.60	0.84		554.40
	2			RISER-POL-UH	132.14			264.28
				MATERIALS				
	832			72 COUNT FIBER	1.35			1,123.20
	732			4" PVC	2.47			1,808.04
	6			2" UGUARD (60')	22.75			136.50
								9,930.82

* * * *

NOW, THEREFORE, in order to facilitate the orderly and expeditious relocation of the said facilities of COMPANY, the DEPARTMENT and the COMPANY have agreed as follows:

1. That the scope, description, and location of work to be undertaken by the COMPANY are as follows

Removal of overhead fiber line and relocating to underground. Overhead facilities are in conflict with proposed bridge and need to be relocated due to project R-2721A. Approximately 732' of underground proposed installation of 4" conduit with fiber line.

2. That any work performed under this agreement shall comply with DEPARTMENT's " POLICIES AND PROCEDURES FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHTS OF WAY" dated January 1, 1975, and such amendments thereto as may be in effect at the date of this agreement. The work to be performed by the COMPANY shall conform with Federal Highway Administration's Federal-Aid Policy Guide, Subchapter G, Part 645, Subpart A hereinafter referred to as FAPG dated December 9, 1991, and such amendments thereto as may be in effect at the date of this agreement. The provisions of said FAPG and amendments thereto are incorporated in this agreement by reference as fully as if herein set out. Any work performed under this agreement not in compliance with FAPG shall constitute unauthorized work and the DEPARTMENT shall be relieved of participating in the costs of such unauthorized work unless such work is done pursuant to a supplemental agreement attached to and made a part hereof.

3. That the COMPANY will prepare an estimate, broken down as to estimated cost of labor, construction overhead, materials and supplies, handling charges, transportation and equipment, rights of way, preliminary engineering and construction engineering, including an itemization of appropriate credits for salvage and betterments, and accrued depreciation all in sufficient detail to provide the DEPARTMENT a reasonable basis for analysis. Unit costs, such as broad gauge units of property, may be used for estimating purposes where the COMPANY uses such units in its own operations. The COMPANY will also prepare plans, sketches or drawings showing their existing facilities, temporary and permanent changes to be made with reference to the DEPARTMENT's new right of way using appropriate nomenclature, symbols, legend, notes, color coding or the like. The before mentioned estimate and plans are attached hereto and made a part hereof. The DEPARTMENT will not reimburse the COMPANY for any utility relocations or changes not necessitated by the construction of the highway project, nor for changes made solely for the benefit or convenience of the COMPANY, its contractor, or a highway contractor.

4. That the DEPARTMENT's authority, obligation, or liability to pay for relocations as set forth in this agreement is based on the COMPANY having a right of occupancy in its existing location by reason of the fee, an easement or other real property interest, the damaging or taking of which is compensable in eminent domain.

5. That payment for all work done hereunder shall be made in accordance with the requirements of FAPG unless payment is being made pursuant to a supplemental agreement attached to and made a part of this agreement.

6. That the construction work provided for in this agreement will be performed by the **method** or **methods** as specified below:

☑ **BY COMPANY'S REGULAR FORCE**: The COMPANY proposes to use its regular construction or maintenance crews and personnel at its standard schedule of wages and working hours in accordance with the terms of its agreement with such employees.

☐ **BY EXISTING WRITTEN CONTINUING CONTRACT**: The COMPANY proposes to use an existing written continuing contract under which certain work as shown by the COMPANY's estimate is regularly performed for the COMPANY and under which the lowest available costs are developed.

☐ **BY CONTRACT**: The COMPANY does not have adequate staff or equipment to perform the necessary work with its own forces. The COMPANY proposes to award a contract to the lowest qualified bidder who submits a proposal in conformity with the requirements and specifications for the work to be performed as set forth in an appropriate solicitation for bids.

7. a. It is contemplated by the parties hereto that the construction of this State Highway Project will begin on or about the 10 day of August , 2020 .

b. Based on the best information available at the present time to the COMPANY, indicate applicable paragraph below:

☑ Materials are available and it is expected that work will be complete prior to highway construction.

☐ All work will take place during highway construction and arrangements for said work will be coordinated with highway construction operations at preconstruction conference.

☐ Work will begin promptly upon notification by DEPARTMENT; however, it is not expected to be complete prior to highway construction. Any remaining work will be coordinated with highway construction operations at preconstruction conference.

☐ Other (Specify)

8. That the method used by the COMPANY in developing the relocation costs shall be as indicated by Paragraph (a), (b), or (c) as follows:

a. ☐ **Actual direct and related indirect costs accumulated in accordance with a work order accounting procedure prescribed by the applicable Federal or State regulatory body.**

b. ☑ **Actual direct and related indirect costs accumulated in accordance with an established accounting procedure developed by the COMPANY and approved by the DEPARTMENT.**

c. ☐ **On a lump-sum basis where the estimated cost to the DEPARTMENT does not exceed $100,000.00. Except where unit costs are used and approved, the estimate shall show such details as man-hours by class and rate; equipment charges by type, size, and rate; materials and supplies by items and price; and payroll additives and other overhead factors.**

9. Indicate if (a) or (b) is applicable:

a. ☑ **That the replacement facility is not of greater functional capacity or capability than the one it replaces, and includes no COMPANY betterments.**

b. ☐ **That the replacement facility involves COMPANY betterments, or is of greater functional capacity or capability than the one it replaces.**

10. That the total estimated cost of the work proposed herein, including all cost to the DEPARTMENT and COMPANY less any credit for salvage, is estimated to be --------- $15,442.33

The estimated non-betterment cost to the DEPARTMENT, including all cost less any credits for salvage, betterments, accrued depreciation and additional work done by the COMPANY will be ---------- $15,442.33

The estimated cost to the COMPANY including betterments, and any additional work done by the COMPANY will be ---------- $_____

(*The above costs shall be supported by attached estimate and plans*)

11. That in the event it is determined there are changes in the scope of work, extra work, or major changes from the statement of work covered by this agreement, reimbursement shall be limited to costs covered by a modification of this agreement or a written change or extra work order approved by the DEPARTMENT.

12. Periodic progress billings of incurred costs may be made by COMPANY to the DEPARTMENT not to exceed monthly intervals; however, total progress billing payments shall not exceed 95% of the approved non-betterment estimate. Progress billing forms may be obtained from the Area Utility Agent.

13. One final and detailed complete billing of all cost shall be made by COMPANY to the DEPARTMENT at the earliest practicable date after completion of work and in any event within six months after completion of work. The statement of final billing shall follow as closely as possible the order of the items in the estimate portion of this agreement.

14. That the DEPARTMENT shall have the right to inspect all books, records, accounts and other documents of the COMPANY pertaining to the work performed by it under this agreement at any time after work begins and for a period of 3 years from the date final payment has been received by the COMPANY.

15. That the COMPANY obligates itself to erect, service and maintain the facilities to be retained and installed over and along the highway within the DEPARTMENT right of way limits in accordance with the mandate of the Statute and such other laws, rules, and regulations as have been or may be validly enacted or adopted, now or hereafter.

16. That if, in the future, it becomes necessary due to highway construction or improvement to adjust or relocate utilities covered in this agreement being relocated at DEPARTMENT expense that are crossing or otherwise occupying highway right of way, then non-betterment cost of same will be that of the DEPARTMENT.

17. That if, at any time, the DEPARTMENT shall require the relocation of or changes in the location of the encroaching facilities covered in this agreement being relocated at COMPANY expense, the COMPANY binds itself, its successors and assigns, to promptly relocate or alter the facilities, in order to conform to the said requirements, without any cost to the DEPARTMENT.

18. That the COMPANY agrees to relinquish their rights in that portion of right of way vacated by their existing facilities now absorbed within DEPARTMENT right of way.

19. Proper temporary and permanent measures shall be used to control erosion and sedimentation in accordance with all local, State and Federal regulations.

20. The COMPANY agrees to comply with the environmental rules and regulations of the State of North Carolina. Violation to the NC Sedimentation Pollution Control Act, Clean Water Act, NC Coastal Management Act, or other environmental commitment outlined in the project permits may result in work stoppage, penalties and/or construction delays.

21. The COMPANY agrees to comply with Buy America. United States Codes (USC) 313 and Code of Federal Regulations 23 CFR 635.410: Requires the use of domestic steel and iron in all federally funded construction projects.

IN W ITNESS W HEREOF, t he p arties h ereby h ave a ffixed t heir names b y t heir duly authorized officers the day and year first above written.

DEPARTMENT OF TRANSPORTATION

BY: _____

AREA UTILITY AGENT

ATTEST OR WITNESS

_____

(TITLE)

_____

(NAME OF COMPANY)

BY: _____

TITLE: _____

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

National Pollutant Elimination System (NPDES)

Stormwater Permit Compliance Certification

I Drew Havens , a duly authorized representative of the Town of Apex, an industrial/commercial/ residential facility requesting attachment to a North Carolina Department of Transportation highway drainage system at E Williams St. in

Wake County, do hereby certify the following:

Check and circle what applies

☒ **The Industrial / Commercial / Residential facility does not require an NPDES stormwater permit.**

☐ **The Industrial / Commercial / Residential facility does require an NPDES stormwater permit. The permit has been obtained, and a Stormwater Pollution Prevention Plan (SPPP) is in place.**

I understand if the Department of Transportation determines the facility is not in compliance with NPDES stormwater permit requirements, the Department will report the noncompliance to the

N.C. Division of Water Quality. I also understand that falsification of this certification may result in penalty of law against the facility and me as prescribed in the North Carolina General Statues.

Signature: _____

Date: _____

Note: If the applicant has a question as to whether an NPDES stormwater permit is required, he or she may contact the N.C. Division of Water Quality in Raleigh at (919) 733-5083 (ask for Stormwater and General Permits Unit).

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA
Meeting Date: July 21,2020

Item Details

Presenter(s): Drew Havens, Town Manager
Department(s): Administration

Requested Motion

Motion to approve an ordinance to amend the Apex Town Code Chapter 20 related to Towing.

Approval Recommended?

Yes

Item Details

Following discussions by the Planning Committee, the attached ordinance will regulate towing from property used for non-residential and multi-family residential purposes within the Town of Apex. The proposed ordinance requires the property owners to provide notice of potential towing by signage meeting certain criteria. All tow storage lots for tows regulated by the proposed ordinance must be located within a ten mile radius of Apex Town Hall.

Attachments

- Proposed Ordinance

ORDINANCE NO. 2020-0721-17

AN ORDINANCE TO AMEND APEX TOWN CODE CHAPTER 20 c

BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX AS FOLLOWS:

Section 1. That Chapter 20 of the Town of Apex Code of Ordinances is hereby amended with the addition of a new Article XI to read as follows:

ARTICLE XI. TOWING FROM PRIVATE LOTS

Sec. 20-205. Findings and intent.

(a) The Town Council of the Town of Apex has a significant governmental interest in protecting the health, safety, and welfare of the general public and preserving the public order.

(b) North Carolina General Statute 160A-174 allows a city by ordinance to define, prohibit, regulate, or abate acts, omissions, or conditions, detrimental to the health, safety, or welfare of the public, and the peace and dignity of the city.

(c) Some practices related to the non-consensual towing of motor vehicles from private property have resulted in the public and members of the towing industry being exposed to harm.

(d) The Apex Town Council desires to minimize and control the harmful and adverse effects that occur during the non-consensual towing of motor vehicles.

Sec. 20-206 Applicability.

The provisions of this Article shall apply to any private property used for non-residential and multi-family residential purposes.

Sec. 20-207 Exceptions.

Notwithstanding any other provision of this article, no notice shall be required for the towing or removal of a vehicle (i) if the vehicle obstructs adequate ingress and egress, or (ii) if the vehicle has been left on private residential property for a period of time greater than two (2) hours, (iii) if the vehicle is removed pursuant to N.C.G.S. §25-9-609, (iv) if the vehicle tow is initiated by the Town of Apex pursuant to Chapter 20, Article III of the Apex Town Code, or (v) if the vehicle is being removed pursuant to the direction of a law enforcement officer or other officer in accordance with the provisions of this Code or state law.

Sec. 20-208 Notice required.

(a) It shall be unlawful to tow or remove a vehicle which is parked on private property without the permission of the owner or lessee of that private property unless notice in accordance with the provisions of this section is posted on the private property from which the towing or removal is made. Such notice shall fulfill the following requirements:

(1) A notice, in the form of a sign structure, at least twenty-four (24) inches by twenty-four (24) inches in size, shall be prominently placed on the private property at each access or curb cut allowing vehicular access to the property, no greater than five (5) feet from the street right-of-way line. If there are no curb or access barriers, signs shall be posted not less than one (1) sign each fifty (50) feet of the frontage to the public street. The maximum size for any sign shall be four (4) square feet.

(2) The notice shall clearly display the following:

a. In not less than one-and one-half (1½) inch high letters on a contrasting background, the words "tow-away" or "tow-away zone" or "towing enforced," or a similar phrase.

b. In not less than one-inch high letters on a contrasting background, a statement indicating that parking by unauthorized vehicles is prohibited by the use of a phrase such as "private property", "leased parking", "no parking", "parking for customers only", "parking for residents only", or a similar phrase. If parking by unauthorized vehicles is not prohibited on a twenty-four-hour continuous basis, the days of the week and hours of the day during which unauthorized parking is prohibited shall be posted.

c. If the property owner adopts a policy where the vehicles are subject to immediate towing when the vehicle operator steps off the property immediately after conducting business on the property, the signage shall also depict the phrase "If you walk-off this property, you are subject to being towed. This includes patrons who are frequenting business on this property" or similar language which conveys this message in one-inch high letters on a contrasting background.

d. In not less than one-half (½) inch high letters on a contrasting background, the name and telephone number of the towing and storage company at which a person available to release the vehicle that has been towed, removed, or immobilized may be contacted at any time. Phone calls to the telephone number must be answered by a person or a call back must be initiated, by a person, within fifteen (15) minutes of a message being left on voice mail or answering machine type device. A person with the authority and ability to release the vehicle must respond to the location of the vehicle within thirty (30) minutes of a call being answered or voice message, when applicable, being returned.

e. In not less than one-half (½) inch high letters on a contrasting background, the maximum fees and charges for towing, hooking up but not towing, and storage; a statement that debit and credit cards may be

used for payment; and the amount or percent of additional charges which may be added for use of debit and credit cards.

(b) The sign structure displaying the required notices shall be permanently installed with the bottom of the sign not less than four (4) feet above ground level and not more than five (5) feet above ground level. Pedestrian safety should be taken into consideration when locating freestanding signs.

Sec. 20-209 Towing Receipt Required, Fees Reported to the Police Department.

(a) The towing or storage firm shall provide a receipt for each payment at the time the payment is made. Each receipt shall be legible and shall contain the following information:

(1) The name address and telephone number of the tow company.

(2) Sufficient information to allow the employee who towed the vehicle to be identified.

(3) A total fee with a breakdown of towing and storage fees.

(4) A clear and accurate reason for the towing and the date and time of the towing. Receipts shall not use descriptions that might cause individuals to associate private property towing with municipal action.

(b) The fees referred to in this section shall be payable by cash, debit card and at least two (2) major national credit cards. Failure to accept credit or debit cards for payment is a violation of this section and is punishable as a misdemeanor.

(c) The Tow Operator must provide a fee schedule to the Police department. Any changes in fees must be provided to the police and posted on the signs, required in Section 20-208 at least 24 hours before they go into effect.

Sec. 20-210 Report to police department.

When towing a vehicle pursuant to this article, the tow truck operator who is removing the vehicle shall report by telephone to the Apex Police Department a license tag number, description of the vehicle, the location that the vehicle is being towed from, its intended storage location, and the contract information for the person from whom the vehicle owner may retrieve the vehicle. This report to the police department shall be made before the tow truck towing the vehicle leaves the private property from which the vehicle is towed.

Sec. 20-211 Release prior to tow.

If, prior to the tow truck and vehicle having left the private property at which the vehicle was parked, the owner or operator or other person able to move the vehicle returns to the property, the tow truck operator shall release the vehicle to that person upon payment of the release fee.

Sec. 20-212 Regulations for tow storage lots.

(a) Tow operators are required to provide the location of their tow storage lots to the Apex Police Department on an annual basis.

(b) The tow storage lot must be located within ten (10 mile radius of Apex Town Hall.

(c) Tow storage lots must be clearly signed. The lot shall be secured and lighted in such a manner as to keep the vehicle safe from break-ins or damage while in storage. A fenced storage yard with average surface level lighting sufficient for transacting nighttime business shall be deemed compliant with this section.

Sec. 20-213 Penalties.

(a) Any violation of the provisions of this article or a failure to comply with any of its requirements shall subject the offender to a civil penalty as follows:

(1) In the amount of fifty dollars ($50.00) for the first offense;

(2) In the amount of one hundred dollars ($100.00) for the second offense within a twelve-month period; and

(3) In the amount of two hundred fifty dollars ($250.00) for each offense when the offense is the third or subsequent offense with a twelve-month period.

(b) This article may also be enforced by an appropriate equitable action.

(c) Any one, all, or any combination of the foregoing penalties and remedies may be used to enforce this article.

Section 2. It is the intention of the governing body, and it is hereby ordained that the provisions of this ordinance shall become and be made a part of the Code of Ordinances and the sections of this ordinance may be renumbered to accomplish such intention.

Section 3. Severability, Conflict of Laws. If this ordinance or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

Section 4. Effective Date. This ordinance shall be effective upon adoption.

Introduced by Council Member: _____

Seconded by Council Member: _____

This the 21st day of July 2020.

_____
Jacques K. Gilbert
Mayor

ATTEST:

_____
Donna B. Hosch, MMC, NCCMC
Town Clerk

APPROVED AS TO FORM:

_____
Laurie L. Hohe
Town Attorney

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: July 21, 2020

Item Details

Presenter(s): Donna B. Hosch, Town Clerk

Department(s): Office of the Town Clerk

Requested Motion

Motion to approve Apex Tax Report

Approval Recommended?

Yes

Item Details

In regular session on July 6, 2020, the Wake County Board of Commissioners approved the Apex Tax Report.

Attachments

- Tax Report

Approved by: Kim Lorbacher

Tax Committee Meeting: 06/18/2020

Board of Commissioners Meeting: 07/06/2020

TO: Wake County Board of Commissioners and Town Board of Apex

FOR: Consideration of Requests for Exemptions

Item #	Taxpayer(s)	Description Jurisdiction	Account # / Year For Payment Status	Value Appealed	Appeal/Request Type	Recommendation
16699	CARIELLO HOLDINGS LLC 606 TORCASTLE CIR CARY NC 27513-9739	3701 GREEN LEVEL WEST RD APEX	0000133625 2020 Not Billed	$3,530,732	Exemption Educational Purpose 105-278.4	Denied - Not a non-profit purpose

This List Requires Board Action

Tax Committee Members: Natasha Baldwin, City Of Raleigh
Kim Lorbacher, Wake County Finance
Jessica Murphy-Rhem, Town Of Cary

MKD

Marcus Kinrade, Tax Administrator

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING
Meeting Date: July 21, 2020

Item Details

Presenter(s): Sarah Van Every, Senior Planner
Department(s): Planning and Community Development

Requested Motion

Public Hearing and possible motion to approve Rezoning Application #20CZ05 West Village PUD Amendment. The applicant, Josh Decker, McAdams Company, seeks to rezone approximately 35.36 acres located at 2412 Kelly Road (PIN 0731331798) from Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33) to Planned Unit Development-Conditional Zoning (PUD-CZ).

Approval Recommended?

The Planning and Community Development Department recommends approval.

The Planning Board held a Public Hearing on July 13, 2020 and unanimously recommended approval of the rezoning.

Item Details

Attachments

- Vicinity Map
- Application
- Staff Report

All property owners within three hundred (300) feet of this rezoning have been notified per UDO Sec. 2.2.11 *Public Notification*.

BACKGROUND INFORMATION:

Location: 2412 Kelly Road
Applicant/Owner: Josh Decker, McAdams Company/SM Raleigh, LLC

PROJECT DESCRIPTION:

Acreage: 35.36 ± acres
PIN: 0731331798
Current Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)
Proposed Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ)
2045 Land Use Map: Medium Density Residential and Mixed Use: High Density Residential/Office Employment/Commercial Services
Town Limits: Within Corporate limits

Adjacent Zoning & Land Uses:

	Zoning	Land Use
North:	Rural Residential (RR)	Single-family Residential
South:	Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)	Single-family Residential (West Village PUD)
East:	Residential Agricultural (RA); Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)	Single-family Residential (West Village PUD)
West:	Rural Residential (RR)	Single-family Residential (Westwinds Subdivision)

EXISTING CONDITIONS:

The subject property is located west of Kelly Road, north of Old US 1, and south of Southwinds Run. The property is currently under construction for the development of West Village PUD.

NEIGHBORHOOD MEETING:

The applicant conducted a neighborhood meeting on April 22, 2020. The neighborhood meeting report is attached.

WCPSS COORDINATION:

This rezoning was submitted prior to the agreement with the Wake County Public School System to provide a Letter of Impact for rezonings allowing residential development.

2045 LAND USE MAP:

The 2045 Land Use Map identifies the property subject to this rezoning as Medium Density Residential and Mixed Use: High Density Residential/Office Employment/Commercial Services. The proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) is consistent with that land use classification.

PLANNED UNIT DEVELOPMENT:
The applicant is proposing the following changes (shown in bold) with this PUD amendment:

Change to Section 10: Natural Resource and Environmental Data, Section D. Landscaping Buffering and Screening.

Current Language:

This PUD will be subject to, and meet the requirements of Section 8.2.6 of the UDO, *Buffering* as provided for within. Please note the perimeter buffer associated with the westernmost property line has been increased above the minimum 10' required buffer in order to provide additional screening to the residential land located to the west of the project area.

Proposed Change:

This PUD will be subject to, and meet the requirements of Section 8.2.6 of the UDO, Buffering as provided for within. Please note the perimeter buffer associated with the westernmost property line has been increased above the minimum 10' required buffer in order to provide additional screening to the residential land located to the west of the project area. **While a majority of this westernmost buffer includes 30' of undisturbed buffer and 10' of Type A (40' total), a portion of the 40' buffer along the western side of PIN 0731331798 will be disturbed and replanted to meet Type A standards, creating a 40' Type A buffer, as shown on sheet C-2. Allowing grading in this portion of the buffer will allow for reduced retaining wall height, as requested by the neighbouring property owner.**

PARKS, RECREATION, AND CULTURAL RESOURCES ADVISORY COMMISSION:
A fee-in-lieu and Public Greenway Dedication and Construction was recommended by the Parks, Recreation and Cultural Resources Advisory Commission on December 9, 2015. The fee was calculated as $3,206.19 per SF detached unit for a fee of $323,825.19 and as $2,146.92 per SF attached unit for a fee of $626,900.64. In addition, the Commission recommended that a pedestrian connection be made to Pleasant Park to the south of the project.

APEX TRANSPORTATION PLAN/ACCESS and CIRCULATION:
The proposed PUD is consistent with the Apex Transportation Plan.

PLANNING STAFF RECOMMENDATION:
Planning staff recommends approval of #20CZ05 West Village PUD with the conditions as offered by the applicant.

PLANNING BOARD RECOMMENDATION:
The Planning Board heard this item at their July 13, 2020 meeting and unanimously recommended approval of the rezoning with the conditions offered by the applicant.

ANALYSIS STATEMENT OF THE REASONABLENESS OF THE PROPOSED REZONING:
This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness, and effect on public interest:

The proposed rezoning to amend the current PUD-CZ zoning district is reasonable in that it is consistent with the 2045 Land Use Map, which classifies the subject property as Medium Density Residential and Mixed Use: High Density Residential/Office Employment/Commercial Services.

The proposed rezoning is in the public interest because the amendment to the existing PUD condition will allow for disturbance within a buffer in order to reduce the height of a retaining wall as requested by the adjacent property owner. The buffer will be replanted to meet the UDO planting requirements. The proposed rezoning will also maintain the character and appearance of the area.

PLANNED UNIT DEVELOPMENT DISTRICT AND CONDITIONAL ZONING STANDARDS:

Standards

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments.

1) *Planned Unit Development (PUD-CZ) District*
In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:

a) *Development parameters*

(i) The uses proposed to be developed in the PD Plan for PUD-CZ are those uses permitted in Sec. 4.2.2 *Use Table.*

(ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.

(iii) The dimensional standards in Sec. 5.1.3 *Table of Intensity and Dimensional Standards, Planned Development Districts* may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.

(iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details*, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Apex

Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.

(v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-de-sac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.

(vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.

(vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.

b) *Off-street parking and loading*. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.3 *Off-Street Parking and Loading*, except that variations from these standards may be permitted if a comprehensive parking and loading plan for the PUD-CZ is submitted as part of the PD Plan that is determined to be suitable for the PUD-CZ, and generally consistent with the intent and purpose of the off-street parking and loading standards.

c) *RCA.* The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 *Resource Conservation Area*, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than two percent (2%) provided that:

(i) The PD Plan for PUD-CZ includes a non-residential component; or

(ii) The PD Plan for PUD-CZ has an overall density of 6 residential units per acre or more.

d) *Landscaping*. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.2 *Landscaping, Buffering and Screening*, except that variations from these standards may be permitted where it is demonstrated that the proposed landscaping sufficiently buffers uses from each other, ensures compatibility with land uses on surrounding properties, creates attractive streetscapes and parking areas and is consistent with the character of the area. In no case shall a buffer be less than one half of the width required by Sec. 8.2 or 10 feet in width, whichever is greater.

e) *Signs.* Signage in the PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.7 *Signs*, except that the standards can be varied if a master signage plan is submitted for review and approval concurrent with the PD plan and is determined by the Town Council to be suitable for the PUD-CZ and generally consistent with the intent and purpose of the sign standards of the UDO. The master signage plan shall have design standards that are exceptional and provide for higher quality signs than those in routine developments and shall comply with Sec. 8.7.2 *Prohibited Signs*.

f) *Public facilities.* The improvements standards and guarantees applicable to the public facilities that will serve the site shall comply with Article 7: *Subdivision and* Article 14: *Parks, Recreation, Greenways, and Open Space*.

(i) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site transportation circulation system. The on-site transportation circulation system shall be integrated with the off-site transportation circulation system of the Town. The PD Plan for PUD-CZ shall be consistent with the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details* and show required right-of-way widths and road sections. A Traffic Impact Analysis (TIA) shall be required per Sec. 13.19.

(ii) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site system of potable water and wastewater lines that can accommodate the proposed development, and are efficiently integrated into off-site potable water and wastewater public improvement plans. The PD Plan shall include a proposed water and wastewater plan.

(iii) Adequate off-site facilities for potable water supply, sewage disposal, solid waste disposal, electrical supply, fire protection and roads shall be planned and programmed for the development proposed in the PD Plan for PUD-CZ, and the development is conveniently located in relation to schools and police protection services.

(iv) The PD Plan shall demonstrate compliance with the parks and recreation requirements of Sec. Article 14: *Parks, Recreation, Greenways, and Open Space* and Sec. 7.3.1 *Privately-owned Play Lawns* if there is a residential component in the PUD-CZ.

g) *Natural resource and environmental protection.* The PD Plan for PUD-CZ demonstrates compliance with the current regulatory standards of this Ordinance related to natural resource and environmental protection in Sec. 6.1 *Watershed Protection Overlay District*, Sec. 6.2 *Flood Damage Prevention Overlay District*, and Sec. 8.1 *Resource Conservation*.

h) *Storm water management.* The PD Plan shall demonstrate that the post-development rate of on-site storm water discharge from the entire site shall not exceed pre-development levels in accordance with Sec. 6.1.7 of the UDO.

i) *Phasing.* The PD Plan for PUD-CZ shall include a phasing plan for the development. If development of the PUD-CZ is proposed to occur in more than one phase, then guarantees shall be provided that project improvements and amenities that are necessary and desirable for residents of the project, or that are of benefit to the Town, are constructed with the first phase of the project, or, if this is not possible, then as early in the project as is technically feasible.

j) *Consistency with 2045 Land Use Map.* The PD Plan for PUD-CZ demonstrates consistency with the goals and policies established in the Town's 2045 Land Use.

k) *Complies with the UDO.* The PD Plan for PUD-CZ demonstrates compliance with all other relevant portions of the UDO.

CONDITIONAL ZONING STANDARDS:
The Town Council shall find the Planned Unit Development-Conditional Zoning (PUD-CZ) designation demonstrates compliance with the following standards. 2.3.3.F:

Legislative Considerations
The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1) *Consistency with 2045 Land Use Map.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.

2) *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

3) *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 *Supplemental Standards,* if applicable.

4) *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

5) *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

6) *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

7) *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

Village at Crocketts Ridge
Holland Rd
Southwinds Run
Rezoning #20CZ05
Camp Branch Ln
Holland Farm
Westwinds
West Village
Kelly Rd
Termini Dr
S Salem St To Nc 540 Hwy Nb Ramp
540
S Salem St Ramp
Nc 540 Hwy Nb To S
Nc 540 Hwy Sb To S Salem St Ramp
Nc 540 Hwy Sb Ramp
S Salem St To Nc 540 Hwy Sb Ramp
S Salem St
NC 540 Hwy NB
NC 540 Hwy SB
0
500
1,000
Feet
June, 2020
January 2020 Aerial Photography
Prepared by: Town of Apex Planning Department

PLANNED UNIT DEVELOPMENT-CONDITIONAL ZONING DISTRICT PETITION
2045 LAND USE MAP AMENDMENT PROCESS INFORMATION

PD PLAN/PUD-CZ PETITION SUBMISSION: Applications are due by 12:00 pm on the first business day of each month. See the PUD Plan Schedule on the website for more details.

PD PLAN/PUD-CZ PETITION FEES:
PUD-CZ Request: $1,500.00 + $10 an acre
PD Plan Amendment not requiring full TRC Review: $500.00
2045 Land Use Map Amendment: $700.00

PRE-APPLICATION MEETING: A pre-application meeting with members of the Technical Review Committee is required to be scheduled prior to the submittal of a PD Plan for PUD-CZ. Pre-application meetings are typically scheduled on the 1st, 2nd and 5th Thursdays of the month.

To schedule a meeting, applicants must e-mail a pdf map, drawing, model, site or sketch plan to Planner Lauren Staudenmaier (lauren.staudenmaier@apexnc.org) no later than five (5) working days prior to the desired meeting day.

PURPOSE OF A PUD-CZ (UDO Section 3.3.3(C)): The purpose of the PUD-CZ is to permit variations in order to allow flexibility for landowners to creatively plan for a site specific, higher quality overall development of their land in a way that is not possible through the strict application of the minimum standards of this Ordinance. This is done through the application of performance standards that: integrate and mix uses where a mix of uses is proposed, possess interconnectivity, reflect the small-town character of Apex, expand opportunities for public transportation, preserve of natural features, integrate resource conservation area into plan for development, and that public facilities are available.

NEIGHBORHOOD MEETING: Neighborhood meetings are required per UDO Section 2.2.7 prior to application submission. The applicant is required to notify property owners and any neighborhood association that represents citizens within that area within 300 feet of the subject property via first class mail a minimum of 10 days in advance of the neighborhood meeting. The applicant shall use their own return address on the envelopes as the meeting is a private meeting between the developer and the neighbors. The applicant shall submit the "Certified List of Property Owners" and "Neighborhood Meeting Packet" forms included in this application packet with their initial submittal. The Neighborhood Meeting Packet is located at the very end of this document.

ANNEXATION REQUIREMENTS: If a property or portion thereof subject to the PUD is outside the corporate limits and ETJ, an annexation petition is **REQUIRED** to be submitted on the same day as this application.

Electronic Submittal Requirements (submit in IDT): Click here to access IDT Plans Website

All applicants shall provide information on the proposed residential development to Wake County Public School System at the time of application via their online Residential Development Form

- PUD-CZ Application
- PD Plan Text (pdf & Word versions)
- Colored Rendering of Building Elevations – 11"x17"
- Transportation Impact Analysis

Site Plan Set
- 24" x 36" size
- Scale not less than: 1" = 50' horizontal, 1" = 5' vertical
- Saved as pdf – no scanned plans

Hard Copy Submittal Requirements: Submit to Planning Department

- PUD-CZ Petition Application
- Petition Fee
- One (1) hardcopy PD Plan
- Three (3) bound Site Plan Sets – 24" x 36" size
- Colored Rendering of Building Elevations – 11"x17"
- Legal Description (metes and bounds)
- Certified List of Property Owners within 300 feet of subject property
- Development Name Approval Application
- Town of Apex Utilities Offer & Agreement
- Agent Authorization Form
- Neighborhood Meeting Packet
- If applicable: Annexation Petition, map, legal description and $200.00 fee
- Two (2) bound copies of the Transportation Impact Analysis and 1 copy of the TIA & traffic analysis files on disk or FTP site at first submittal (if applicable)
- One (1) set of envelopes addressed to Certified List of Property Owners within 300 feet of subject property and all the HOAs of those properties within 300' of the subject property. Planning staff may require an additional set of envelopes based on the timing of the Planning Board and Town Council meetings.
- Addresses must be from a current list obtained from the Wake County GIS Map Services. A buffer report service is offered for $1 per page. Please contact them at 919-856-6360 or http://www.wakegov.com/tax/Pages/default.aspx
- Affixed with first class stamps & the following return address:

  Town of Apex Planning Department
  P.O. Box 250
  Apex, NC 27502

PETITION PROCESS INFORMATION

NEIGHBORHOOD MEETING: Neighborhood meetings are required per UDO Section 2.2.7 prior to application submission. The applicant is required to notify property owners and any neighborhood association that represents citizens within that area within 300 feet of the subject property via first class mail a minimum of 10 days in advance of the neighborhood meeting. The applicant shall use their own return address on the envelopes as the meeting is a private meeting between the developer and the neighbors. The applicant shall submit the "Certified List of Property Owners" and "Neighborhood Meeting Packet" forms included in this application packet with their initial submittal. The Neighborhood Meeting Packet is located at the very end of this document.

REVIEW FOR SUFFICIENCY: Incomplete plans will be returned to the applicant and sufficiently complete applications are forwarded to the planning staff for review.

REVIEW BY STAFF: Planning staff reviews the application to determine compliance with the Unified Development Ordinance (UDO). If the application is determined not to be compliant with the UDO, comments will be sent to the applicant. The applicant must address all staff comments before any public hearings are scheduled.

PUBLIC HEARING NOTIFICATION: Notification of the public hearing will take place by three different methods. A written notice will be sent to nearby property owners not more than 25 days nor less than 14 days prior to the public hearings, as required by the UDO. The Planning Department will prepare these written notifications for all property owners of the land subject to the application and all property owners within 300 feet of the land subject to the application. A notice will be published on the Town of Apex website (www.apexnc.org) no less than 10 days, but not more than 25 days, prior to the public hearings, and a notice will be posted at the land subject to the application at least 14 days prior to the public hearings.

1ST PUBLIC HEARING/PLANNING BOARD MEETING: The Planning Board will consider the application, relevant support materials, the Staff Report and public testimony given at the public hearing. After the public hearing the Planning Board will make a recommendation to the Town Council. The Planning Board may recommend approval, approval with conditions or disapproval. The application is then forwarded to the Town Council. The Planning Board meets at 4:30 p.m. in the Town Hall Council Chambers on the date indicated on the Rezoning Schedule.

2ND PUBLIC HEARING/TOWN COUNCIL MEETING: The Town Council will consider the application, relevant support materials, the Staff Report, the Planning Board recommendation and public testimony given at the public hearing. After the public hearing the Town Council will vote to approve, approve with conditions or disapprove the rezoning. The Town Council meets at 6:00 p.m. in the Town Council Chambers on the date indicated on the Rezoning Schedule.

PLANNED UNIT DEVELOPMENT APPLICATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 20CZ05 Submittal Date: 5/1/2020

Fee Paid $ 500 Check # Credit Card Payment

PETITION TO AMEND THE OFFICIAL ZONING DISTRICT MAP

Project Name: West Village

Address(es): 2412 Kelly Road

PIN(s) 0731331798

West Village total acreage: 163.34 Acreage: 35.36 (parcel)

Current Zoning: PUD-CZ Proposed Zoning: PUD-CZ (amendment)

Current 2045 LUM Designation: Medium Density Residential and Mixed Use

Requested 2045 LUM Designation: No change

See next page for LUM amendment

If any portion of the project is shown as mixed use (3 or more stripes on the 2045 Land Use Map) provide the following:

Area classified as mixed use: Acreage: ~130

Area proposed as non-residential development: Acreage: 55.99 acres

Percent of mixed use area proposed as non-residential: Percent: 43.11%

Applicant Information

Name: Josh Decker

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-361-5000 E-mail: decker@mcadamsco.com

Owner Information

Name: SM Raleigh LLC

Address: 11710 Plaza America Dr Ste 1100

City: Reston State: VA Zip: 20190

Phone: 919.977.8760 E-mail: KetchemBK@stanleymartin.com

Agent Information

Name: Josh Decker

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-361-5000 E-mail: decker@mcadamsco.com

Other contacts:

PLANNED UNIT DEVELOPMENT APPLICATION

Application #: 20CZ05 Submittal Date: 5/1/2020

2045 LAND USE MAP AMENDMENT (if applicable)

The applicant does hereby respectfully request the Town Council amend the 2045 Land Use Map. In support of this request, the following facts are shown:

The area sought to be amended on the 2045 Land Use Map is located at:

N/A

Current 2045 Land Use Classification:

Proposed 2045 Land Use Classification:

What conditions justify the passage of the amendment to the 2045 Land Use Map? Discuss the existing use classifications of the subject area in addition to the adjacent land use classifications.

CERTIFIED LIST OF NEIGHBORING PROPERTY OWNERS

Application #: 20CZ05 Submittal Date: 5/1/2020

Provide a certified list of property owners subject to this application and all property owners within 300' of the subject property and HOA Contacts.

	Owner's Name	PIN
1.	See attached sheet on the following page for full list of property	
2.	owners.	
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

I, _____, certify that this is an accurate listing of all property owners and property owners within 300' of the subject property.

Date: _____ By: _____

COUNTY OF WAKE STATE OF NORTH CAROLINA

Sworn and subscribed before me, _____, a Notary Public for the above State and County, on this the _____day of _____, 20____.

_____
Notary Public

SEAL

_____
Print Name

My Commission Expires: _____

CERTIFIED LIST OF NEIGHBORING PROPERTY OWNERS

Application #: 20CZ05 Submittal Date: 5/1/2020

Provide a certified list of property owners subject to this application and all property owners within 300' of the subject property and HOA Contacts.

	Owner's Name	PIN
1.	See attached sheet on the following page for full list of property	
2.	owners.	
3.		
4.		
5.		
6.		
7.		
8.		
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10.		
11.		
12.		
13.		
14.		
15.		

I, BRIAN KETCHEM → FOR SM RALEIGH, LLC, certify that this is an accurate listing of all property owners and property owners within 300' of the subject property.

Date: 4/28/2020 By: [signature]

COUNTY OF WAKE STATE OF NORTH CAROLINA

Sworn and subscribed before me, Stephanie A. Hedrick, a Notary Public for the above State and County, on this the 28th day of April, 2020.

[signature]
Notary Public

Stephanie A. Hedrick
Print Name

SEAL

STEPHANIE A. HEDRICK NOTARY PUBLIC WAKE COUNTY, NC

My Commission Expires: 08/02/2020

CERTIFIED LIST OF NEIGHBORING PROPERTY OWNERS

Owner's Name	PIN
DONNELLY, TIMOTHY L DONNELLY, CYNTHIA O	731149410
SWAMP, STEVEN M SWAMP, CYNTHIA R	731223637
SWAMP, STEVEN M SWAMP, CYTHINA R	731224870
WOODARD, PAT D WOODARD, NANCY P	731225296
CHEELY, GEORGE RAY CHEELY, JEAN S	731232804
COOPER, DAVID L COOPER, BARBARA C	731233180
THOMPSON, MICHAEL F THOMPSON, CLAUDIA L	731233480
IANNONE, JOSEPH V JR	731244392
W TIMBERLAKE, BARBARA JO TRUSTEE TRUSTEE OF BARBARA JO W TIMBERLAKE FAMILY TRUST	731254251
SCHARDT, DANIEL SCHARDT, DENISE	731259148
SM RALEIGH, LLC	731311773
SEARS, TONY C SEARS, JUDY T	731329405
SM RALEIGH, LLC	731331798
SEARS, TONY C SEARS, JUDY T	731338590
SEARS, TONY C SEARS, JUDY T	731338863
WHITLEY MILLS LLC	731346671
COUNCIL, GLENWOOD C COUNCIL, LINDA M	731347382
FAHEY FAMILY FARM LLC	731434504
SM RALEIGH LLC	731441619

TOWN OF APEX UTILITIES OFFER AND AGREEMENT

Application #: _____ Submittal Date: _____

Town of Apex
73 Hunter Street
P.O. Box 250 Apex, NC 27502
919-249-3400

WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

Submitted with original PUD application.

_____

(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer & Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

_____, the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.

Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

ACCEPTED:

CUSTOMER: _____	TOWN OF APEX
BY: _____ Authorized Agent	BY: _____ Authorized Agent
DATE: _____	DATE: _____

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

SM Raleigh, LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☑ Other: Amendment to original PUD application

The property address is: 2412 Kelly Rd Apex, NC

The agent for this project is: McAdams

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Josh Decker

Address: 2905 Meridian Parkway

Telephone Number: 919-361-5000

E-Mail Address: decker@mcadamsco.com

Signature(s) of Owner(s)*

_____

_____ _____

Type or print name Date

_____

_____ _____

Type or print name Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

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- ☐ Land Use Amendment
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Agent Name: Josh Decker

Address: 2905 Meridian Parkway

Telephone Number: 919-361-5000

E-Mail Address: decker@mcadamsco.com

Signature(s) of Owner(s)*

Brian Kretchman - Director of Land (SM Raleigh, LLC) — Type or print name — 4/28/2020 — Date

_____ — Type or print name — _____ — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: _____ Submittal Date: _____

The undersigned, _____ (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at _____ and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated _____, and recorded in the Wake County Register of Deeds Office on _____, in Book _____ Page _____.
4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).
5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on _____, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on _____, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

   This the _____ day of _____, 20_____.

_____ (seal)

_____

Type or print name

STATE OF NORTH CAROLINA
COUNTY OF _____

I, the undersigned, a Notary Public in and for the County of _____, hereby certify that _____, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's _____, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.

_____

Notary Public
State of North Carolina
My Commission Expires: _____

[NOTARY SEAL]

AFFIDAVIT OF OWNERSHIP

Application #: _____ Submittal Date: _____

The undersigned, _____ (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at _____ and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").

2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.

3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated _____, and recorded in the Wake County Register of Deeds Office on _____, in Book _____ Page _____.

4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).

5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on _____, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on _____, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the 28th day of April, 20__

_____ (seal)

Brian Ketchem - SM Raleigh, LLC

Type or print name

STATE OF NORTH CAROLINA
COUNTY OF Wake

I, the undersigned, a Notary Public in and for the County of Wake, hereby certify that Brian Ketchem, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's N/A, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.

Stephanie A Hedrick 4/28/2020

Notary Public
State of North Carolina
My Commission Expires: 08/02/2020

STEPHANIE A. HEDRICK NOTARY PUBLIC WAKE COUNTY, NC [NOTARY SEAL]

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: _____ Submittal Date: _____

Insert legal description below.

Beginning at an existing iron pipe located on the northern right-of-way line of Old US Highway 1 and also being the southeastern property comer of lot 2 as shown in Book of Maps 2014, Page 703, Wake County Registry; thence leaving said right-of-way along and with said eastern property line North 39° 04' 21" West a distance of 271.27 feet to a newly set iron pipe; thence North 22° 19' 03" West a distance of201.88 feet to a newly set iron pipe; thence North 82° 14' 22" East a distance of 280.68 feet to an existing iron pipe; thence South 38° 29' 14" East a distance of 84.36 feet to a newly set iron pipe; thence South 48° 51' 39" East a distance of
234.31 feet to a newly set iron pipe located on said northern right-of-way line; thence along and with said right-of-way South 48° 51'39" East a distance of 4.98 feet to an existing iron pipe; thence South 47° 56' 55" West a distance of 40.75 feet to a point; thence South 48° 37' 10" West a distance of 50.54 feet to a point; thence South 50° 43' 16" West a distance of 84.89 feet to a point; thence South 51° 56' 36" West a distance of 53.06 feet to a point; thence South 52° 56' 35" West a distance of 52.31 feet to a point; thence South 54° 05' 42" West a distance of 56.50 feet to the point of beginning, containing 2.7832 acres more or less.

FOR APPLICANT USE ONLY
DO NOT SUBMIT WITH APPLICATION

Common Acronyms/Definitions			
IDT Website	Contractor's Plan Room	**UDO**	Town's Unified Development Ordinance
TOA	Town of Apex	**NCDEQ**	North Carolina Dept. of Environmental Quality
RCA	Resource Conservation Area	**DDM**	Design & Development Manual

Town Contact Information			
Planning Department	(919) 249-3426	**Soil & Erosion Control Officer**	(919) 249-1166
Parks & Recreation Department	(919) 249-7468	**Electric Utilities Division**	(919) 249-3342
Transportation Engineer	(919) 249-3358	**Utility Engineering/Stormwater**	(919) 249-3413

General Document Formatting Requirements:
Page margins should be 1" or greater.
Font size should neither be less than 10 nor greater than 12 for text. Larger font size for headers is acceptable
Font type should be Calibri, Arial, Verdana, or other Sans Serif font.
Use of bold type should be limited to headings and section titles.
Use of italics and underlining is discouraged.

PD PLAN TEXT CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Table of Contents		
2	Vicinity Map	Show location of property and adjacent streets within a maximum of a ½ mile radius.	
3	Base Items		
a	Name of project	Include phase numbers, if applicable	
b	Preparer's, Owner's and Contract Purchaser's contact information	Name, address, phone number, fax number, and e-mail address.	
c	Current zoning designation		
d	Proposed zoning designation		
e	Current 2045 Land Use Map designation		2045 LUM
f	Proposed 2045 Land Use Map designation	Application must be submitted if amendment is requested or required.	
g	Area of tract(s)	In square feet or acres	
h	Area designated as mixed use on 2045 LUM	In square feet or acres	
i	Area of mixed use property proposed as non-residential development	In square feet or acres	
j	Percent of mixed use areas proposed as non-residential development		
k	Proposed list of uses	Add statement below at the top of the list of uses:	
	The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.		
4	Purpose Statement-Planned Unit Development standards		UDO Sec. 2.3.4.F.1.iv-vi
5	Purpose Statement-Conditional Zoning standards		UDO Sec. 2.3.3.F.1-10
6	Proposed Design Controls		
a	Maximum square footage per non-residential use		
b	Maximum densities per residential use (du/acre)		
c	Lot sizes for residential use		
d	Maximum height of the building(s)	Include number of stories.	
e	Front, side and rear setbacks		

PD PLAN TEXT CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
f	Amount and percentage of built upon area allowed		
g	Amount and percentage of built upon area		
7	Proposed Architectural Controls		
a	Proposed materials		
b	Proposed structural elements	Includes roof pitch, inclusion of porches, inclusion of crawl space, etc.	
8	Parking and loading	State that requirements of UDO Sec. 8.3 will be met or provide comprehensive parking on layout sheet.	UDO Sec. 8.3
9	Provide statement that signage will comply with UDO Section 8.7		UDO Sec. 8.7
10	Natural Resource and Environmental Data		
a	Indicate if the site is in the Primary or Secondary Watershed Protection Overlay District		
b	Indicate if the site contains a FEMA designated 100 year floodplain		
c	Gross square footage and percent of RCA required		
d	Gross square footage and percent of RCA provided		
e	Indicate if site contains a historic structure		
11	Explain how this project meets the stormwater management requirements		UDO Sec. 2.3.4.F.1.h & 6.1.7
12	Project must be reviewed by the Parks, Recreation and Cultural Resources Advisory Commission	For recommendation on land dedication and/or fee in lieu. Applicant must contact the Director of Parks, Recreation and Cultural Resources to request meeting.	
13	Explain how this project meets the Public Facilities requirements		UDO Sec. 2.3.4.F.1.f
14	Provide phasing plan		
15	Provide statement regarding how this project is consistent with the Land Use Plan's map, intent, and/or goals		
16	Provide statement regarding compliance with all other relevant portions of the UDO.	List sections of UDO the applicant is asking for deviation from.	
17	Building elevations showing all sides of the structure(s)	Indicate height and number of stories.	

GENERAL PLAN CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Uploading to IDT	All files must be named in consecutive order with Sheet name and title (1. Coversheet.pdf, 2. Site Plan.pdf, 3. Erosion Control Plan.pdf).	IDT Plan Review
2	Electronic submittal through IDT	Submit PD Plan for PUD Application, set of site plans (24"x36" at a scale of not less than 1"=50' horizontal, 1"=5' vertical), and 11"x17" colored rendering of required elevations.	
3	Every checklist item must be included on the plan sets. Do not attach checklist to the plan submittal.	If an item is not applicable, place a note on the applicable plan sheet stating why the item is not applicable. Failure to do so may result in the plans being considered incomplete.	

COVER SHEET CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Vicinity Map	Show location of the property and adjacent streets within a maximum of ½ mile radius.	
2	Aerial photograph of site	Include 50' of adjoining property	
3	Project Data (tabular format)-requirements below:		See Table 1
a	Name of project	Include phase numbers	
b	Preparer's contact information	Name, address, phone number, fax number, and e-mail address.	
c	Owner's contact information	Name, address, phone number, fax number, and e-mail address.	
d	Contract purchaser's contact information	Name, address, phone number, fax number, and e-mail address.	
e	Current 2045 Land Use Map designation		2045 LUM
f	Proposed 2045 Land Use Map designation	Application must be submitted if amendment is requested or required.	
g	Area of tract(s)		
h	Area designated as mixed use on 2045 LUM	In square feet or acres	
i	Area of mixed use property proposed as non-residential development	In square feet or acres	
j	Percent of mixed use areas proposed as non-residential development		
k	Existing and proposed gross square footage of buildings		
l	Proposed gross square footage by floor area	By type of use and use classification	
m	Proposed height of the building and number of stories	Measured as the vertical distance in feet between the finished floor elevation to the highest point of the roof at the front elevation. Do not include finished grade of a basement.	UDO Sec. 5.1
n	Number of parking spaces required	Indicate whether based on number of employees or square footage of building.	UDO Sec. 8.3.2
o	Total number of parking spaces provided		UDO Sec. 5.1
p	Required front, side and rear yard setbacks		
q	Indicate if the site is in the Primary or Secondary Watershed Protection Overlay District	Watershed Protection Overlay District Map	UDO Sec. 6.1 & 8.1.2.B.2.i
r	Indicate if the site contains a historic structure	Indicate if site appears on the Wake County Inventory of Historic Structures map and/or if the property appears on the TOA National Register Historic District Map.	UDO Sec. 12.2
4	Include the recommendation from the Parks and Recreation Advisory Board.	Include the specific amount of the recommendation.	

EXISTING CONDITIONS SHEET CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
Show existing site features on the proposed site and the area within a 50' perimeter of the site.			
1	Provide LIDAR or field verified topography of the subdivision at a minimum of 2 ft contours, showing existing grades	Please fill out the GIS request form for a copy of Town of Apex LIDAR data. Wake County topo data is no longer acceptable.	
2	Location of existing vegetation 18-inch caliper and larger		
3	Location of any underground storage tanks, hazardous waste and debris, abandoned wells, septic tanks, or similar structures	Other permits from local, state, or federal authorities may be required for the demolition or [illegible] these items on the property.	

EXISTING CONDITIONS SHEET CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
Show existing site features on the proposed site and the area within a 50' perimeter of the site.			
4	Identify open fields, existing vegetation, wetlands, steep slopes, creeks, ponds, dams, rock outcroppings, fencing, roads, structures, and other pertinent site features	Show outline of existing vegetation.	
5	Location of wetlands		
6	Location of the 100-year floodplain and 100-year floodway	Based on FIRM maps, the FEMA detailed study and field measurements.	

LAYOUT SHEET CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Boundary of entire tract by metes and bounds		
2	Note stating "Plan sheets are intended for illustrative use only."		
3	Location and dimensions of existing driveways or curb cuts on adjoining properties	Include properties on opposite side of adjoining streets.	
4	Existing streets and right-of-ways showing existing dimensions in accordance with the TOA Transportation Plan. Connections must be made to existing stubs on adjacent property.	Indicate location and dimensions of pavement, curbs and gutters, and sidewalks. Where development abuts or includes a State maintained road, design must be submitted and reviewed concurrently with NCDOT.	Thoroughfare Plan Map TOA Details Sec. 300
5	Approximate location of access points.	May be indicated by arrows.	
6	Approximate location of RCA.	Only needed if RCA has been identified.	
7	Location and dimensions of buffers	Includes RCA and Riparian buffers	UDO Sec. 6.1.11 & 8.1.2.B.1 & 8.2.6
8	Approximate location of residential and non-residential uses.	May be done with bubbles.	
9	Check for conformity with TOA's adopted plans and policies	Thoroughfare Plan Map Land Use Plan P & R Master Plan Bike/Ped Plan Water & Wastewater Master Plan	

PHASING PLAN CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Boundary of entire tract by metes and bounds		
2	Phase lines		
3	Guarantee project improvements and amenities are necessary and desirable for residents of the project, or are of benefit to the Town	If development is proposed to occur in phases, project improvements and amenities are to be constructed within the first phase of the project or as early as is technically feasible.	

UTILITY PLAN CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Items on Layout sheet		
2	Indicate whether or not requesting full town services – water, sewer and electricity	If electric utilities are provided by the Town of Apex, a consultation with the Electric Utilities Division is required.	
3	Indicate whether or not site will utilize private sewage disposal (septic system)		

UTILITY PLAN CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
4	Approximate location and dimension width of easements required for utilities		
5	Location of existing trees to be saved		

PRELIMINARY STORMWATER MANAGEMENT PLAN CHECKLIST ITEMS			
#	Requirement	Additional Information	Reference
1	Items on Layout sheet		
2	Demonstrate that the post-development rate of on-site stormwater discharge from the entire site will not exceed pre-development levels in accordance with UDO		UDO Sec. 6.1.7

TRANSPORTATION IMPACT ANALYSIS CHECKLIST ITEMS **Please contact the Transportation Engineer at 919-249-3358 prior to starting a TIA.**			
#	Requirement	Additional Information	Reference
1	Site Plan or at a minimum, a land use plan indicating conceptual access points to the external roadway system		UDO Sec. 13.19
2	Vicinity map showing the location of the property and adjacent streets within the approved study area		UDO Sec. 13.19
3	Peak-hour volumes from a recent count, no more than one year old at the time of submittal unless otherwise approved by Town staff		UDO Sec. 13.19
4	Average daily and peak hour vehicular trips generated by the proposed development		UDO Sec. 13.19
5	Trip distribution allocation on all roads and intersections within the study area approved by the Town	Please contact the transportation engineer at 919-249-3358 at least 60 days prior to starting a TIA. The transportation engineer must approve the study area.	UDO Sec. 13.19
6	Intersection geometry and traffic control devices		UDO Sec. 13.19
7	Capacity analyses for all anticipated conditions including phasing milestones unless otherwise approved by Town staff	Anticipated conditions include existing, no-build and build.	UDO Sec. 13.19
8	Documentation of data and assumptions		UDO Sec. 13.19
9	Proposed road improvements in accordance with the UDO requirements for a Traffic Impact Analysis	Upload to IDT and provide 2 hardcopies at first submittal. Anticipated review time 4 to 6 weeks.	UDO Sec. 13.19

PARKS AND RECREATION SITE DATA TABLE		
Date Reviewed by PRCR Advisory Commission:		
☐	**Fee-in-Lieu of Dedication:**	
	_____ single-family detached units X $3,345.49 per unit =	$_____
	_____ single-family attached units X $2,240.19 per unit =	$_____
	_____ multi-family units X $1,972.42 per unit =	$_____
	Total Fee-in-Lieu:	$_____
☐	**Acres of Land Dedication**	_____
☐	**Public Greenway Trail Construction**	Yes ☐ No ☐

Instruction Packet and Affidavit for
Neighborhood Meetings

Town of Apex
Planning Department
PO Box 250
Apex, NC 27502

T: 919-249-3426
F: 919-249-3338

This packet consists of instructions and templates for conducting a required Neighborhood Meeting. Planning Department staff are available to advise you in the preparation of these materials. Call the Planning Department at (919) 249-3426 for more information.

WHAT IS THE PURPOSE OF A NEIGHBORHOOD MEETING?

A neighborhood meeting is a required form of community outreach to receive initial feedback regarding certain project types prior to submittal to the Planning Department per the standards found in UDO Sec. 2.2.7. The intention of the meeting is to initiate neighbor communication and identify issues and concerns early on and provide the applicant an opportunity to address neighbor concerns about the potential impacts of the project prior to submitting an application. A neighborhood meeting is valid for six (6) months prior to the submission of an application; a delay in submission requires a new neighborhood meeting.

WHEN IS A NEIGHBORHOOD MEETING REQUIRED?

- Rezonings (including Planned Unit Developments);
- Major Site Plans;
- Residential Master Subdivision Plans (excluding exempt subdivisions); or
- Special Use Permits

INSTRUCTIONS

Prior to submitting an application for a Rezoning, Major Site Plan, residential Master Subdivision Plan (excluding exempt subdivisions), or Special Use Permit, the applicant must conduct at least one (1) Neighborhood Meeting. The applicant shall submit all forms included in this packet with the initial application submittal.

The Neighborhood Meeting must be held in accordance with the following rules:

These groups and individuals must be invited to the meeting:

- The applicant is required to notify the Planning Department, all property owners within 300 feet of the subject property, and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the neighborhood meeting, not including the day of mailing. The applicant shall use <u>their own return address</u> on the envelopes as the meeting is a private meeting between the applicant and the neighbors.
- The applicant shall include with the meeting notice a vicinity map in addition to either the existing zoning map of the area or preliminary plans of the proposed development (see Handout requirements below).

The meeting must be held within specific timeframes and meet certain requirements:

- The meeting must be held for a minimum of two (2) hours, Monday through Thursday, during the 5:00 p.m. - 9:00 p.m. time period. The meeting cannot be held on a Town recognized holiday (which coincide with the State of North Carolina recognized holidays).
- The meeting shall be held at a place that is generally accessible to neighbors that reside in close proximity to the land subject to the application.
- A sign-in sheet must be used in order to verify attendance. Ensure each attendee signs in. Please note if any person(s) refuses to sign in. Note if no one attended.
- Handout requirements:
    - For rezonings (excluding rezonings to PUD-CZ, TND-CZ and MEC-CZ), a vicinity map and existing zoning map of the area must be provided to help facilitate discussion.
    - For rezonings to PUD-CZ, TND-CZ and MEC-CZ; Major Site Plans; residential Master Subdivision Plans; and Special Use Permits, preliminary plans of the proposed development must be available at the meeting to help facilitate discussion. Neighbors may request emailed/mailed copies of the maps or plans from the applicant by checking the "send plans" box on the sign-in sheet; applicant shall provide reduced copies upon request.
    - Printed copies must equal the number of notices required to be sent.
    - Contact information for the applicant's representative and Town Staff must be provided on the attached "Project Contact Information" form.
    - "Common Construction Issues & Who to Call" sheet (attached) must be included as part of the handout.
    - A copy of the handout must be included as part of the Neighborhood Meeting report.
- The agenda of the meeting shall include:
    - Explanation of all processes the meeting is being held for (rezoning, subdivision, etc.).
    - Explanation of future meetings (additional neighborhood meetings, Planning Board, Town Council, etc.).
    - Explanation of development proposal – uses and conditions for rezonings, layout for subdivision and site plans, and builder/end user if known/public knowledge.
- Questions or concerns by attendees, and responses by the applicant, if any, must be noted. Provide blank comment sheets or notecards for neighbors to submit written comments. The applicant shall also include any questions and concerns received via written correspondence (such as email) or phone call along with responses provided by the applicant.
- The applicant shall be responsible for notifying any neighbors who check the "Send Plans & Updates" box on the sign-in sheet of any additional neighborhood meetings and the actual submittal date to the Town with a link to the Town of Apex's Interactive Development Map.

For accountability purposes, please submit the following with your application:

- A copy of the letter mailed to neighbors and neighborhood organizations (use attached invitation template);
- A list of those persons and neighborhood organizations invited to the meeting;
- A copy of the sign-in sheet (use attached sign-in sheet template);
- A summary of the meeting and a list of any changes made to the project as a result of the neighborhood comments (use attached meeting summary template);
- The affidavit, signed, dated, and notarized (use attached affidavit template); and
- One reduced copy of the maps and/or plans presented to the neighbors at the Neighborhood Meeting.

Providing Input to Town Council:

Each Town Council meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Town Council meets on the 1st and 3rd Tuesdays of each month at 6:00 p.m. (except for holidays, see schedule of meetings at http://www.apexnc.org/838/Agendas-Minutes). You may also contact Town Council by e-mail at AllCouncil@apexnc.org.

Private Agreements and Easement Negotiation:

The Town of Apex cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Apex can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Town Council public hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the Town Council public hearing if the agreement is included in the conditions. If it is not, you may request that the Town Council not approve the rezoning without the agreement being included in the conditions (note that it is up to Town Council whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Interactive Development Map at: http://apexnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=fa9ba2017b784030b15ef4da27d9e795

Documentation:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

NOTICE OF ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

April 9, 2020
Date

Dear Neighbor:
You are invited to an electronic neighborhood meeting to review and discuss the development proposal at

2412 Kelly Road (Address(es)) 0731331798 (PIN(s))

in accordance with the Town of Apex Electronic Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, you may contact the applicant before or after the meeting is held. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org. If at all feasible given emergency declarations, limits on in-person gatherings, and social distancing, an additional in-person Neighborhood Meeting may be scheduled and held prior to a public hearing or staff decision on the application.

An Electronic Neighborhood Meeting is required because this project includes (check all that apply):

	Application Type	Approving Authority
◉	Rezoning (including Planned Unit Development)	Town Council
○	Major Site Plan	Town Council (QJPH*)
○	Special Use Permit	Town Council (QJPH*)
○	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):
An amendment to the current West Village PUD zoning is proposed for the 40' buffer (30' which is undisturbed) on the western side of PIN 0731331798, bordering PIN 0731244392. This amendment will allow grading within the buffer in order to reduce the height of a planned retaining wall to minimize visual impacts for the neighboring property. The graded area will be replanted as a 40' Type A buffer. This revision is isolated to one area and one adjacent property owner and being completed per the adjacent property owner's request.

Estimated submittal date: May 1, 2020

MEETING INFORMATION:

Property Owner(s) name(s):	Stanley Martin Homes
Applicant(s):	McAdams
Contact information (email/phone):	Josh Decker | decker@mcadamsco.com | 704. 219. 7175
Electronic Meeting invitation/call in info:	Zoom https://mcadamsco.zoom.us/j/859669340 (see instruction sheet)
Date of meeting**:	April 22, 2020
Time of meeting**:	5:30-7:30

MEETING AGENDA TIMES:
Welcome: 5:30-5:40 Project Presentation: 5:40-6:00 Question & Answer: 6:00-7:30

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: West Village Zoning: PUD-CZ

Location: 2412 Kelly Rd, Apex, NC

Property PIN(s): 0731331798 Acreage/Square Feet: 163.34 acres

Property Owner: SM Raleigh LLC

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-361-5000 Email: decker@mcadamsco.com

Developer: Stanley Martin Homes

Address: 11710 Plaza America Dr Ste 1100

City: Reston State: VA Zip: 20190

Phone: 919.977.8760 Fax: Email: KetchemBK@stanleymartin.com

Engineer: McAdams

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-361-5000 Fax: Email: decker@mcadamsco.com

Builder (if known):

Address:

City: State: Zip:

Phone: Fax: Email:

Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts

Planning Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Senior Transportation Engineer	(919) 249-3358
Water Resources Department Jessica Bolin, Senior Engineer (Stormwater, Sedimentation & Erosion Control) Stan Fortier, Senior Engineer (Stormwater, Sedimentation & Erosion Control) James Gregg, Utility Engineer (Water & Sewer)	 (919) 249-3537 (919) 249-1166 (919) 249-3324
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

April 9, 2020

RE: Virtual Neighborhood Meeting – Zoom Instructions

Dear Property Owner,

Due to the current circumstances of COVID-19, we will be hosting a virtual neighborhood meeting via Zoom. The meeting will be held on April 22, 2020 and begin at 5:30 PM Eastern Time.

- To attend the meeting via computer, type in the following link in your internet browser:
  https://mcadamsco.zoom.us/j/859669340
  If prompted for a Meeting ID, enter this number: **859 669 340**

- To attend the meeting via phone, you may dial in by your location:
  +1 312 626 6799 US (Chicago)
  +1 646 876 9923 US (New York)
  +1 253 215 8782 US
  +1 301 715 8592 US
  +1 346 248 7799 US (Houston)
  +1 408 638 0968 US (San Jose)
  +1 669 900 6833 US (San Jose)
  877 853 5247 US Toll-free
  888 788 0099 US Toll-free
  Meeting ID: **859 669 340**
  Find your local number: https://mcadamsco.zoom.us/u/adhD7tRx8p

Sincerely,
MCADAMS

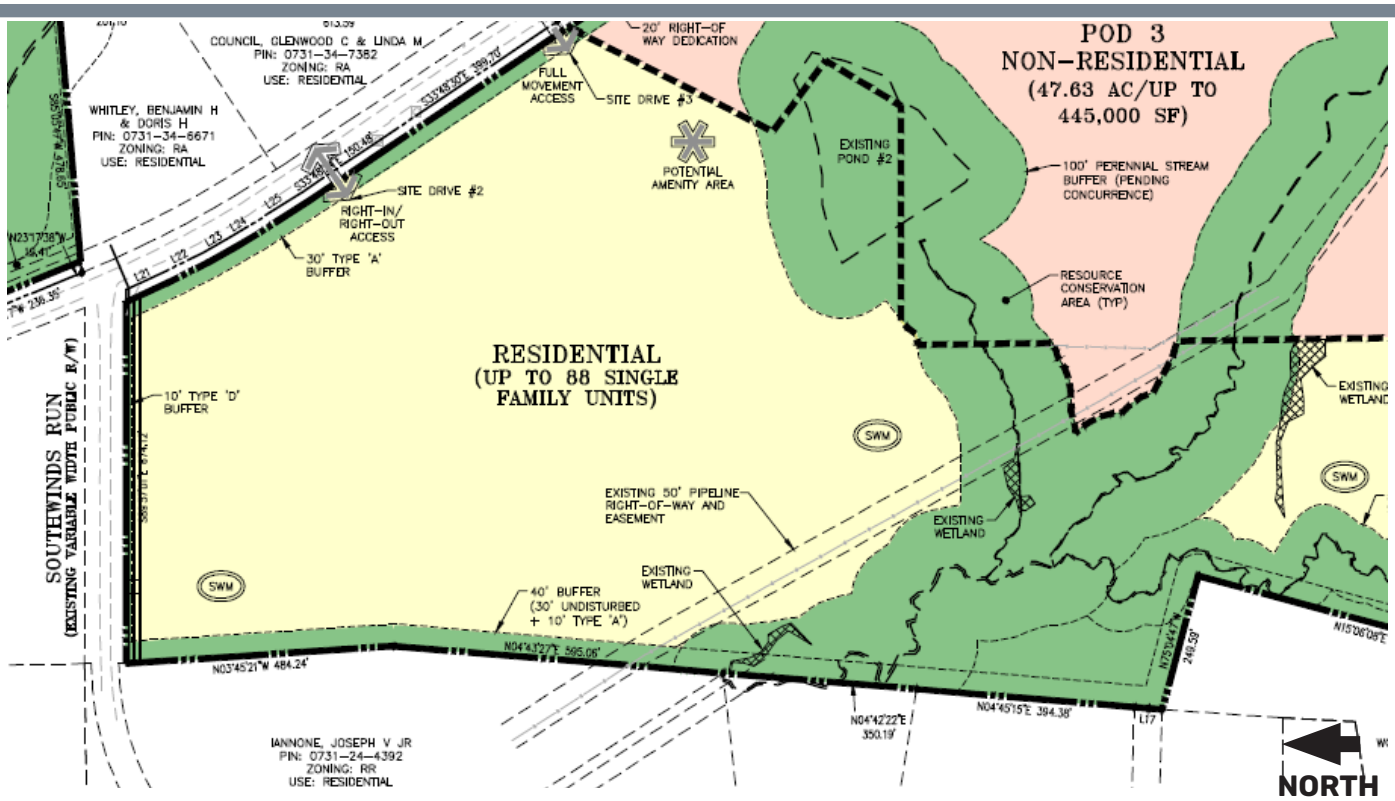
WEST VILLAGE AMENDMENT

2412 KELLY RD APEX, NC

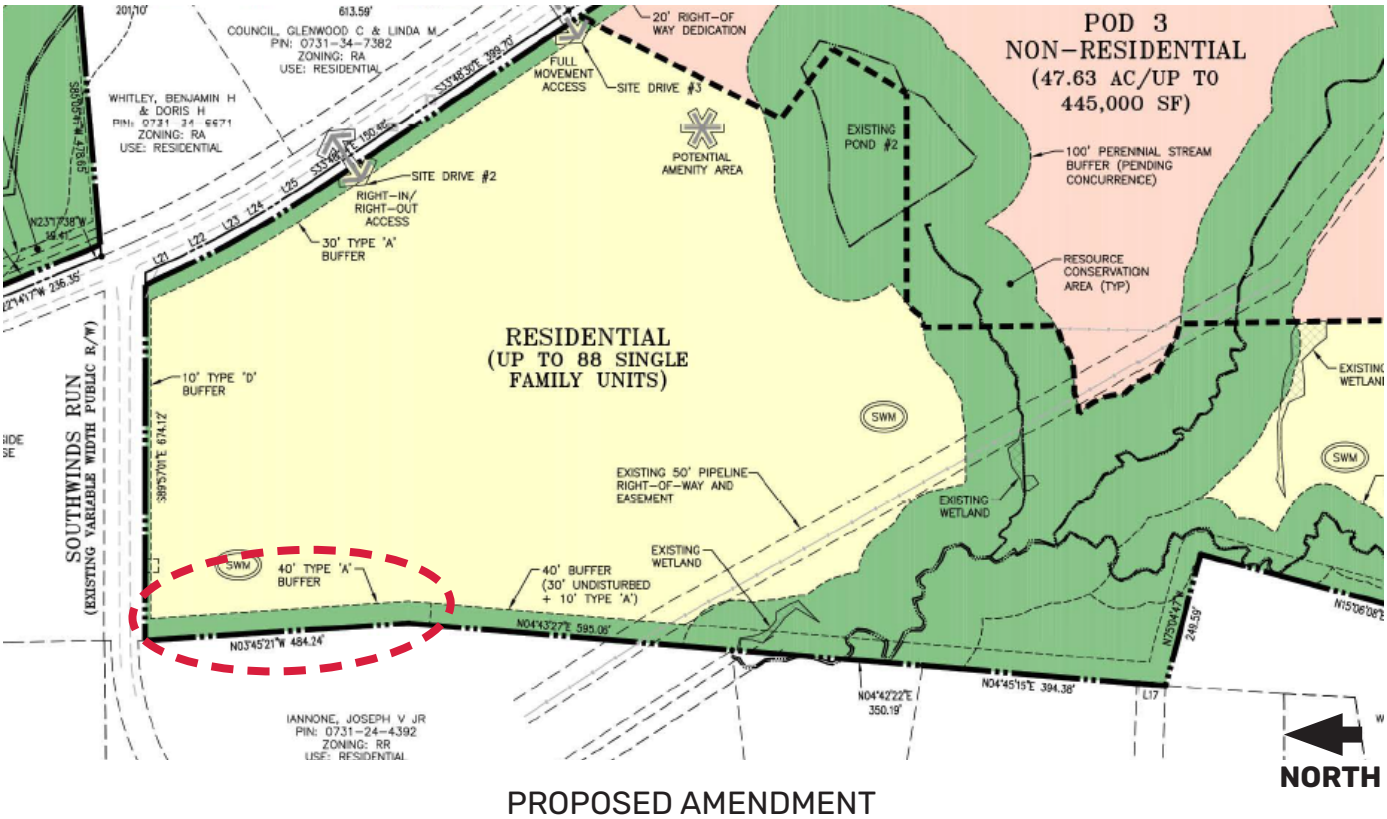
VICINITY MAP

APRIL 2020

McAdams



CURRENT ZONING CONDITION



PROPOSED AMENDMENT

COMMON CONSTRUCTION ISSUES & WHO TO CALL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Noise & Hours of Construction:	**Non-Emergency Police**	**919-362-8661**

Noise from tree removal, grading, excavating, paving, and building structures is a routine part of the construction process. The Town generally limits construction hours from 7:00 a.m. to 8:30 p.m. so that there are quiet times even during the construction process. Note that construction outside of these hours is allowed with special permission from the Town when it makes more sense to have the construction occur at night, often to avoid traffic issues. In addition, the Town limits hours of blasting rock to Monday through Friday from 8:00 a.m. to 5:00 p.m. Report violations of construction hours and other noise complaints to the Non-Emergency Police phone number at 919-362-8661.

Construction Traffic:	**James Misciagno**	**919-372-7470**

Construction truck traffic will be heavy throughout the development process, including but not limited to removal of trees from site, loads of dirt coming in and/or out of the site, construction materials such as brick and wood brought to the site, asphalt and concrete trucks come in to pave, etc. The Town requires a construction entrance that is graveled to try to prevent as much dirt from leaving the site as possible. If dirt does get into the road, the Town can require they clean the street (see "Dirt in the Road" below).

Road Damage & Traffic Control:	**Water Resources – Infrastructure Inspections**	**919-362-8166**

There can be issues with roadway damage, roadway improvements, and traffic control. Potholes, rutting, inadequate lanes/signing/striping, poor traffic control, blocked sidewalks/paths are all common issues that should be reported to Water Resources – Infrastructure Inspections at 919-249-3427. The Town will get NCDOT involved if needed.

Parking Violations:	**Non-Emergency Police**	**919-362-8661**

Unless a neighbor gives permission, there should be no construction parking in neighbors' driveways or on their property. Note that parking in the right-of-way is allowed, but Town regulations prohibit parking within 15 feet of driveways so as not to block sight triangles. Trespassing and parking complaints should be reported to the Non-Emergency Police phone number at 919-362-8661.

Dirt in the Road:	**James Misciagno**	**919-372-7470**

Sediment (dirt) and mud gets into the existing roads due to rain events and/or vehicle traffic. These incidents should be reported to James Misciagno. He will coordinate the cleaning of the roadways with the developer.

Dirt on Properties or in Streams:	**James Misciagno**	**919-372-7470**
	Danny Smith	**Danny.Smith@ncdenr.gov**

Sediment (dirt) can leave the site and get onto adjacent properties or into streams and stream buffers; it is typically transported off-site by rain events. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the appropriate repairs with the developer. Impacts to the streams and stream buffers should also be reported to Danny Smith (danny.smith@ncdenr.gov) with the State.

Dust:	**James Misciagno**	**919-372-7470**

During dry weather dust often becomes a problem blowing into existing neighborhoods or roadways. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the use of water trucks onsite with the grading contractor to help control the dust.

Trash:	**James Misciagno**	**919-372-7470**

Excessive garbage and construction debris can blow around on a site or even off of the site. These incidents should be reported to James Misciagno at 919-372-7470. He will coordinate the cleanup and trash collection with the developer/home builder.

Temporary Sediment Basins:	**James Misciagno**	**919-372-7470**

Temporary sediment basins during construction (prior to the conversion to the final stormwater pond) are often quite unattractive. Concerns should be reported to James Misciagno at 919-372-7470 so that he can coordinate the cleaning and/or mowing of the slopes and bottom of the pond with the developer.

Stormwater Control Measures:	**Mike Deaton**	**919-249-3413**

Post-construction concerns related to Stormwater Control Measures (typically a stormwater pond) such as conversion and long-term maintenance should be reported to Mike Deaton at 919-249-3413.

Electric Utility Installation:	**Rodney Smith**	**919-249-3342**

Concerns with electric utility installation can be addressed by the Apex Electric Utilities Department. Contact Rodney Smith at 919-249-3342.

ELECTRONIC NEIGHBORHOOD MEETING ATTENDANCE SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Format: Zoom

Date of meeting: April 22, 2020 Time of meeting: 5:30-7:30

Property Owner(s) name(s): SM Raleigh LLC

Applicant(s): McAdams

Please list Electronic Neighborhood Meeting Attendees who provided their name and/or contact information either during the meeting or via phone/email before or after the meeting.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	Barbara Hinkle				
2.	Wayne Weaver				
3.	Steve and Cindy Swamp	2701 Southwinds Run			
4.	Pat and Nancy Woodward	2721 Southwinds Run			
5.	Jean Cheely	2601 Southwinds Run			
6.	Doug Whitley	2128 Castle Pines Dr			
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

SUMMARY OF DISCUSSION FROM THE ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): SM Raleigh LLC

Applicant(s): McAdams

Contact information (email/phone): Josh Decker | decker@mcadamsco.com | 919-361-5000

Meeting Format: Zoom

Date of meeting: April 22, 2020 Time of meeting: 5:30-7:30

Please summarize the questions/comments and your response from the Electronic Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:
Was there a retaining wall on the originally approved plan?

Applicant's Response:
Yes, there was a retaining wall on the original plan.

Question/Concern #2:
Can we improve the Type D buffer on Kelly Rd?

Applicant's Response:
This buffer is designed as street trees and will remain as is on the approved plan.

Question/Concern #3:
What is the price range on the homes for this development?

Applicant's Response:
We are unsure with the current market, but they will most likely be around the 400k range.

Question/Concern #4:
Can you make the Kelly Road buffer a Type A buffer?

Applicant's Response:
We most likely couldn't fit a Type A buffer within the given 10 feet. This buffer will remain a Type D, as it is on the approved plans.

SUMMARY OF DISCUSSION FROM THE ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): SM Raleigh LLC

Applicant(s): McAdams

Contact information (email/phone): Josh Decker | decker@mcadamsco.com | 919-361-5000

Meeting Address: Virtual - Zoom Meeting

Date of meeting: April 22, 2020 Time of meeting: 5:30-7:30

Please summarize the questions/comments and your response from the Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

Could you look at the amenity near our property (Woodward)? We don't want to much noise coming from that area or children wandering over to our property.

Applicant's Response:

This amenity is a lawn area and is located over 250 feet away from your property. There are not plans to have play equipment here, so noise from children shouldn't be an issue.

Question/Concern #2:

If you want to start building in the fall, you will need to make sure internet service is available. Having better internet service is something we are looking forward to with this new development.

Applicant's Response:

Thank you, that is something we will consider.

Question/Concern #3:

Applicant's Response:

Question/Concern #4:

Applicant's Response:

AFFIDAVIT OF CONDUCTING AN ELECTRONIC NEIGHBORHOOD MEETING AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Brian Ketchem, do hereby declare as follows:
Print Name

1. I have conducted an Electronic Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.

2. The meeting invitations were mailed to the Apex Planning Department, all property owners within 300 feet of the subject property and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the Electronic Neighborhood Meeting.

3. The meeting was conducted via Zoom (indicate format of meeting) on April 22, 2020 (date) from 5:30 (start time) to 7:30 (end time).

4. I have included the mailing list, meeting invitation, attendance sheet issue/response summary, and zoning map/reduced plans with the application.

5. I have prepared these materials in good faith and to the best of my ability.

_____ By: _____
Date

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, on this the _____day of _____, 20_____.

SEAL

_____
Notary Public

_____
Print Name

My Commission Expires: _____

AFFIDAVIT OF CONDUCTING AN ELECTRONIC NEIGHBORHOOD MEETING AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, _____, do hereby declare as follows:
Print Name

1. I have conducted an Electronic Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.

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4. I have included the mailing list, meeting invitation, attendance sheet issue/response summary, and zoning map/reduced plans with the application.

5. I have prepared these materials in good faith and to the best of my ability.

4/28/2020
Date

By: _____

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Stephanie A. Hedrick, a Notary Public for the above State and County, on this the 28th day of April, 2020.

SEAL

STEPHANIE A. HEDRICK NOTARY PUBLIC WAKE COUNTY, NC

Stephanie A. Hedrick
Notary Public

Stephanie A. Hedrick
Print Name

My Commission Expires: 08/02/2020

WEST VILLAGE PUD

PD PLAN FOR PUD CZ

APEX, NORTH CAROLINA

Dated November 2, 2015

Revised: December 4, 2015

Revised: January 15, 2016

Revised: April 15, 2016

Revised: May 2, 2016

Revised: July 1, 2016

Revised: July 26, 2016

Revised: August 3, 2016

Revised: May 1, 2020

Revised: June 12, 2020

Revised: June 24, 2020

PREPARED FOR:
Town of Apex

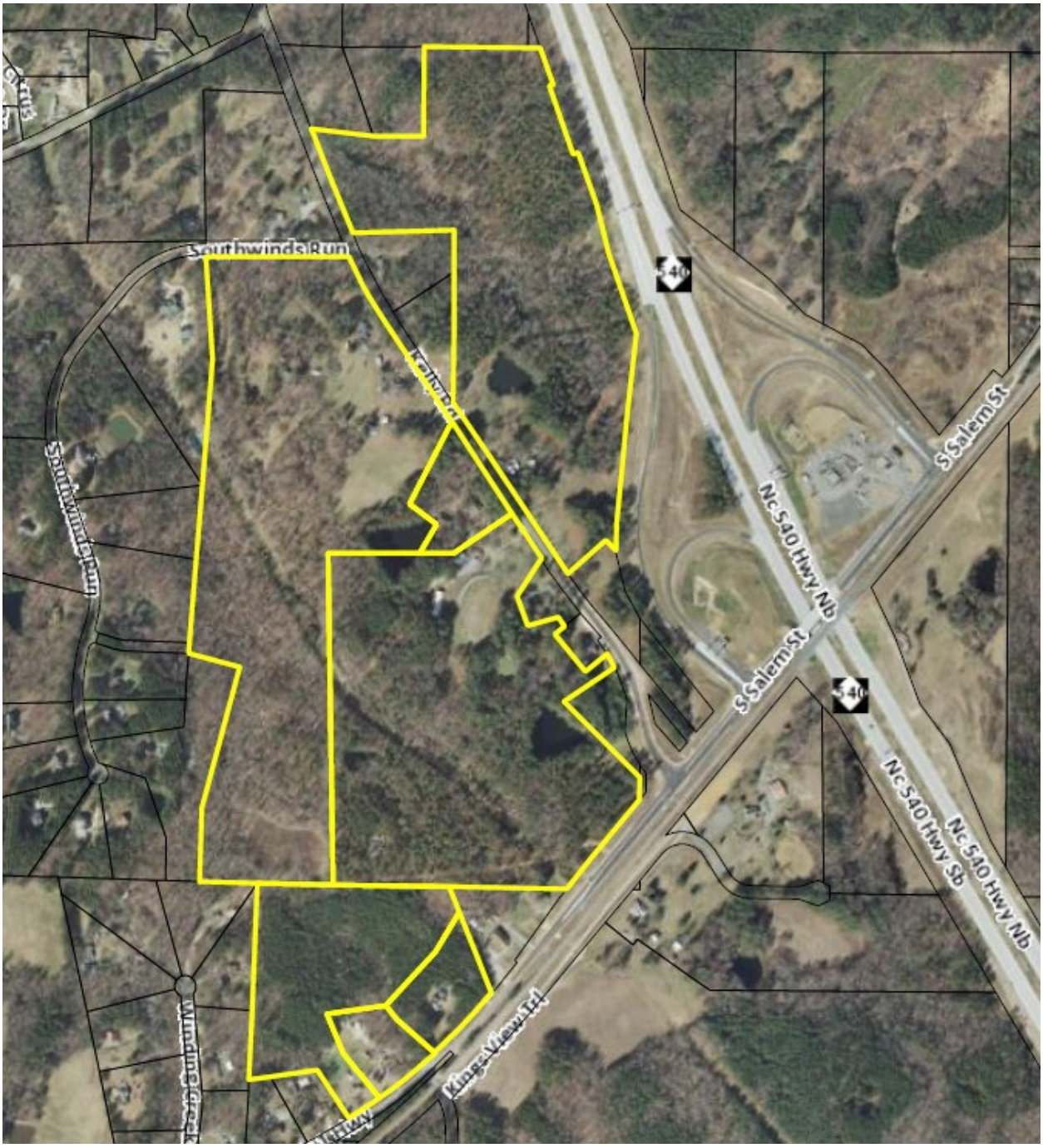
C/O Stanley Martin Homes
4020 Westchase Blvd
Suite 470
Raleigh, NC 27607

PREPARED BY:
THE JOHN R. MCADAMS COMPANY
BOB ZUMWALT, RLA
JOSH DECKER, RLA

Section 1: Table of Contents – PUD Text

Section 1: Table of Contents
Section 2: Vicinity Map
Section 3: Project Data
Section 4: Purpose Statement
Section 5: Permitted Uses
Section 6: Proposed Design Controls
Section 7: Proposed Architectural Controls
Section 8: Parking and Loading
Section 9: Signage
Section 10: Natural Resource and Environmental Data
Section 11: Stormwater Management
Section 12: Parks and Recreation
Section 13: Public Facilities
Section 14: Phasing Plan
Section 15: Consistency with Land Use Plan
Section 16: Compliance with UDO

Section 2: Vicinity Map



Section 3: Project Data

A. Name of Project: West Village PUD

B. Applicant

Owner/Developer: Stanley Martin Homes
4020 Westchase Blvd
Suite 470
Raleigh, NC 27607

Prepared By: The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

C. Current Zoning Designation:
PUD-CZ (#15CZ33)

D. Proposed Zoning Designation:
PUD-CZ

E. Current 2045 Land Use Map Designation:
High Density Residential, Office Employment, Commercial Services, and Medium Density Residential.
Acreages below are approximate as the line separating Land Use Map uses isn't surveyed. Acreages and ratios below based upon total project acreage of 163.34 acres.

Medium Density Residential Acreage – 33.47 Acres (20.75% of Project Total)
Mixed-Use Acreage – 129.87 Acres (79.25% of Project Total, 38.96 acres required to be non-residential based on minimum 30% requirement

F. Proposed 2045 Land Use Map Designation:
The proposed PUD includes a mix of residential (maximum of 380 units) and non-residential uses (500,000 square feet maximum) which is consistent with the current land use designation of High Density Residential, Office Employment, Commercial Services, and Medium Density Residential. Acreages and ratios below based upon total project acreage of 163.34 acres.

Proposed Residential – maximum of 380 units (up to 6 units/acre allowable)

- 3.55 units/residential use acre

Proposed Non-Residential – up to 55.99 acres, up to 500,000 SF

- 43.11% of Mixed-Use designation

G. Area of Tracts and Property Ownership

Total Gross Acreage within PUD: 163.34 Acres
Net Acreage following Right-of-Way Dedication: 161.34

Property Identification Number (PIN):
0731331798
0731441619
0731329405
0731311773
0731318157
0731422153
0731434504
0731441619
0731338590
0731435707
0731434767

Section 4: Purpose Statement

The West Village PUD development concept intends to provide a mix of residential housing opportunities and non-residential uses that are consistent with the Town's stated PUD goal to provide site specific, high quality neighborhoods that exhibit natural feature preservation as well as compatibility with, and connectivity to, surrounding land uses. It is the intent of this development to comply with the PUD development parameters and design controls set forth in the Town's UDO (Section 2.3.4 (F) (1)(a)(i)-(vi). More specifically, this plan will:

- Allow uses that are compatible with Section 4.2.2, *Use Table* of the UDO.
- Offer a mix of non-residential and residential uses, including single-family detached lots, detached townhomes and attached townhomes. The maximum development density for each uses is provided for in this PUD Plan.
- Demonstrate dimensional standards that are consistent with the UDO, and where variances occur, said variances will be included herein and subject to Council approval.

- Provide a variety of residential and non-residential uses that are linked by a network of connected streets and pedestrian sidewalk and trail networks in a way that promotes connectivity, walkability and healthy lifestyles.
- Provide distinctive style architecture and housing which is compatible with the Land Use Plan and value expectations of surrounding properties.
- The Developer shall provide two locations for public art located within the proposed roundabouts and/or commercial areas, to be coordinated with the Town of Apex.

All site specific standards and conditions of this PD Plan shall be consistent with all Conditional Zoning (CZ) District standards set forth in the UDO Section 2.3.3, *Conditional Zoning Districts*. The proposed PUD, with a maximum density of 380 units per acre and 500,000 square feet of non-residential uses will provide a development density that is consistent with the 2045 Land Use Plan designations of High Density Residential, Office Employment, Commercial Services, and Medium Density Residential. The Advance Apex 2045 Plan describes medium density residential use as primarily single-family, duplexes, and townhomes between 3 and 7 dwelling units per acre, a density that will act as a transition between more urbanized areas of Apex to lower density neighborhoods in the western part of the study area. Not only is the proposed PUD consistent with the future land use plan, it provides an effective transition from the high intensity intersection of Old US HWY 1 and NC HWY 540 to the existing lower density neighborhood to the north and west. The project will transition from non-residential uses at intersection of Old US HWY 1 and NC HWY 540 to townhomes and finally single-family detached homes adjacent to the lower density residential to the west. Road improvements, meeting Town of Apex standards, will allow connectivity within the development and to adjoining infrastructure, while a sidewalk network will offer pedestrian linkages as an alternative transportation modality.

Section 5: Permitted Uses

The development will include residential and non-residential uses. Specifically, the permitted uses shall include:

Residential

Housing (front loaded or alley loaded)

- Single-Family
- Townhouse
- Townhouse, detached

Utilities

- Utility, minor

Recreational Uses

- Greenway
- Park, Active
- Park, Passive
- Recreation facility, private

Non-Residential

Public and Civic Uses

- Assembly Hall, Non-profit/for-profit
- Church
- Cemetery
- Day Care Facility
- School, Public or Private
- Veterinary Clinic or Hospital
- Vocational School
- Drop-in or Short-Term Child Care

Utilities

- Communication Tower, Commercial (limited to the existing tower)
- Utility, minor

Recreational Uses

- Entertainment, Indoor
- Greenway
- Park, Active
- Park, Passive
- Recreation facility, private

Food and Beverage Service

- Restaurant, drive-through
- Restaurant, general

Office and Research

- Medical or dental clinic or office
- Office, business or professional

Public Accommodation

- Hotel or motel

Retail Sales and Service

- Barber and beauty shop
- Book store
- Building supplies, retail
- Convenience store
- Convenience store with gas sales
- Dry cleaners and laundry service
- Farmer’s market
- Financial institution
- Floral shop
- Funeral home
- Gas and fuel, retail
- Greenhouse or nursery, retail
- Grocery, general
- Grocery, specialty
- Health/fitness center or spa
- Laundromat
- Newsstand or gift shop
- Personal service
- Pharmacy
- Printing and copying services, limited
- Retail sales, bulky goods
- Retail sales, general
- Studio for art
- Tailor shop
- Theatre
- Pet services
- Artisan studio

Section 6: Proposed Design Controls

A. Residential Densities and Design Controls Density

- Maximum Units: 380 units
- Maximum built upon area: 70% (impervious)

Single-Family

- Minimum lot size: 7,000 square feet (8,000 SF average, minimum of 10,000 SF within 100' of Westwinds neighborhood off of Southwinds Run)
- Minimum lot width: 55 feet
- Front setback: 20 feet
- Side setback: 5 feet
- Corner side setback: 10 feet
- Rear setback: 15 feet
- Maximum building height: 36 feet (front façade, basements could increase height of floor to roof on rear façade)

Townhomes

- Minimum lot size: Not applicable
- Minimum lot width: 22 feet
- Front setback: 10 feet (alley loaded units)
  18 feet (garage front units)
- Side setback: 0 feet
- Building separation: 16 feet
- Rear setback: 5 feet (alley loaded units)
  10 feet (garage front units)
- Maximum building height: 45 feet; 3 story

Townhomes (Detached)

- Minimum lot size: Not applicable
- Minimum lot width: 22 feet
- Front setback: 10 feet (alley loaded units)
  18 feet (garage front units)
- Side setback: 3 feet
- Corner side setback: 10 feet
- Rear setback: 5 feet (alley loaded units)
  10 feet (garage front units)
- Maximum building height: 45 feet; 3 story

B. Non-Residential Densities and Design Controls

- Maximum Density: 500,000 square feet
- Minimum lot size: 5,000 square feet
- Minimum lot width: None
- Front setback: 5 feet
- Side setback: 5 feet
- Corner side setback: 5 feet
- Rear setback: 5 feet
- Maximum building height: 75 feet; 5 story
- Maximum built upon area: 70% (impervious)

C. Landscaping, Buffering, and Screening

All landscape, buffering and screening standards shall comply with buffer types and widths, shown on sheet C-2 of the PUD plans. However, along the new Street A and new Street B through Commercial Pod – 3 and the Residential area off of Old US HWY 1 no streetscape buffers will be required based on the option to alley load homes or buildings on the street. The 30' Type E Buffer along Old US HWY 1 frontage shall apply to residential and non-residential uses as shown on sheet C-2. Additionally, a portion of the 40' buffer along the western side of PIN 0731331798 will be disturbed and replanted to meet Type A standards, as shown on sheet C-2. This is to allow grading within the buffer and reduce retaining wall height to minimize adverse visual impacts for the neighbouring property.

Section 7: Proposed Architectural Controls

The proposed development will exhibit quality architectural aesthetics to establish a neighborhood theme while allowing architectural diversity. Basic architectural controls are included to ensure a consistency of character throughout the development while providing flexibility for variety, thus avoiding monotony.

Three (3) distinct residential areas are envisioned for West Village and will be comprised of attached townhomes, detached townhomes and detached single family homes. While the majority of the homes are likely to have front load garages, it is anticipated a portion of the project will also integrate alley-loaded detached townhomes within at least one or possibly both of the townhome sections. The prevailing architecture scheme proposed is designed to promote a mix of "Americana" and "New Urbanism". There are 2 distinct townhome designs proposed, one is a Lake Cottage series utilizing a more natural material selection and earth tone color palette with wood and stone accents. The second townhome series is identified as an Urban American

design series with emphasis on clean lines and alternating materials to provide horizontal relief and additional interest. The color palate will be a soft series of brighter colors to incorporate diversity and vibrancy to the streetscape.

The single family detached homes will involve several different architectural styles including, but not only, Craftsman and Colonial melded into a diverse, eclectic and non-monotonous streetscape. Elevations will include gables, dormers and varying roof pitches to establish variation amongst facades. Colors used in the single family collection are expected to span a broad spectrum but generally softer in nature.

While each of the architectural series proposed will have their own identity, a number of common threads will link the different neighborhoods within West Village including the extensive use of front porches, metal accent roofs and decorative garage doors. Units shall not be the same color as the adjacent units. Elevations have been included below in an effort to represent the bulk, massing, scale and architectural style of the development.

URBAN AMERICAN

COLONIAL

LAKE COTTAGE

CRAFTSMAN

OUTDOOR LIVING

OPEN FLOOR PLANS

COVERD PORCHES ON ALL ELEVATIONS

SAMPLE COLOR PALETTE: COMBINES LAKE COTTAGE & URBAN AMERICAN

IMAGES ARE FOR CONCEPT PURPOSES ONLY

SINGLE FAMILY HOMES - 1 1/2 Story Homes

Architecture that incorporates Lake Cottage and Urban American styles, as well as Craftsman and Colonial to create an organic style that mimics the neighborhoods of the past.

Color palettes from Urban American and Lake Cottage collections will merge

Materials will be the stone, brick, metal, board & batten, shake and horizontal siding. Front doors and garage doors will match the architectural styles of the homes.

There will be covered porches on all elevations to encourage outdoor living and the sense of community.

WEST VILLAGE

APEX, NORTH CAROLINA

LIGHTER STAIN ACCENTS

WHITE GARAGE DOORS

LIGHT TRIM

SAMPLE COLOR PALETTE - COMBINED LAKE COTTAGE & URBAN AMERICAN

LAKE COTTAGE STYLE
TOWNHOMES
REAR LOAD GARAGE

- Covered Porches
- Stone
- Light Stain & Painted Wood Accents:
- Brackets & Columns
- Light Trims
- Metal Roofs (Accent)
- Bronze Detailing
- Multiple Siding Materials
  - Shake, Board & Batten, Lap
- Carriage Style Garage Doors with Glass

WEST VILLAGE

APEX, NORTH CAROLINA

STAINED WOOD COLUMNS

STAINED FRONT DOORS

DARK TRIM & WINDOWS

METAL ROOF ACCENTS

STONE

EXPOSED WOOD BEAMS

COLOR PALETTE INSPIRED BY NATURE

LAKE COTTAGE STYLE
TOWNHOMES
FRONT LOAD GARAGE
- Covered Porches
- Stone
- Wood Accents:
  - -Brackets - Front Doors
  - -Columns - Garage Doors with glass
- Dark Trims
- Metal Roofs (Accent)
- Bronze Detailing
- Multiple Siding Materials
  - Shake, Board & Batten, Lap

WEST VILLAGE
APEX, NORTH CAROLINA

IMAGES ARE FOR CONCEPT PURPOSES ONLY

Note: Third story living space may be included, however maximum heights per PUD will not be exceeded.

WHITE GARAGE DOORS WITH GLASS

CLEAN WINDOW GRID PATTERN

METAL ROOF

INDUSTRIAL STYLE LIGHT FIXTURES

URBAN AMERICAN
TOWNHOMES

Fresh Color Palette with Bright Doors
Clean Architectural Lines
Stone Accents
Carriage Garage Doors with Windows
Covered porches
Metal Roof (Accent)

COVERED PORCHES

BRIGHT DOOR COLORS

FRESH COLOR PALETTE

WEST VILLAGE
APEX, NORTH CAROLINA

IMAGES ARE FOR CONCEPT PURPOSES ONLY

Streetscape features may be used to help with establishing a framework for the proposed development. These features may include benches, trash receptacles, street and/or pedestrian lights compatible with their context. Other features may include markers, bollards, pole banners, and unique paving patterns.

Additional features used as focal points or key terminus points may be located within or around the development (i.e. gazebos, fountains, and public art). Other features not mentioned may be considered with administrative staff approval.

Residential Design Guidelines:

Single-Family Residential

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. All single-family homes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 20 inches from average grade across the front of the house to the finished floor level at the front door.
3. Garage doors must have windows, decorative details or carriage-style adornments on them.
4. The garage cannot protrude more than 4’ out from the front façade or front porch except where a side load garage condition presents itself.
5. The roof shall be pitched at 5:12 or greater.

Townhomes and Townhomes Detached

6. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
7. All townhomes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 12 inches from average grade across the front of the house to the finished floor level at the front door.
8. Roofline cannot be a single mass; it must be broken up either horizontally and/or vertically between, at minimum, every other unit.
9. Garage doors must have windows, decorative details or carriage-style adornments on them.
10. House entrances for units with front-facing single-car garages must have a prominent covered porch/stoop area leading to the front door.

Proposed Materials

Proposed materials will be of a similar palette to provide consistency of character along with visual interest. Exterior material that may be incorporated into any of the residential building products include:

- Cementitious siding, metal accent roofs
- Wood siding
- Stone or synthetic stone
- Brick

Additional exterior materials that are prohibited include:

- Aluminium siding

Additional building materials may be included with administrative staff approval.

In addition to the above design guidelines, Builders of residential homes shall install conduit from the electric panel box to the attic area appropriate to allow connection of a roof-installed solar panel system.

Non-Residential Design Guidelines:

- Buildings shall be arranged to define, create and activate edges and public places.
- Every effort shall be made to locate service and loading areas in the rear of structures. Where these features are located between the building and a public road, they will be designed in such a way that they do not distract from the character of the development and they will be screened in accordance with the UDO.
- Drive-thru lanes, pick-up windows and other like functions shall be allowable if located facing an adjacent street or drive. Landscaping and/or other architectural features should be used to create screening for these types of uses.
- Elevations of buildings facing a street shall incorporate detailing in keeping with the character and style of other architectural features.
- Elevations of corner buildings shall utilize design features such as variations in wall plane, variation in building mass and window placement to generate street interest.
- Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials and ornamental details as well as landscaping shall be incorporated to add visual interest.
- Differences of roof height, pitch, ridgelines and materials shall be used to create visual interest and avoid repetition.

Non-residential exteriors shall incorporate variation in materials. The primary (front) façade of the main buildings to be considered may include:

- Brick and/or stone masonry
- Decorative concrete block (integral color or textured)
- Stone accents
- Aluminium storefronts with anodized or pre-finished colors
- EIFS cornices, and parapet trim
- EIFS or synthetic stucco shall not be uses in the first four feet above grade and shall be limited to only 25% of each building façade
- Precast concrete
- Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material
- Soffit and fascia materials to be considered include EIFS with crown trim elements
- Cementitious siding

Non-residential buildings visible from public view shall be constructed with compatible materials. Rear elevations of non-residential buildings facing opaque landscape buffers or not visible from vehicular use areas or public rights-of-way may incorporate decorative concrete masonry, metal coping, or EIFS trim.

Exterior materials not allowable as a part of the development are as follows:

- Vinyl siding
- Painted, smooth faced concrete block
- Metal Walls

Section 8: Parking and Loading

All parking standards within the PUD will comply with Section 8.3, *Parking and Loading*, of the Town of Apex's UDO (effective date December 15, 2015).

Section 9: Signage

All signage for this PUD shall comply with Section 8.7, *Signs*, of the Town of Apex UDO. A Master Sign Plan shall be submitted by the developer that shows detailed location, dimensions, and materials of all signs, in accordance with Section 8.7 referenced above, with any site plan submittal.

Off-Site Signage Conditions

Developer shall design and construct neighborhood sign for adjacent Westwinds community at intersection of Southwinds Run and Kelly Road. A sign easement will be

coordinated with adjacent land owners to confirm location as the location will need to be platted and recorded.

Section 10: Natural Resource and Environmental Data

A. River Basins and Watershed Protection Overlay Districts

The project is located primarily Cape Fear River Basin. The project site is located within the Primary Watershed Protection Overlay District as shown on the Town of Apex watershed map. Given this overlay district, this PUD will comply with all built upon area, vegetated conveyances, structural BMP's and riparian stream buffer requirements of Section 6.1.7 (B)(1)-(4).

B. FEMA designated 100 year floodplains

The project site does not sit within a designated current or future 100 year floodplain as shown on the Town of Apex FEMA map and FIRM Panel 3720073100J, dated May 2, 2006.

C. Resource Conservation Areas (RCA) – Required and Provided

This PUD will be subject to, and meet the requirements of Section 8.1.2 of the UDO, *Resource Conservation Area* and Section 2.3.4, *Planned Development Districts*, as provided for within.

The PUD will preserve a minimum of 27% (including 2% required if the site is mass graded) of the gross project area as a Resource Conservation Area (RCA). Designated RCA areas will be consistent with the items listed in Section 8.1.2(B) of the Town's UDO. Preserved streams, wetlands, and associated riparian buffers provide the primary RCA's throughout the site. Additional RCA's are provided as stormwater management areas, and greenway trails which necessarily contribute to a walkable community as the project intends. RCA is transferrable from locations shown as a part of the exhibits associated with this PUD document. However, the minimums stated shall be met prior to full build out of the project. On-site ponds are intended to be drained and based on the outcome of those processes, developable land may be created and RCA relocated.

D. Landscaping, Buffering and Screening

This PUD will be subject to, and meet the requirements of Section 8.2.6 of the UDO, *Buffering* as provided for within. Please note the perimeter buffer associated with the

westernmost property line has been increased above the minimum 10’ required buffer in order to provide additional screening to the residential land located to the west of the project area. While a majority of this westernmost buffer includes 30’ of undisturbed buffer and 10’ of Type A (40’ total), a portion of the 40’ buffer along the western side of PIN 0731331798 will be disturbed and replanted to meet Type A standards, creating a 40’ Type A buffer, as shown on sheet C-2. Allowing grading in this portion of the buffer will allow for reduced retaining wall height, as requested by the neighbouring property owner.
The PUD will contain the following landscape buffers to separate adjacent land uses:

- Type A: Opaque
  This buffer functions as an opaque screen from the ground to a height of at least 6 feet. Plantings of deciduous and evergreen trees shall obtain a height at maturity of between 18 and 60 feet and have no unobstructed openings between tree canopies at maturity. Large trees shall be spaced no wider than 15 feet at time of planting. Screening plants for the type a buffer shall be evergreen and between 5 and 6 feet tall at the time of installation (see plant standards sec. 8.2.2(b)). At least 50 percent of the required trees and 100 percent of the shrubs must be evergreen species.

- Type B: Semi-Opaque
  This buffer serves as a semi-opaque screen from the ground to a height of between 3 and 6 feet with openings no greater than 10 feet. Trees shall obtain a height of between 18 and 40 feet at maturity and have no unobstructed openings greater than 20 feet between canopies at maturity. Large trees shall be spaced no wider than 40 feet at time of planting, and small trees shall be spaced no more than 20 feet. At least 75 percent of the required shrubs must be evergreen species.

- Type D: Streetfront
  This buffer is intended to provide a softening of the view of a particular property from the street, without eliminating views to and from the property. This shall include at least one large type tree for every 1,000 square feet of buffer, or two small trees for every 1,000 square feet of buffer. Large trees may not be spaced more than 30 feet apart, and small trees no more than 15 feet apart. At maturity, these trees shall reach a height of at least 20 feet. A streetfront buffer is required along all private and public streets except thoroughfares and controlled access highways. However, along the new Street A and new Street B through Commercial Pod – 3 and the Residential area off of Old US HWY 1 no

streetscape buffers will be required based on the option to alley load homes or buildings on the street.

- Type E: Streetscape Buffers Along Thoroughfares.
  Streetscape buffers are required on all thoroughfares as shown on the adopted thoroughfare map. Streetscape buffers are to remain undisturbed to the maximum extent practicable except where no existing vegetation is present. However, along the new Street A and new Street B through Commercial Pod – 3 and the Residential area off of Old US HWY 1 no streetscape buffers will be required based on the option to alley load homes or buildings on the street.

E. Any historic structures present

One historic structure exists within Non-Residential Pod 1 and is shown on the Existing Conditions Plan and noted on the Preliminary Layout and Phasing Plan.

Prior to approval of a site plan for Non-Residential Pod 1 (subject property), a Historic Preservation Easement and Rehabilitation Agreement shall be established for historic structure(s) on the site with Capital Area Preservation (or such other agency as designated by the Town of Apex). The specific terms of the Historic Preservation Easement and Rehabilitation Agreement shall be as agreed to by the Owner and Capital Area Preservation (or such other agency as designated by the Town).

Efforts associated with removing, restoring or maintaining this structure will occur as a part of the non-residential development associated with this development pod. However, as a part of the road widening effort if conflicts arise as a part of required transportation or utility improvements, efforts to address this structure may happen prior to the non-residential development. Activities relating to the historic structure will be done in compliance with applicable UDO requirements, including Section 2.2.8.

Section 11: Stormwater Management

This PUD shall meet all stormwater management requirements for quality and quantity treatment in accordance with Section 6.1.7 of the UDO, such that:

- Post development peak runoff shall not exceed pre-development peak runoff conditions for the 1 year, 10 year, 25 year and 24 hour storm events.

- Treatment for the first 1 inch of runoff will provide for 85% removal of total suspended solids.

Acceptable stormwater structures shall include detention ponds, retention ponds, bio-retention areas, or other approved devices consistent with the NC DWQ Stormwater BMP Manual and the Town of Apex UDO.

Section 12: Parks and Recreation

This project was reviewed by the PRCR Advisory Commission on 12/9/2015 and fee in lieu was recommended for a maximum of 380 residential units.

No. Units	Housing Type	Fee Per Unit*	Total Fees
85	Single-family	$3,221.90	$273,861.50
294	Townhomes	$2,157.44	$634.287.36

**Fees are based upon approval date and runs with project with exception of the increase in total unit count.*

Section 13: Public Facilities

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F) (1) (f) and be designed according to sound engineering standards. Specifically, road and utility infrastructure shall be as follows:

- **General Roadway Infrastructure:**
  All proposed roadway infrastructure will be consistent with the Town of Apex UDO and Transportation Plan (updated in 2011), and the Traffic Impact Analysis approved by the Town of Apex and NCDOT. An internal road network will be provided in accordance with the Town's UDO. All road networks will promote connectivity wherever possible to adjacent neighborhoods, undeveloped property, nearby points of interest, and municipal destinations. Further, cul-de-sacs will be avoided except where environmental features make through streets unfeasible.

Roadway Phasing – Prior to time of the fifty-first certificate of occupancy associated with the residential located off of Old US HWY 1, the second point of access (southernmost portion of Street A), necessary portion of the southernmost roundabout and Street B shown shall be constructed. As a part of the non-residential development in Pod 3, the roundabout proposed on Kelly Road shall be constructed along with the portion of

Street A tying back to the southernmost roundabout. Prior to time of the first certificate of occupancy associated with Pod 3, Street A will be complete the connection from Kelly Road and Old US HWY 1.

- **Off-Site Transportation Conditions:**
  The project will also provide the following off-site transportation conditions:

All recommendations on state maintained roadways are subject to NCDOT review and approval as part of the driveway permits and encroachment agreements. Build 2018 refers to the first plat of residential development or as otherwise determined by Apex Town Council during the review and approval of subdivision plans. Build 2020 refers to the first plat of commercial development or as otherwise determined by Apex Town Council during the review and approval of commercial site plans. Internal Protected Storage Length (IPS) refers to the required minimum distance from the intersection along the proposed driveway or street before any full movement commercial driveway access or public street intersection will be allowed.

Developer shall provide right-of-way dedication along Kelly Road and Old US 1 based on a 100-foot right-of-way. Where Old US 1 abuts railroad right-of-way the developer shall be responsible for dedicating public right-of-way 70 feet from roadway centerline along the project frontage or as otherwise required to accommodate a 100-foot road right-of-way exclusive of railroad right-of-way.

Street 'A' and Street 'B' (including Kelly Road at Site Drive #4)

- Street 'A' shall be constructed as a 3-lane 38-foot curb and gutter street with 5-foot sidewalk on both sides on 62-foot public right-of-way.
- Street 'B' shall be constructed as a 2-lane 39'-foot curb and gutter street with on-street parking and 6-foot sidewalk on both sides on 53-foot public right-of-way.
- Residential driveway access shall not be permitted along Streets 'A' and 'B'.
- Prior to platting the 51st residential unit in the Residential area located adjacent to Old US 1, developer shall construct and dedicate as public Street 'A' from Site Drive #5 to the roundabout at Street 'B', roundabout serving Street 'A' at Street 'B', and Street 'B' from Site Drive #6/Pleasant Plains Road to the roundabout at Street 'A'.
- Prior to the first certificate of occupancy within POD 3, developer shall construct and dedicate as public Street 'A' from the roundabout at Street 'B' to Kelly Road at Site Drive #4 and construct a roundabout on Kelly Road at Site Drive #4. The roundabout will serve a 4-lane divided roadway to the north and 2-lane roadway to the south for Build 2020.

Kelly Road at Olive Chapel Road

- Developer shall construct a 200-foot eastbound right turn lane and a 300-foot additional westbound left turn lane on Olive Chapel Road (with southbound receiving through lane on Kelly Road) for Build 2020.

Kelly Road at Apex Barbecue Road

- Developer shall construct a 400-foot eastbound left turn lane, 350-foot westbound left turn lane, 350-foot northbound left turn lane, 150-foot northbound right turn lane, 350-foot southbound left turn lane, and 200-foot southbound right turn lane for Build 2020.

Kelly Road at Southwinds Run

- Developer shall construct a 100-foot northbound left turn lane on Kelly Road, an additional (second) northbound through lane through the intersection to drop as a right turn at Site Drive #1, and begin an additional (second) southbound through lane immediately south of Southwinds Run for Build 2020.

Old US 1 at Kelly Road

- Developer shall construct a 100-foot westbound right turn lane on Old US 1 for Build 2018.
- Developer shall convert the intersection to right-in/right-out as well as construct an additional westbound through lane, beginning at the NC 540 Southbound off-ramp as a free-flow right turn exiting the ramp, along with a 200-foot westbound right turn lane on Old US 1 for Build 2020.
- Prior to platting the 300th residential unit, the developer will complete a signal warrant analysis at the intersection of Old US 1 and Kelly Road to determine if a traffic signal is warranted at the intersection. If the signal is warranted and approved for installation by NCDOT, the developer will permit and install the traffic signal. However, if Street “A” through POD 3 is under construction prior to installation of the signal, then the requirement for the signal shall be waived and the Kelly Road / Old US 1 intersection shall be converted to a Right-In/Right-Out as required in the improvements for the commercial development.

NC 540 Ramps at Old US 1

- Developer shall provide a free-flow right turn lane for the NC 540 Southbound off-ramp and additional receiving through lane continuing west to drop as a right turn at Site Drive #6 on Old US 1 for Build 2020.

Old US 1 at Pleasant Plains Road & Site Drive #6

- Developer shall construct Site Drive #6 with a through-right lane and a 200-foot left turn lane for Build 2018.

- Developer shall construct a 200-foot eastbound left turn lane and 200-foot westbound left turn lane on Old US 1 for Build 2018.
- Developer shall install a traffic signal once warranted and approved by NCDOT and install communication with the NC 540 traffic signals.
- Developer shall construct an additional westbound through lane on Old US 1 to drop as a right turn lane at Site Drive #6 for Build 2020.
- Developer shall construct an additional eastbound through lane on Old US 1 beginning 400 feet west of Site Drive #6 for Build 2020.

Kelly Road at Site Drive #1

- Developer shall construct Site Drive #1 as a right-in and right-out only providing 100 feet IPS and a 100-foot northbound right turn lane on Kelly Road for Build 2018.
- Developer shall construct an additional northbound through lane on Kelly Road to drop as a right turn lane at Site Drive #1 for Build 2020.

Kelly Road at Site Drive #2

- Developer shall construct Site Drive #2 as a right-in and right-out only providing 100 feet IPS for Build 2018.
- Developer shall construct an additional northbound through lane and an additional southbound through lane on Kelly Road at Site Drive #2 for Build 2020.

Kelly Road at Site Drive #3

- Developer shall construct Site Drive #3 with a 100-foot eastbound right turn lane and a 100-foot westbound right turn lane on the Site Drive #3 approaches adjacent to through-right lanes with 200 feet IPS for Build 2018.
- Developer shall construct 100-foot northbound and 100-foot southbound left turn lanes on Kelly Road for Build 2018.
- Developer shall construct an additional (second) southbound through lane and additional (second) northbound through lane on Kelly Road at Site Drive #3 for Build 2020.

Old US 1 at Site Drive #5

- Developer shall construct Site Drive #5 as a full-movement intersection with 200-foot dual southbound left turn lanes and a 200-foot southbound right turn lane providing 300 feet IPS providing connectivity to both the residential and commercial phases for Build 2020.
- Developer shall construct an additional (second) westbound through lane and add a 200-foot westbound right turn lane on Old US 1 for Build 2020.

- Developer shall construct a 300-foot eastbound left turn lane and an additional (second) eastbound through lane on Old US 1 dropping 1000 feet east of the intersection for Build 2020.

- **Electric Charging Stations:**
  Developer shall provide 2 charging stations, one within the residential and one within the non-residential for electric vehicles within the overall project. In addition to these committed stations, two additional charging stations will be installed as part of the overall project.

- **Water & Sewer Utilities:**
  All **water and sanitary sewer** service will be provided by the developer and conform to the Town of Apex Public Works and Utilities Department requirements. Preliminary location and tie in points are shown on sheet C-3 and C-4 of the PUD plans. The water extension shown along Kelly Road to Old US HWY 1, alternatively, could be located through Pod – 3 Commercial and southernmost residential accomplishing the intent of the routing shown on sheet C-3 and C-4. The ultimate routing will be dictated by timing of commercial development, roadway construction internal to the site and timing commitment related to the extension. However, this will be coordinated with the Town of Apex at time of site plan and construction documents.

  Developer to provide $75,000 in escrow for use by the Westwinds community for insurance associated with community wells, for use in drilling new wells or to extend public water into the community as a primary or secondary water source. Ultimately, the well-related use of the funds will be determined by the Westwinds community. Land owners will be required to annex into the Town of Apex prior to making any connections to public water services provided by the Town.

- **Other Utilities:**
  Electricity will be provided by Apex Electric. Phone, cable and gas will be provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Section 14: Phasing Plan

This PUD will be completed in up to 10 phases. Location of phases will be determined at the time of Master Subdivision Review and Approval.

Section 15: Consistency with the Land Use Plan

The proposed development is consistent with the 2045 Land Use Map's goals and objectives. The project contains both medium density residential and mixed-use designations. In accordance with this designation, the plan proposes a mix of uses that include single-family detached lots, townhomes and non-residential uses. The proposed development is situated at the intersection of Old US HWY 1 and NC HWY 540, positioning the project at a key location for future non-residential uses. As such, the project is allocating 34.28% of the total site area to accommodate non-residential uses. However, as it relates to the Mixed-Use designation, 43.11% of that total area has been allocated for non-residential uses.

The neighborhood is designed to provide an effective transition from the high intensity intersection of Old US HWY 1 and NC HWY 540 to the existing lower density neighborhoods to the north and west. The project will transition from non-residential uses at the intersection of Old US HWY 1 and NC HWY 540 to townhomes and finally single-family detached homes adjacent to the lower density residential to the northwest.

All uses within the project will be designed with an interconnected system of walkable streets, trails, open spaces and recreational amenities, providing for a highly desirable place for Apex residences to work, shop, eat and live.

Section 16: Compliance with the UDO

The development standards adopted for this PUD are in compliance with all applicable sections of the Town's Unified Development Ordinance (UDO).

WEST VILLAGE

PLANNED DEVELOPMENT PLAN FOR PUD-CZ

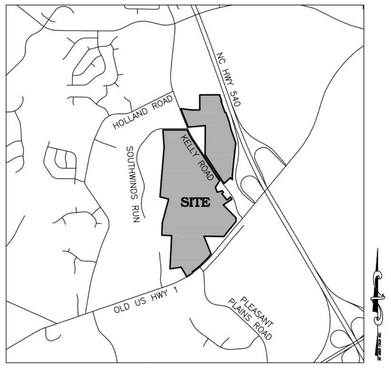
KELLY ROAD & OLD US HIGHWAY 1
APEX, NORTH CAROLINA
PROJECT NUMBER: SMH-17000

DATE: MAY 1, 2020
REVISED: JUNE 12, 2020
REVISED: JUNE 24, 2020

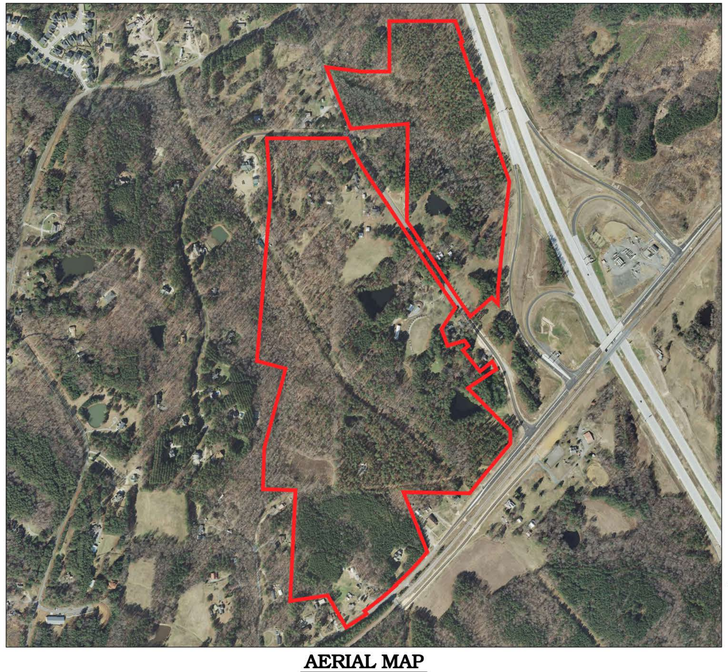
PLANNED DEVELOPMENT PLAN FOR:
WEST VILLAGE
APEX, NORTH CAROLINA
SMH-17000

SHEET INDEX

C-1 EXISTING CONDITIONS PLAN
C-2 PRELIMINARY LAYOUT & PHASING PLAN
C-3 PRELIMINARY UTILITY & STORMWATER MANAGEMENT PLAN
C-4 PRELIMINARY SANITARY SEWER OUTFALL



VICINITY MAP
NTS



AERIAL MAP
NTS

DEVELOPER:
STANLEY MARTIN HOMES
4020 WESTCHASE BOULEVARD, SUITE 190
RALEIGH, NC 27607
CONTACT: BRIAN KETCHUM
PHONE: 919-977-8760
EMAIL: KetchumBK@stanleymartin.com

OWNERS

1. SM RALEIGH LLC
PIN: 0731-44-1619
ZONING: PUD-CZ
USE: VACANT

2. FAHEY FAMILY FARM LLC
PIN: 0731-43-4504
ZONING: PUD-CZ
USE: RESIDENTIAL

3. FAHEY FAMILY FARM LLC
PIN: 0731-43-5707
ZONING: PUD-CZ
USE: VACANT

4. FAHEY FAMILY FARM LLC
PIN: 0731-43-4767
ZONING: PUD-CZ
USE: VACANT

5. SM RALEIGH LLC
PIN: 0731-33-1798
ZONING: PUD-CZ
USE: VACANT

6. SEARS, TONY C & JUDY T
PIN: 0731-33-8590
ZONING: PUD-CZ
USE: FORESTRY

7. SEARS, TONY C & JUDY T
PIN: 0731-33-8863
ZONING: PUD-CZ
USE: FORESTRY

8. SEARS, TONY C & JUDY T
PIN: 0731-32-9405
ZONING: PUD-CZ
USE: FORESTRY

9. SEARS, TONY C & JUDY T
PIN: 0731-42-2153
ZONING: PUD-CZ
USE: FORESTRY

10. SM RALEIGH
PIN: 0731-31-1773
ZONING: PUD-CZ
USE: VACANT

11. J&M STROUP LLC
PIN: 0731-31-8157
ZONING: PUD-CZ
USE: RESIDENTIAL

SITE DATA

DEVELOPER	STANLEY MARTIN HOMES 4020 WESTCHASE BLVD, SUITE 190 RALEIGH, NC 27607				
PARCELS	0731-44-1619	0731-33-1798	0731-42-2153		
	0731-43-4504	0731-33-8590	0731-31-1773		
	0731-43-5707	0731-33-8863	0731-31-8157		
	0731-43-4767	0731-32-9405			
	(SEE TABLE ON COVER SHEET FOR OWNER INFORMATION)				
SITE AREA	GROSS: 163.34 AC				
	R/W DEDICATION: 2.00 AC				
	NET: 161.34 AC				
EXISTING ZONING	PUD-CZ #15CZ33				
PROPOSED ZONING	PUD-CZ				
RIVER BASIN	CAPE FEAR				
WATERSHED OVERLAY	PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT				
MAX BUILT UPON AREA (IMPERVIOUS)	LESS THAN 70% (IMPERVIOUS)				
2045 LAND USE MAP DESIGNATION	HIGH DENSITY RESIDENTIAL, OFFICE EMPLOYMENT, COMMERCIAL SERVICES, AND MEDIUM DENSITY RESIDENTIAL				
EXISTING USE	RESIDENTIAL				
PROPOSED USE	UP TO 393 TOTAL RESIDENTIAL UNITS (SINGLE FAMILY & TOWNHOMES) UP TO 500,000 SF NON-RESIDENTIAL RECREATIONAL FACILITY (PRIVATE), PARK (ACTIVE), PARK (PASSIVE), UTILITY (MINOR) MIX OF USES RESIDENTIAL: 105.35 AC (65.30%) NON-RESIDENTIAL: 55.99 AC (34.70%)				
DENSITY	393 UNITS / 105.84 AC = 3.71 UNITS/AC				
		SINGLE FAMILY	TOWNHOME	TOWNHOME DETACHED	NON-RESIDENTIAL
LOT WIDTH	MINIMUM	55'	22'	22'	50'
LOT SIZE	MINIMUM	7,000 SF*	N/A	N/A	5,000 SF
	AVERAGE	8,000 SF	N/A	N/A	N/A
	*MINIMUM LOT SIZE FOR SINGLE FAMILY LOTS WITHIN 100' OF FAR WESTERN PROPERTY LINE (ADJACENT TO WESTWINDS SUBDIVISION) SHALL BE 10,000 SF				
SETBACKS	SIDE	5'	0'	3'	5'
	FRONT	20'	10'; OR 18' WHERE THERE IS A FRONT-LOADED GARAGE	10'; OR 18' WHERE THERE IS A FRONT-LOADED GARAGE	5'
	CORNER SIDE	10'	16' BUILDING SEPARATION	10' BUILDING SEPARATION	5'
	REAR	15'	10'; OR 5' TO ALLEY-LOADED GARAGE	10'; OR 5' TO ALLEY-LOADED GARAGE	5'
BUILDING HEIGHT	MAXIMUM	36'	45' (3-STORY)	45' (3-STORY)	75' (5-STORY)
FEMA FIRM PANEL	3720073100J				
RESOURCE CONSERVATION AREA (RCA)	27% MINIMUM (43.56 AC) INCLUDES 2% REQUIRED IF SITE IS MASS GRADED				
IMPERVIOUS SURFACE AREA	ALLOWED	112.94 AC (70%)			
	PROPOSED	36.71 AC (22.75%)			

TRANSPORTATION ZONING CONDITIONS

1. ALL RECOMMENDATIONS ON STATE MAINTAINED ROADWAYS ARE SUBJECT TO NCDOT REVIEW AND APPROVAL AS PART OF THE DRIVEWAY PERMITS AND ENCROACHMENT AGREEMENTS. BUILD 2018 REFERS TO THE FIRST PLAT OF RESIDENTIAL DEVELOPMENT OR AS OTHERWISE DETERMINED BY APEX TOWN COUNCIL DURING THE REVIEW AND APPROVAL OF SUBDIVISION PLANS. BUILD 2020 REFERS TO THE FIRST PLAT OF COMMERCIAL DEVELOPMENT OR AS OTHERWISE DETERMINED BY APEX TOWN COUNCIL DURING THE REVIEW AND APPROVAL OF COMMERCIAL SITE PLANS. INTERNAL PROTECTED STORAGE LENGTH (IPS) REFERS TO THE REQUIRED MINIMUM DISTANCE FROM THE INTERSECTION ALONG THE PROPOSED DRIVEWAY OR STREET BEFORE ANY FULL MOVEMENT COMMERCIAL DRIVEWAY ACCESS OR PUBLIC STREET INTERSECTION WILL BE ALLOWED.
2. DEVELOPER SHALL PROVIDE RIGHT-OF-WAY DEDICATION ALONG KELLY ROAD AND OLD US 1 BASED ON A 100-FOOT RIGHT-OF-WAY. WHERE OLD US 1 ABUTS RAILROAD RIGHT-OF-WAY THE DEVELOPER SHALL BE RESPONSIBLE FOR DEDICATING PUBLIC RIGHT-OF-WAY TO FEET FROM ROADWAY CENTERLINE ALONG THE PROJECT FRONTAGE OR AS OTHERWISE REQUIRED TO ACCOMMODATE A 100-FOOT ROAD RIGHT-OF-WAY EXCLUSIVE OF RAILROAD RIGHT-OF-WAY.
3. STREET 'A' AND STREET 'B' (INCLUDING KELLY ROAD AT SITE DRIVE #4)
   - STREET 'A' SHALL BE CONSTRUCTED AS A 3-LANE 38-FOOT CURB AND GUTTER STREET WITH 5-FOOT SIDEWALK ON BOTH SIDES ON 62-FOOT PUBLIC RIGHT-OF-WAY.
   - STREET 'B' SHALL BE CONSTRUCTED AS A 2-LANE 39'-FOOT CURB AND GUTTER STREET WITH ON-STREET PARKING AND 6-FOOT SIDEWALK ON BOTH SIDES ON 53-FOOT PUBLIC RIGHT-OF-WAY.
   - RESIDENTIAL DRIVEWAY ACCESS SHALL NOT BE PERMITTED ALONG STREETS 'A' AND 'B'.
   - PRIOR TO PLATTING THE 51ST RESIDENTIAL UNIT IN THE RESIDENTIAL AREA LOCATED ADJACENT TO OLD US 1, DEVELOPER SHALL CONSTRUCT AND DEDICATE AS PUBLIC STREET 'A' FROM SITE DRIVE #5 TO THE ROUNDABOUT AT STREET 'B', ROUNDABOUT SERVING STREET 'A' AT STREET 'B', AND STREET 'B' FROM SITE DRIVE #6/PLEASANT PLAINS ROAD TO THE ROUNDABOUT AT STREET 'A'.
   - PRIOR TO THE FIRST CERTIFICATE OF OCCUPANCY WITHIN POD 3, DEVELOPER SHALL CONSTRUCT AND DEDICATE AS PUBLIC STREET 'A' FROM THE ROUNDABOUT AT STREET 'B' TO KELLY ROAD AT SITE DRIVE #4 AND CONSTRUCT A ROUNDABOUT ON KELLY ROAD AT SITE DRIVE #4. THE ROUNDABOUT WILL SERVE A 4-LANE DIVIDED ROADWAY TO THE NORTH AND 2-LANE ROADWAY TO THE SOUTH FOR BUILD 2020.
4. KELLY ROAD AT OLIVE CHAPEL ROAD
   - DEVELOPER SHALL CONSTRUCT A 200-FOOT EASTBOUND RIGHT TURN LANE AND A 300-FOOT ADDITIONAL WESTBOUND LEFT TURN LANE ON OLIVE CHAPEL ROAD (WITH SOUTHBOUND RECEIVING THROUGH LANE ON KELLY ROAD) FOR BUILD 2020.
5. KELLY ROAD AT APEX BARBECUE ROAD
   - DEVELOPER SHALL CONSTRUCT A 400-FOOT EASTBOUND LEFT TURN LANE, 350-FOOT WESTBOUND LEFT TURN LANE, 350-FOOT NORTHBOUND LEFT TURN LANE, 150-FOOT NORTHBOUND RIGHT TURN LANE, 350-FOOT SOUTHBOUND LEFT TURN LANE, AND 200-FOOT SOUTHBOUND RIGHT TURN LANE FOR BUILD 2020.
6. KELLY ROAD AT SOUTHWINDS RUN
   - DEVELOPER SHALL CONSTRUCT A 100-FOOT NORTHBOUND LEFT TURN LANE ON KELLY ROAD, AN ADDITIONAL (SECOND) NORTHBOUND THROUGH LANE THROUGH THE INTERSECTION TO DROP AS A RIGHT TURN AT SITE DRIVE #1, AND BEGIN AN ADDITIONAL (SECOND) SOUTHBOUND THROUGH LANE IMMEDIATELY SOUTH OF SOUTHWINDS RUN FOR BUILD 2020.
7. OLD US 1 AT KELLY ROAD
   - DEVELOPER SHALL CONSTRUCT A 100-FOOT WESTBOUND RIGHT TURN LANE ON OLD US 1 FOR BUILD 2018.
   - DEVELOPER SHALL CONVERT THE INTERSECTION TO RIGHT-IN/RIGHT-OUT AS WELL AS CONSTRUCT AN ADDITIONAL WESTBOUND THROUGH LANE, BEGINNING AT THE NC 540 SOUTHBOUND OFF-RAMP AS A FREE-FLOW RIGHT TURN EXITING THE RAMP, ALONG WITH A 200-FOOT WESTBOUND RIGHT TURN LANE ON OLD US 1 FOR BUILD 2020.
8. NC 540 RAMPS AT OLD US 1
   - DEVELOPER SHALL PROVIDE A FREE-FLOW RIGHT TURN LANE FOR THE NC 540 SOUTHBOUND OFF-RAMP AND ADDITIONAL RECEIVING THROUGH LANE CONTINUING WEST TO DROP AS A RIGHT TURN AT SITE DRIVE #6 ON OLD US 1 FOR BUILD 2020.
9. OLD US 1 AT PLEASANT PLAINS ROAD & SITE DRIVE #6
   - DEVELOPER SHALL CONSTRUCT SITE DRIVE #6 WITH A THROUGH-RIGHT LANE AND A 200-FOOT LEFT TURN LANE FOR BUILD 2018.
   - DEVELOPER SHALL CONSTRUCT A 200-FOOT EASTBOUND LEFT TURN LANE AND 200-FOOT WESTBOUND LEFT TURN LANE ON OLD US 1 FOR BUILD 2018.
   - DEVELOPER SHALL INSTALL A TRAFFIC SIGNAL ONCE WARRANTED AND APPROVED BY NCDOT AND INSTALL COMMUNICATION WITH THE NC 540 TRAFFIC SIGNALS.
   - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL WESTBOUND THROUGH LANE ON OLD US 1 TO DROP AS A RIGHT TURN LANE AT SITE DRIVE #6 FOR BUILD 2020.
   - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL EASTBOUND THROUGH LANE ON OLD US 1 BEGINNING 400 FEET WEST OF SITE DRIVE #6 FOR BUILD 2020.
10. KELLY ROAD AT SITE DRIVE #1
    - DEVELOPER SHALL CONSTRUCT SITE DRIVE #1 AS A RIGHT-IN AND RIGHT-OUT ONLY PROVIDING 100 FEET IPS AND A 100-FOOT NORTHBOUND RIGHT TURN LANE ON KELLY ROAD FOR BUILD 2018.
    - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL NORTHBOUND THROUGH LANE ON KELLY ROAD TO DROP AS A RIGHT TURN LANE AT SITE DRIVE #1 FOR BUILD 2020.
11. KELLY ROAD AT SITE DRIVE #2
    - DEVELOPER SHALL CONSTRUCT SITE DRIVE #2 AS A RIGHT-IN AND RIGHT-OUT ONLY PROVIDING 100 FEET IPS FOR BUILD 2018.
    - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL NORTHBOUND THROUGH LANE AND AN ADDITIONAL SOUTHBOUND THROUGH LANE ON KELLY ROAD AT SITE DRIVE #2 FOR BUILD 2020.
12. KELLY ROAD AT SITE DRIVE #3
    - DEVELOPER SHALL CONSTRUCT SITE DRIVE #3 WITH A 100-FOOT EASTBOUND RIGHT TURN LANE AND A 100-FOOT WESTBOUND RIGHT TURN LANE ON THE SITE DRIVE #3 APPROACHES ADJACENT TO THROUGH-RIGHT LANES WITH 200 FEET IPS FOR BUILD 2018.
    - DEVELOPER SHALL CONSTRUCT 100-FOOT NORTHBOUND AND 100-FOOT SOUTHBOUND LEFT TURN LANES ON KELLY ROAD FOR BUILD 2018.
    - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL (SECOND) SOUTHBOUND THROUGH LANE AND ADDITIONAL (SECOND) NORTHBOUND THROUGH LANE ON KELLY ROAD AT SITE DRIVE #3 FOR BUILD 2020.
13. OLD US 1 AT SITE DRIVE #5
    - DEVELOPER SHALL CONSTRUCT SITE DRIVE #5 AS A FULL-MOVEMENT INTERSECTION WITH 200-FOOT DUAL SOUTHBOUND LEFT TURN LANES AND A 200-FOOT SOUTHBOUND RIGHT TURN LANE PROVIDING 300 FEET IPS PROVIDING CONNECTIVITY TO BOTH THE RESIDENTIAL AND COMMERCIAL PHASES FOR BUILD 2020.
    - DEVELOPER SHALL CONSTRUCT AN ADDITIONAL (SECOND) WESTBOUND THROUGH LANE AND ADD A 200-FOOT WESTBOUND RIGHT TURN LANE ON OLD US 1 FOR BUILD 2020.
    - DEVELOPER SHALL CONSTRUCT A 300-FOOT EASTBOUND LEFT TURN LANE AND AN ADDITIONAL (SECOND) EASTBOUND THROUGH LANE ON OLD US 1 DROPPING 1000 FEET EAST OF THE INTERSECTION FOR BUILD 2020.

THE JOHN R. McADAMS COMPANY, INC.
2905 Meridian Parkway
Durham, North Carolina 27713
License No.: C-0293
(800) 733-5646 ▪ McAdamsCo.com
Contact: Josh Decker
decker@mcadamsco.com

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

X:\Projects\ORL\ORL-15000\Planning\PUD-Rezoning\Current Drawings\ORL15000-CS1.dwg, 6/24/2020 9:24:05 AM, updegrove, 1:1

GENERAL NOTES

1. TOPOGRAHIC AND SURROUNDING PARCEL INFORMATION TAKEN FROM WAKE COUNTY GIS.

2. PORTION OF BOUNDARY BY SURVEY FROM BASS, NIXON & KENNEDY, INC. DATED 03-11-2015, ADDITIONAL BOUNDAY FROM WAKE COUNTY GIS.

3. PORTION OF PLANIMETRIC INFORMATION OBTAINED FROM SURVEY FROM BASS, NIXON & KENNEDY, INC. DATED 03-11-2015, ADDITIONAL PLANIMETRIC INFORMATION FROM BEST AVAILABLE SOURCES.

4. THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FIRM PANEL 3720073100J DATED MAY 2, 2006.

5. THERE ARE NO HISTORIC STRUCTURES ON THE SUBJECT PROPERTY.

6. A DEMOLITION PERMIT WILL NEED TO BE ISSUED PRIOR TO TAKING DOWN THE EXISTING STRUCTURES. A LETTER OF ASBESTOS ABATEMENT WILL NEED TO ACCOMPANY THE APPLICATION FOR PERMIT.

7. ALL EXISTING STRUCTURES ON THE SUBJECT PROPERTY SHALL BE REMOVED PER TOWN OF APEX STANDARDS AND REQUIREMENTS.

8. EXISTING PONDS #1 & 2 MAY BE DRAINED AT A LATER DATE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.

9. EFFORTS ASSOCIATED WITH REMOVING, RESTORING OR MAINTAINING THIS STRUCTURE WILL OCCUR AS A PART OF THE NON-RESIDENTIAL DEVELOPMENT ASSOCIATED WITH THIS DEVELOPMENT POD. HOWEVER, AS A PART OF THE ROAD WIDENING EFFORT IF CONFLICTS ARISE AS A PART OF REQUIRED TRANSPORTATION OR UTILITY IMPROVEMENTS, EFFORTS TO ADDRESS THIS STRUCTURE MAY HAPPEN PRIOR TO THE NON-RESIDENTIAL DEVELOPMENT. ACTIVITIES RELATING TO THE HISTORIC STRUCTURE WILL BE DONE IN COMPLIANCE WITH APPLICABLE UDO REQUIREMENTS, INCLUDING SECTION 2.2.8.

TREE LEGEND

A	ASH	20 T-Q — CALIPER INCH SIZE OF TREE; TYPE OF TREE; D FOR DOUBLE, T FOR TRIPLE
B	BIRCH	
C	CEDAR	
G	GUM	
H	HICKORY	
M	MAGNOLIA	
P	PINE	
PO	POPLAR	
PIO	PIN OAK	
PSO	POST OAK	
REO	RED OAK	
WAO	WATER OAK	
WHO	WHITE OAK	
WIO	WILLOW OAK	

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License No: C-0293
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McADAMS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 4170 JOSHUA A. DECKER

REVISIONS:	
1	2020-06-12 PER TOWN OF APEX COMMENTS
2	2020-06-24 PER TOWN OF APEX COMMENTS

DEVELOPER:
STANLEY MARTINHOMES
4020 WESTCHASE BOULEVARD, SUITE 190
RALEIGH, NC 27607

WEST VILLAGE

KELLY ROAD & OLD US HIGHWAY 1

APEX, NORTH CAROLINA

EXISTING CONDITIONS PLAN

PROJECT NO.	ORL-15000
FILENAME:	ORL15000-XC1
DESIGNED BY:	RCZ
DRAWN BY:	RLU
SCALE:	1"=200'
DATE:	05-01-2020
SHEET NO.	C-1

McADAMS

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

X:\Projects\ORL\ORL-15000\Planning\PUD-Rezoning\Current Drawings\ORL15000-XC1.dwg, 6/24/2020 9:20:39 AM, updegrove, 1:1

LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	S40°32'07"W	71.72
L2	S41°36'33"W	53.02
L3	S42°59'16"W	53.35
L4	S44°03'19"W	53.17
L5	S45°07'59"W	53.49
L6	S46°17'03"W	53.01
L7	S47°08'27"W	49.64
L8	S47°56'55"W	40.75
L9	S48°37'10"W	50.54
L10	S50°43'16"W	84.89
L11	S51°56'36"W	53.06
L12	S52°36'35"W	52.31
L13	S54°05'42"W	56.50
L14	S54°04'47"W	21.64
L15	S56°04'32"W	95.13
L16	S57°13'06"W	90.86
L17	N04°40'34"E	50.02
L21	S24°58'58"E	73.12
L22	S26°40'10"E	79.58
L23	S29°35'51"E	60.12
L24	S30°35'44"E	44.59
L25	S32°44'34"E	108.36

PHASING NOTES

1. THE PROPERTY WILL BE DEVELOPED IN UP TO 10 PHASES. THE TIMING AND AMOUNT OF PHASES WILL BE DEFINED AT THE TIME OF SITE PLAN REVIEW.

2. ACCESS POINTS ARE PRELIMINARY IN NATURE AND SUBJECT TO TOWN OF APEX AND NCDOT REVIEW AT TIME OF SITE PLAN REVIEW.

3. LIMITS OF LAND DISTURBANCE WITHIN EACH PHASE TO BE FINALIZED AT SITE PLAN PHASE.

4. PUBLIC UTILITIES SHALL BE PROVIDED FOR EACH PHASE.

5. ROADWAY PHASING – PRIOR TO TIME OF THE FIFTY-FIRST PLATTED LOT ASSOCIATED WITH THE RESIDENTIAL LOCATED OFF OF OLD US HWY 1, THE SECOND POINT OF ACCESS (SOUTHERNMOST PORTION OF STREET 'A'), NECESSARY PORTION OF THE SOUTHERNMOST ROUNDABOUT AND STREET 'B' SHOWN SHALL BE CONSTRUCTED. AS A PART OF THE NON-RESIDENTIAL DEVELOPMENT IN POD 3, THE ROUNDABOUT PROPOSED ON KELLY ROAD SHALL BE CONSTRUCTED ALONG WITH THE PORTION OF STREET 'A' TYING BACK TO THE SOUTHERNMOST ROUNDABOUT. PRIOR TO TIME OF THE FIRST CERTIFICATE OF OCCUPANCY FOR ANY COMMERCIAL WITHIN POD 3, STREET 'A' WILL BE FULLY CONSTRUCTED, CONNECTING KELLY ROAD TO OLD US HWY 1.

SITE NOTES

1. REFER TO PUD DOCUMENT FOR A COMPLETE LIST OF ALLOWABLE USES FOR EACH TRACT OR DEVELOPMENT AREA.

2. NO SITE DEVELOPMENT ACTIVITY INCLUDING BUT NOT LIMITED TO TESTING, CLEARING, INSTALLATION OF S&E MEASURES, OR GRADING, SHALL OCCUR UNTIL REQUIRED PROTECTION FENCING HAS BEEN INSTALLED AND INSPECTED. A PROTECTION FENCING INSTALLATION PERMIT MAY BE OBTAINED AT THE PLANNING DEPARTMENT OR BY CALLING 919-249-3426.

3. PROTECTION FENCING MUST BE PLACED AWAY FROM ANY SAVED TREE ONE FOOT FOR EACH INCH OF TREE CALIPER. PROTECTION FENCING MUST BE PLACED AT LEAST 10 FEET AWAY FROM ANY OTHER DESIGNATED RESOURCE CONSERVATION AREA, SUCH AS, BUT NOT LIMITED TO, HISTORIC BUILDINGS AND STRUCTURES, WETLANDS, AND PONDS. PROTECTION FENCING MUST BE PLACED ALONG THE OUTSIDE LINE OF THE 100-YEAR FLOODPLAIN, AND THE OUTSIDE EDGE OF ANY RIPARIAN BUFFER. ADDITIONAL PROTECTION FENCING MAY BE REQUIRED IN OTHER LOCATIONS CLOSE TO CONSTRUCTION ACTIVITY WHERE IT IS DEEMED NECESSARY BY THE ZONING ENFORCEMENT OFFICER; SUCH AREAS MAY INCLUDE BUT ARE NOT LIMITED TO, COMMON PROPERTY LINES OR NEAR PUBLIC AREAS (SIDEWALKS, ETC).

4. ALL GRADING AND SUPPORT STRUCTURES ASSOCIATED WITH ANY RETAINING STRUCTURE SHALL NOT ENCROACH INTO ANY REQUIRED BUFFER OR PROTECTED AREA (SUCH AS, BUT NOT LIMITED TO, RCA AND CRITICAL ROOT ZONES OF TREES, PUBLIC UTILITY EASEMENTS, AND RIGHTS-OF-WAY), AND SHALL BE CONTAINED ENTIRELY ON SITE.

5. SITE ELEMENTS REQUIRED TO SATISFY RECREATIONAL REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS FOUND IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PARKS AND RECREATION DEPARTMENT.

6. THE SCREENING OF TRASH CONTAINERS (INCLUDING DUMPSTERS AND ROLL-OUT CARTS), OUTDOOR STORAGE, MECHANICAL AND HVAC EQUIPMENT, AND SIMILAR FACILITIES ON THE ROOF, ON THE GROUND, OR ON BUILDINGS SHALL MEET THE REQUIREMENTS FOUND IN SECTION 8.2.8 OF THE UNIFIED DEVELOPMENT ORDINANCE; SPECIFICALLY SCREENING MUST BE DONE SO THAT:

A. IT IS INCORPORATED INTO THE OVERALL DESIGN THEME OF THE BUILDING AND LANDSCAPE.

B. SCREENING MATERIALS ARE NOT DIFFERENT FROM OR INFERIOR TO THE PRINCIPAL MATERIALS OF THE BUILDING OR LANDSCAPE, AND ARE SIMILAR IN MATERIALS AND COLOR.

C. SCREENED ITEMS ARE OUT OF VIEW FROM ADJACENT PROPERTIES AND PUBLIC STREETS, AND A TOTALLY OPAQUE SCREEN IS ACHIEVED.

D. ANY GROUND-MOUNTED HVAC OR OTHER MECHANICAL OR UTILITY EQUIPMENT SIX-FEET TALL OR HIGHER MUST BE FENCED AND LANDSCAPED.

E. DUMPSTER ENCLOSURES MUST MEET THE ABOVE REQUIREMENTS PLUS THEY MUST BE AT LEAST EIGHT-FEET TALL OR THE HEIGHT OF THE DUMPSTER, WHICHEVER IS TALLER; AND BE BUILT OF MASONRY MATERIAL.

7. ALL REQUIRED SITE ELEMENTS SHOWN WITHIN A PARTICULAR PHASE MUST BE INSTALLED BEFORE A FINAL CERTIFICATE OF OCCUPANCY MAY BE ISSUED FOR ANY BUILDING WITHIN THAT PHASE.

8. SITE ITEMS SUCH AS BUT NOT LIMITED TO, LIGHTING, LANDSCAPING (INCLUDING MULCH), SCREENING (i.e.: DUMPSTERS/TRASH, MECHANICAL/HVAC, ETC.), SITE STABILIZATION (SEEDING), AND PARKING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.

9. NO SIGNS ARE APPROVED AS PART OF THE PUD-CZ PLAN APPROVAL. A SEPARATE SIGN PERMIT MUST BE OBTAINED. SIGNAGE WILL COMPLY WITH APEX'S UDO.

10. EXACT ACCESS AND STUB LOCATIONS TO BE FINALIZED AT SUBDIVISION PLAN PHASE.

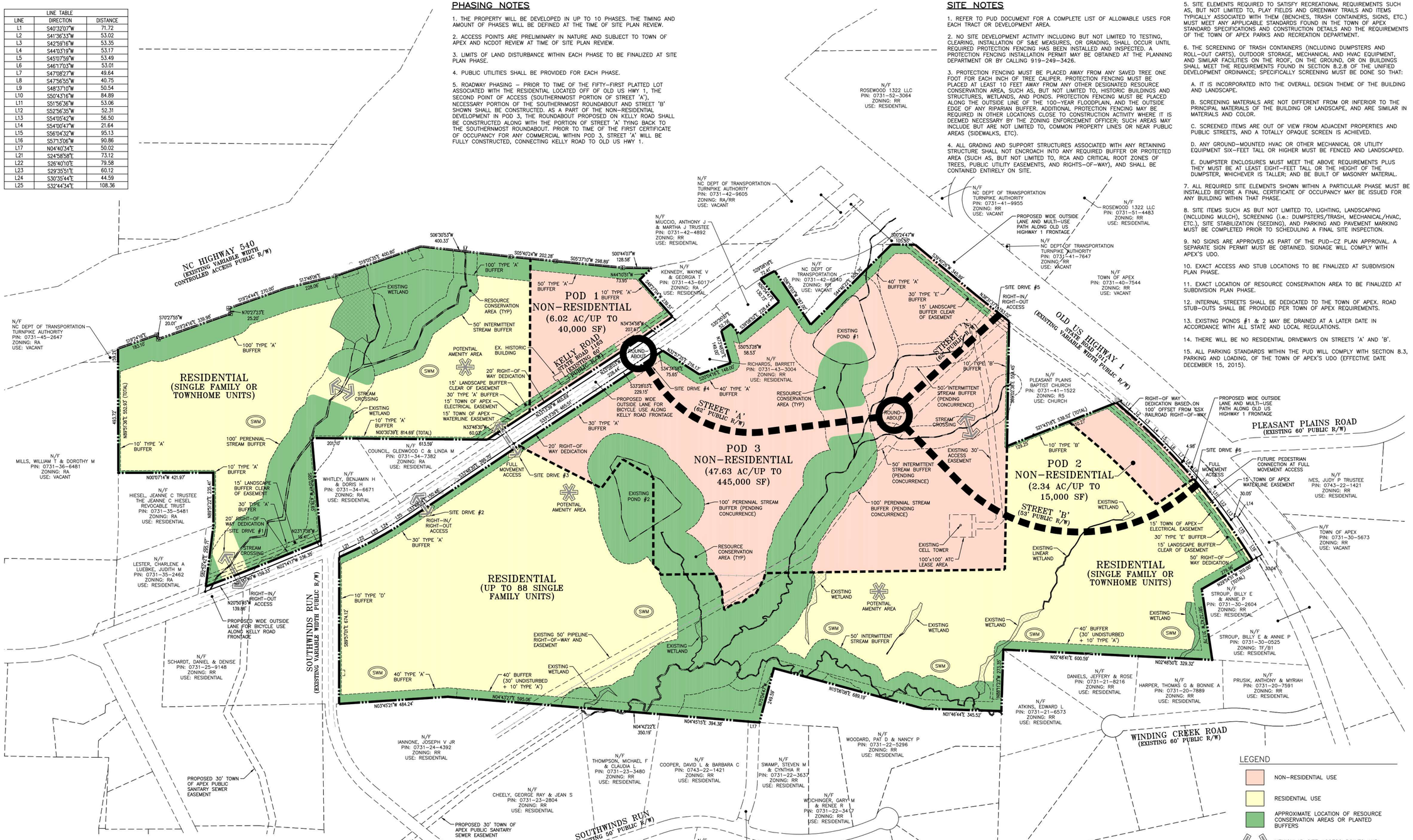
11. EXACT LOCATION OF RESOURCE CONSERVATION AREA TO BE FINALIZED AT SUBDIVISION PLAN PHASE.

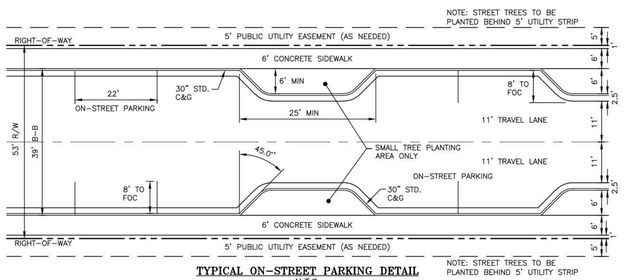
12. INTERNAL STREETS SHALL BE DEDICATED TO THE TOWN OF APEX. ROAD STUB-OUTS SHALL BE PROVIDED PER TOWN OF APEX REQUIREMENTS.

13. EXISTING PONDS #1 & 2 MAY BE DRAINED AT A LATER DATE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS.

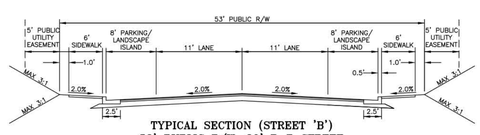
14. THERE WILL BE NO RESIDENTIAL DRIVEWAYS ON STREETS 'A' AND 'B'.

15. ALL PARKING STANDARDS WITHIN THE PUD WILL COMPLY WITH SECTION 8.3, PARKING AND LOADING, OF THE TOWN OF APEX'S UDO (EFFECTIVE DATE DECEMBER 15, 2015).

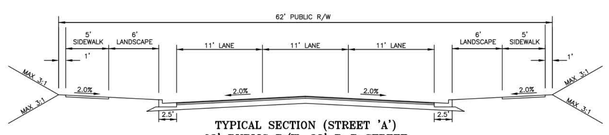




TYPICAL ON-STREET PARKING DETAIL
N.T.S.



TYPICAL SECTION (STREET 'B')
53' PUBLIC R/W, 39' B-B STREET
(TWO WAY WITH PARKING OR PLANTING AREA BOTH SIDES)
N.T.S.



TYPICAL SECTION (STREET 'A')
62' PUBLIC R/W, 38' B-B STREET
(TWO WAY WITH MIDDLE TURNING LANE)
N.T.S.

LEGEND

- NON-RESIDENTIAL USE
- RESIDENTIAL USE
- APPROXIMATE LOCATION OF RESOURCE CONSERVATION AREAS OR PLANTED BUFFERS
- VEHICULAR SITE ACCESS POINTS AND APPROXIMATE STREAM CROSSING LOCATIONS
- POSSIBLE LOCATION OF AMENITY AREA (1 TOTAL ON SITE)
- SWM — APPROXIMATE LOCATION OF STORMWATER MANAGEMENT FACILITY

NOTE: ALL ITEMS IN LEGEND OTHER THAN VEHICULAR SITE ACCESS POINTS ARE SHOWN CONCEPTUALLY, FINAL LOCATION OF AMENITIES, RCA, & STORMWATER MANAGEMENT FACILITIES WILL BE DETERMINED AT THE TIME OF SITE PLAN.

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

PRELIMINARY DRAWING – NOT RELEASED FOR CONSTRUCTION

THE JOHN R. McADAMS COMPANY, INC.
2905 Meridian Parkway
Durham, North Carolina 27713
License No.: C-0293
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McADAMS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 4770 JOSHUA A. DECKER

REVISIONS:
1 2020-06-12 PER TOWN OF APEX COMMENTS
2 2020-06-24 PER TOWN OF APEX COMMENTS

DEVELOPER:
STANLEY MARTINHOMES
4020 WESTCHASE BOULEVARD, SUITE 190
RALEIGH, NC 27607

WEST VILLAGE
KELLY ROAD & OLD US HIGHWAY 1
APEX, NORTH CAROLINA

PRELIMINARY LAYOUT & PHASING PLAN

PROJECT NO.	ORL-15000
FILENAME:	ORL15000-S1
DESIGNED BY:	RCZ
DRAWN BY:	RLU
SCALE:	1"=200'
DATE:	05-01-2020
SHEET NO.	C-2

McADAMS

X:\Projects\ORL\ORL-15000\Planning\PUD-Rezoning\Current Drawings\ORL15000-S1.dwg, 6/24/2020 9:22:27 AM, updegrove, Rich

UTILITY NOTES

1. THIS PROJECT WILL BE SERVED BY GRAVITY SEWER THAT WILL EXTEND OFF-SITE AND REQUIRE OFF-SITE EASEMENT ACQUISITION AND WILL ULTIMATELY CONNECT TO THE EXISTING GRAVITY SANITARY SEWER OUTFALL TO THE WEST NEAR THE MANORS AT BELLA CASA.

2. SITE WILL NOT UTILIZE PRIVATE SEWAGE DISPOSAL SYSTEMS.

3. WATERLINE SERVICE FOR THE PROJECT WILL BE EXTENDED FROM KELLY ROAD AND INTO THE SITE. THE WATER SYSTEM WILL BE LOOPED TO THE EXTENT POSSIBLE. THE MAIN WILL BE EXTENDED TO OLD US HIGHWAY 1 AND ALONG FRONTAGE.

4. UTILITY LAYOUT FOR WATER AND SEWER IS CONCEPTUAL. FINAL DESIGN WILL BE DETERMINED IN CONJUNCTION WITH THE OVERALL DEVELOPMENT PLAN AND DESIGNED PER THE TOWN OF APEX STANDARDS AND SPECIFICATIONS.

5. ALL IMPROVEMENTS STANDARDS APPLICABLE TO THE PUBLIC FACILITIES THAT WILL SERVE THE DEVELOPMENT SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE TOWN OF APEX UDO. ALL ON-SITE POTABLE WATER AND WASTEWATER LINES WILL BE DESIGNED ACCORDING TO SOUND ENGINEERING STANDARDS AND PROVIDED BY THE DEVELOPER. ANY REQUIRED EASEMENT ACQUISITION WILL OCCUR AT THE CONSTRUCTION DRAWING SUBMITTAL STAGE. ROUTING OF OTHER UTILITIES, TO INCLUDE ELECTRICITY, PHONE, CABLE AND GAS, WILL BE IN KEEPING WITH THE TOWN OF APEX STANDARDS AS CONTAINED WITHIN THE UDO.

6. ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHT-OF-WAYS TO BE OWNED, OPERATED AND MAINTAINED BY THE TOWN OF APEX.

7. ALL UTILITY EASEMENTS SHALL BE PROVIDED AS NECESSARY. DELINEATION WILL BE DETERMINED WITH FINAL DESIGN AT CONSTRUCTION DRAWINGS.

8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF APEX STANDARDS AND SPECIFICATIONS.

9. RESOURCE CONSERVATION AREAS (RCA) TO BE FINALIZED AT SUBDIVISION PLAN PHASE.

10. THERE ARE WETLANDS WITHIN THIS SITE. IT IS THE OWNER'S RESPONSIBILITY FOR WETLANDS JURISDICTION AND DISTURBANCE PRIOR TO ANY GRADING ACTIVITY.

STORMWATER NOTES

1. POST-DEVELOPMENT RUNOFF FLOW LEAVING NEWLY DEVELOPED SITES SHALL NOT EXCEED PRE-DEVELOPMENT PEAK RUNOFF CONDITIONS FOR THE 1-YEAR AND 10-YEAR, 24-HOUR STORM EVENT PEAK FLOWS IN ACCORDANCE WITH THE APEX UDO.

LEGEND

- PERENNIAL AND INTERMITTENT STREAM BUFFERS
- (SWM) APPROXIMATE LOCATION OF STORM WATER MANAGEMENT FACILITY
- APPROXIMATE ALIGNMENT OF PROPOSED SANITARY SEWER
- APPROXIMATE ALIGNMENT OF PROPOSED WATER LINE

GRAPHIC SCALE
200 0 100 200 400
1 inch = 200 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

THE JOHN R. McADAMS COMPANY, INC.
2905 Meridian Parkway
Durham, North Carolina 27713
License No: C-0293
(800) 733-5646 • McAdamsCo.com

McADAMS

NORTH CAROLINA PROFESSIONAL SEAL 33628 ENGINEER EVAN C. AKERS

REVISIONS:
1 2020-06-12 PER TOWN OF APEX COMMENTS
2 2020-06-24 PER TOWN OF APEX COMMENTS

DEVELOPER:
STANLEY MARTINHOMES
4020 WESTCHASE BOULEVARD, SUITE 190
RALEIGH, NC 27607

WEST VILLAGE
KELLY ROAD & OLD US HIGHWAY 1
APEX, NORTH CAROLINA

PRELIMINARY UTILITY & STORMWATER MANAGEMENT PLAN

PROJECT NO.	ORL-15000
FILENAME:	ORL15000-U1
DESIGNED BY:	RCZ
DRAWN BY:	RLU
SCALE:	1"=200'
DATE:	05-01-2020
SHEET NO.	C-3

McADAMS

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X:\Projects\ORL\ORL-15000\Planning\PUD-Rezoning\Current Drawings\ORL15000-U1.dwg, 6/24/2020 9:17:39 AM, updegrove, 1:1

PROPOSED POINT OF CONNECTION TO EX. 8" SANITARY SEWER (LOCATION TO BE FIELD VERIFIED)

PROPOSED SANITARY SEWER ALIGNMENT TO EXISTING SANITARY SEWER LINE TO BE DETERMINED BASED UPON OFF-SITE EASEMENT ACQUISITION AT TIME OF SITE PLAN

PROPOSED SANITARY SEWER ALIGNMENT TO EXISTING SANITARY SEWER LINE TO BE DETERMINED BASED UPON OFF-SITE EASEMENT ACQUISITION AT TIME OF SITE PLAN

PROPOSED 30' SANITARY SEWER EASEMENT

PROPOSED POINT OF CONNECTION TO EX. 24" WATER LINE

PROPOSED 20" WATER LINE

N/F CLARK, SUSAN T PIN: 0721-96-3687 ZONING: RR USE: VACANT

N/F CROCKETTS RIDGE PHASE II INC PIN: 0731-05-4167 ZONING: MO-CU USE: VACANT

N/F LEE, JAMES D & KARMA F PIN: 0721-94-7973 ZONING: RR USE: VACANT

N/F CARTER, THOMAS A PIN: 0731-14-0691 ZONING: RR USE: RESIDENTIAL

N/F BAKER, MYRTLE B HEIRS PIN: 0731-14-9865 ZONING: RR USE: VACANT

N/F TIMBERLAKE, BARBARA JO PIN: 0731-25-4251 ZONING: RA/RR USE: RESIDENTIAL

N/F MILLS, WILLIAM T & DOROTHY M PIN: 0731-36-6481 ZONING: RA USE: VACANT

N/F NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY PIN: 0731-45-2647 ZONING: RA USE: VACANT

N/F LESTER, CHARLENE A LUEBKE, JUDITH M PIN: 0731-35-2462 ZONING: RA USE: RESIDENTIAL

N/F HIESEL, JEANNE C TRUSTEE THE JEANNE C HIESEL REVOCABLE TRUST PIN: 0731-35-5481 ZONING: RA USE: RESIDENTIAL

N/F SCHARDT, DANIEL & DENISE PIN: 0731-25-9148 ZONING: RR USE: RESIDENTIAL

N/F DONNELLY, TIMOTHY L & CYNTHIA O PIN: 0731-14-9410 ZONING: RR USE: RESIDENTIAL

N/F IANNONE, JOSEPH V JR PIN: 0731-24-4392 ZONING: RR USE: RESIDENTIAL

N/F WHITLEY, BENJAMIN H & DORIS H PIN: 0731-34-8671 ZONING: RA USE: RESIDENTIAL

N/F COUNCIL, GLENWOOD C & LINDA M PIN: 0731-84-7382 ZONING: RA USE: RESIDENTIAL

N/F CHEELY, GEORGE RAY & JEAN S PIN: 0731-23-2804 ZONING: RR USE: RESIDENTIAL

N/F THOMPSON, MICHAEL F & CLAUDIA L PIN: 0731-23-3480 ZONING: RR USE: RESIDENTIAL

CROCKETTS RIDGE SUBDIVISION

VILLAGE AT CROCKETTS RIDGE SUBDIVISION

THE MANORS AT BELLA CASA SUBDIVISION

HOLLAND FARM SUBDIVISION

WOODLANDS CREEK WAY

COPPER RIDGE CT

UMBRIA COURT

NAPOLI DRIVE

STEEPLE CHASE BEND

CAMP BRANCH LANE

HOLLAND ROAD

SOUTHWINDS RUN (EXISTING VARIABLE WIDTH PUBLIC R/W)

NC HIGHWAY 540 (EXISTING VARIABLE WIDTH CONTROLLED ACCESS PUBLIC R/W)

KELLY ROAD (EXISTING VARIABLE WIDTH PUBLIC R/W)

10' TYPE 'A' BUFFER

100' TYPE 'A' BUFFER

30' TYPE 'D' BUFFER

20' RIGHT-OF WAY DEDICATION

100' PERENNIAL STREAM BUFFER

50' INTERMITTENT STREAM BUFFER

EXISTING WETLAND

10' TYPE 'D' BUFFER

40' TYPE 'A' BUFFER

40' BUFFER (30' UNDISTURBED + 10' TYPE 'A')

EXISTING 60' PIPELINE RIGHT-OF-WAY AND EASEMENT

EXISTING POND #2

SWM

LEGEND

- PERENNIAL AND INTERMITTENT STREAM BUFFERS
- SWM — APPROXIMATE LOCATION OF STORM WATER MANAGEMENT FACILITY
- APPROXIMATE ALIGNMENT OF PROPOSED SANITARY SEWER
- APPROXIMATE ALIGNMENT OF PROPOSED WATER LINE

GRAPHIC SCALE

200 0 100 200 400

1 inch = 200 ft.

NC GRID (NAD 83)

PRELIMINARY DRAWING – NOT RELEASED FOR CONSTRUCTION

THE JOHN R. McADAMS COMPANY, INC.
2905 Meridian Parkway
Durham, North Carolina 27713
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McADAMS

NORTH CAROLINA PROFESSIONAL SEAL 33628 ENGINEER LOGAN C. AKERS

REVISIONS:
1 2020-06-12 PER TOWN OF APEX COMMENTS
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DEVELOPER:
STANLEY MARTINHOMES
4020 WESTCHASE BOULEVARD,
SUITE 190
RALEIGH, NC 27607

WEST VILLAGE

KELLY ROAD & OLD US HIGHWAY 1

APEX, NORTH CAROLINA

PRELIMINARY SANITARY SEWER OUTFALL

PROJECT NO.	ORL-15000
FILENAME:	ORL15000-U1
DESIGNED BY:	RCZ
DRAWN BY:	RLU
SCALE:	1"=200'
DATE:	05-01-2020
SHEET NO.	C-4

McADAMS

X:\Projects\ORL\ORL-15000\Planning\PUD-Rezoning\Current Drawings\ORL15000-U1.dwg, 6/24/2020 9:18:36 AM, Updegrove, Rich

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PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: #20CZ05 West Village PUD Amendment

Planning Board Meeting Date: July 13, 2020

Report Requirements:

Per NCGS 160A-387, all proposed amendments to the zoning ordinance or zoning map shall have a written report provided from the Planning Board to the Town Council within 30 days of referral of the amendment to the Planning Board, or the Town Council may proceed in its consideration of the amendment without the Planning Board report. Furthermore, in no case is the Town Council bound by the recommendations, if any, of the Planning Board.

Per NCGS 160A-383, the Planning Board shall advise and comment on whether the proposed zoning amendment is consistent with all applicable officially adopted plans, and provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Town Council.

PROJECT DESCRIPTION:

Acreage:	±35.36 acres
PIN(s):	0731331798
Current Zoning:	Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)
Proposed Zoning:	Planned Unit Development-Conditional Zoning (PUD-CZ)
2045 Land Use Map:	Medium Density Residential & Mixed Use: High Density Residential/ Office Employment/Commercial Services
Town Limits:	Within Corporate limits

Applicable Officially Adopted Plans:

The Board must state whether the project is consistent or inconsistent with the following officially adopted plans, if applicable. Applicable plans have a check mark next to them.

☑ 2045 Land Use Map
☑ Consistent ☐ Inconsistent Reason: _____

☑ Apex Transportation Plan
☑ Consistent ☐ Inconsistent Reason: _____

☑ Parks, Recreation, Open Space, and Greenways Plan
☑ Consistent ☐ Inconsistent Reason: _____

Legislative Considerations:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1. *Consistency with 2045 Land Use Plan*. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Plan.
   ☑ Consistent ☐ Inconsistent Reason: _____

2. *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
   ☑ Consistent ☐ Inconsistent Reason: _____

3. *Zoning district supplemental standards*. The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 *Supplemental Standards*, if applicable.
   ☑ Consistent ☐ Inconsistent Reason: _____

4. *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.
   ☑ Consistent ☐ Inconsistent Reason: _____

5. *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
   ☑ Consistent ☐ Inconsistent Reason: _____

6. *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
☑ Consistent ☐ Inconsistent Reason: _____

7. *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.
☑ Consistent ☐ Inconsistent Reason: _____

8. *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
☑ Consistent ☐ Inconsistent Reason: _____

9. *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
☑ Consistent ☐ Inconsistent Reason: _____

10. *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.
☑ Consistent ☐ Inconsistent Reason: _____

Planning Board Recommendation:

Motion: Motion to recommend approval with conditions as submitted

Introduced by Planning Board member: Mark Steele

Seconded by Planning Board member: Reginald Skinner

☐ *Approval*: the project is consistent with all applicable officially adopted plans and the applicable legislative considerations listed above.

☑ *Approval with conditions*: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above, so the following conditions are recommended to be included in the project in order to make it fully consistent:

With conditions as submitted by applicant.

☐ *Denial*: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above.

With 6 Planning Board Member(s) voting "aye"

With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

This report reflects the recommendation of the Planning Board, this the 13 day of July 2020.

Attest:

Michael Marks Digitally signed by Michael Marks Date: 2020.07.14 08:02:15 -04'00'

Michael Marks, Planning Board Chair

Dianne Khin Digitally signed by Dianne Khin Date: 2020.07.13 16:43:08 -04'00'

Dianne Khin, Planning Director

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS
CONDITIONAL ZONING #20CZ05
West Village PUD Amendment

Pursuant to the provisions of North Carolina Statutes Section 160A-364 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board and Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant/Authorized Agent: Josh Decker, McAdams Co.
Property Address: 2412 Kelly Road
Acreage: ±35.36 acres
Property Identification Number (PIN): 0731331798
Current 2045 Land Use Map Designation: Medium Density Residential and Mixed Use: High Density Residential/Office Employment/Commercial Services
Existing Zoning of Property: Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)
Proposed Zoning of Property: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
73 Hunter Street, Apex, North Carolina
Council Chambers, 2nd Floor

Planning Board Public Hearing Date and Time: July 13, 2020 4:30 PM
If you would like to speak during the public hearing, you may sign-in ahead of time by emailing your name and address to bonnie.brock@apexnc.org.
If you are unable to attend, you may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. You may share comments by noon on Friday, July 10, 2020, following instructions in the Remote Participation policy. The policy includes options to provide comments by email (public.hearing@apexnc.org, 350-word limit) or voicemail (919-372-7300, 3-minute limit).

Town Council Public Hearing Date and Time: July 21, 2020 6:00 PM
If you are unable to attend, you may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. You may share comments by noon on Monday, July 20, 2020, following instructions in the Remote Participation policy. The policy includes options to provide comments by email (public.hearing@apexnc.org, 350-word limit) or voicemail (919-372-7300, 3-minute limit).

Vicinity Map:

Property owners within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may appear at the public hearing and be heard with respect to the application. Maps showing the location for the above site(s) to be considered in addition to a copy of the 2045 Land Use Map can be inspected at the Apex Town Hall or call 919-249-3426, Department of Planning and Community Development, for further information. To view the petition and related documents on-line: https://www.apexnc.org/DocumentCenter/View/31549.

Dianne F. Khin, AICP
Director of Planning and Community Development

Published Dates: June 26, 2020 – July 21, 2020

1:53 PM
Friday
6/26/2020

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS

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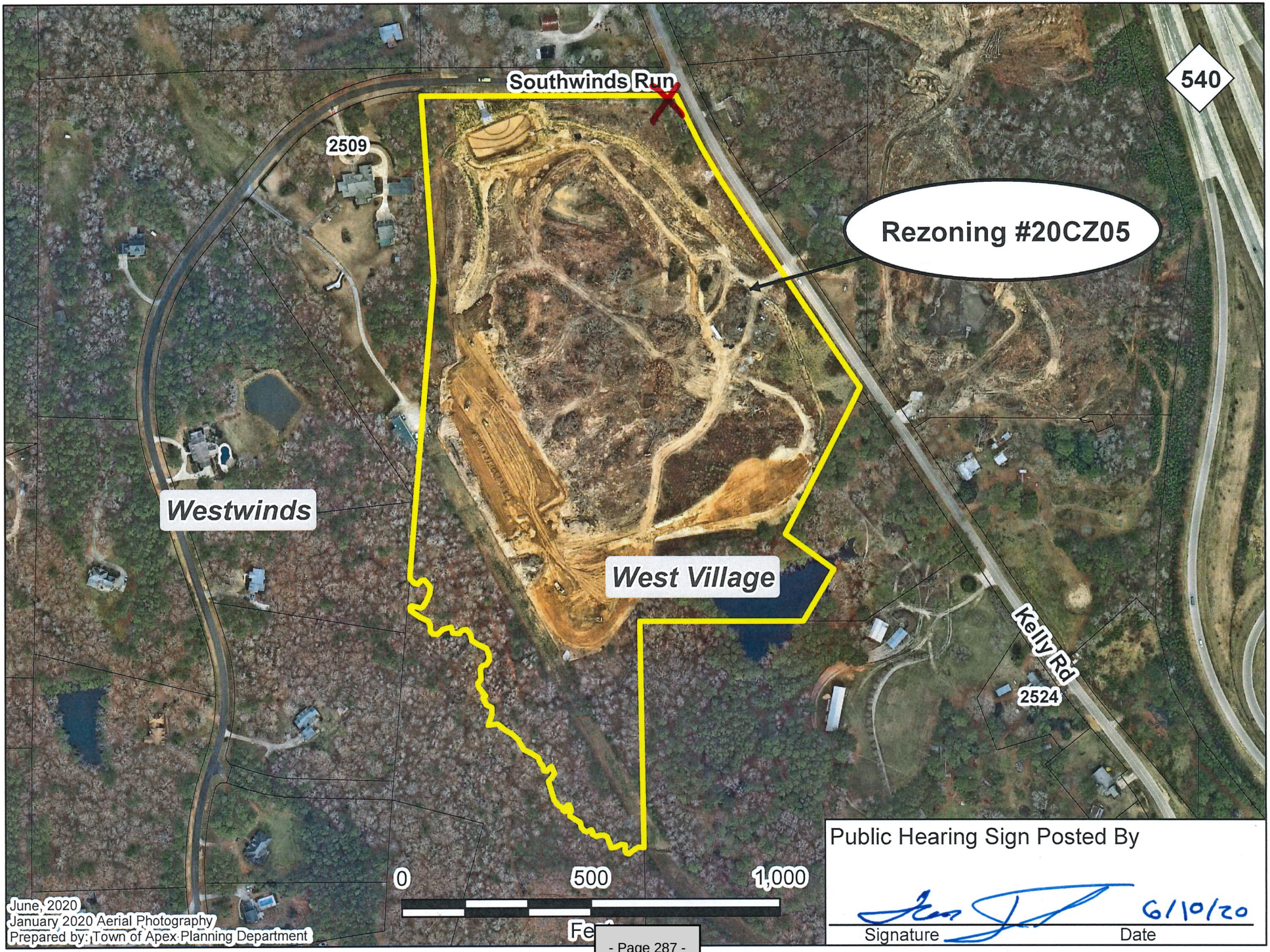
Dianne F. Khin, AICP
Director of Planning and Community Development

Published Dates: June 26, 2020 – July 21, 2020


Southwinds Run
540
2509
Rezoning #20CZ05
Westwinds
West Village
Kelly Rd
2524
0
500
1,000
June, 2020
January 2020 Aerial Photography
Prepared by: Town of Apex Planning Department
Public Hearing Sign Posted By
6/10/20
Signature
Date

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice

Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name:	Rezoning 20CZ05 West Village PUD
Project Location:	2412 Kelly Road
Applicant or Authorized Agent:	Josh Decker
Firm:	McAdams Company

This is to certify that I, as Planning Director, mailed or caused to have mailed by first class postage for the above mentioned project **June 26, 2020** a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners within 300' of the land subject to notification. I further certify that I relied on information provided to me by the above-mentioned person as to accuracy and mailing addresses of property owners within 300' of the land subject to notification.

6/26/2020
Date

Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Jeri Chastain Pederson, a Notary Public for the above State and County, this the 26 day of June, 2020.

Jeri Chastain Pederson
Notary Public

JERI CHASTAIN PEDERSON
Notary Public
Wake County, North Carolina
My Commission Expires
March 10, 2024

My Commission Expires: 03/10/2024

Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING
Meeting Date: July 21, 2020

Item Details

Presenter(s): Shelly Mayo, Planner II
Department(s): Planning and Community Development Department

Requested Motion

Quasi-Judicial Public Hearing and possible motion regarding a revised Major Site Plan for 540 Flex and Business Park located at 1600 Olive Chapel Road. The subject properties are identified on Wake County Tax Maps as PINs 0732235461 & 0732234710.

Approval Recommended?

No recommendation is made by Planning staff on Quasi-Judicial Public Hearings.

Item Details

The proposal is to revise the Major Site Plan that was approved in April 2014.

Attachments

- Vicinity Map
- Major Site Plan Application

STAFF REPORT

540 Flex and Business Park – Revised Major Site Plan

QUASI-JUDICIAL PUBLIC HEARING

July 21, 2020 Town Council Meeting

The purpose of the public hearing is to review, hear, consider and approve, approve with conditions, or disapprove the application for a Major Site Plan.

BACKGROUND INFORMATION:	
Location:	1600 Olive Chapel Road
Applicant/Owner:	Patrick Kiernan, Jones & Cnossen Engineering/540 Flex & Business Park, LLC
PROJECT DESCRIPTION:	
Acreage:	+/- 10.74 acres
PINs:	0732235461 & 0732234710
Current Zoning:	Tech/Flex-Conditional Zoning (TF-CZ #18CZ27)
Current 2045 Land Use Map:	Office Employment
Town Limits:	Inside Corporate Limits

ADJACENT ZONING & LAND USES:		
	Zoning	**Land Use**
North:	Rural Residential (RR #07ETJ24)	Single-family Residential (Chapel Ridge Subdivision)
South:	Medium Density Residential-Conditional Use (MD-CU #94CU17 & #94CU09) Medium Density Residential (MD #07RZ13)	Olive Chapel Road; Single-family Residential (Ashley Downs Subdivision)
East:	Office & Institutional-Conditional Zoning (O&I-CZ #16CZ11)	Olive Chapel Professional Park
West:	Rural Residential (RR)	NC 540 Hwy

EXISTING CONDITIONS:

The site consists of two (2) parcels totaling +/- 10.74 acres. It is located west of 540 and north of Olive Chapel Road. The original Major Site Plan was approved on April 15, 2014 and included 132,568 square feet of office, flex space, and storage in eight (8) buildings. The majority of the site has already been built, including all but the final portion of building A. The aerial image provided in the report is from June 2020.

NEIGHBORHOOD MEETING:

The applicant conducted a virtual neighborhood meeting on March 31, 2020. The meeting report is attached.

PROJECT DATA:

The Revised Major Site Plan is submitted to reflect changes to the area of Building E, the associated parking, the eastern buffer and the shape of the SCMs. The area of Building E was approved on the Major Site Plan as 4,250 ft^2 and then increased to 5,221 ft^2 when the building plans were approved. When the footprint of Building E increased at building plan approval, it caused the drive aisle to the east of the building to shift further east and encroach into the 60-foot Type A buffer. The uses to the east have changed since the original Major Site Plan was approved. The buffer currently required by the UDO is 15-foot Type B. The applicant is requesting to reduce the required buffer in that vicinity to a 25-foot Type A buffer. The remainder of the buffers on the plan are not affected.

Approved Uses & Zoning Conditions:

The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are

subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

1. Automotive Accessory Sales and Installation
2. Commissary
3. Contractor's office and storage yard
4. Glass sales
5. Health/fitness center or spa
6. Manufacturing and Processing, Minor
7. Medical or dental office or clinic
8. Monument sales, retail
9. Office, business or professional
10. Personal services
11. Pet services
12. Printing or copying service
13. Real estate sales
14. Repair services, limited
15. Retail sales, general
16. Security or caretaker quarters
17. Self-service storage
18. Studio for art
19. Tailor shop
20. Upholstery shop
21. Utility, minor
22. Warehousing
23. Wholesaling, general
24. Woodworking or cabinetmaking

CONDITIONS:

1. The buildings adjacent to Olive Chapel Road shall be designed to look like office buildings. They shall be constructed of entirely of masonry products on each façade and include storefront windows.
2. The buildings along NC 540 shall be constructed of entirely of masonry products on each façade and designed to look like office buildings.
3. The storage building area (including drives and parking) shall not cover more than sixty percent of the total project area.
4. The office building and flex space building area (including drives and parking) shall cover at least twenty percent of the total project area.
5. Each commissary use shall be limited to an interior area of no more than 5,000 square feet.
6. Evergreen screening with a 6' minimum height at time of planting will be provided from Olive Chapel Road along the eastern property line behind Building D.
7. The project shall provide rooftop solar systems that produce a minimum of 14KW of electricity. The system shall be installed and completed prior to signature of the final site plan plat for the last phase of the development.
8. The uses Commissary and Manufacturing and Processing, Minor shall only be located in buildings accessed behind the security gate.

Public Utilities:
The proposed Major Site Plan utilizes existing Town water and sewer services.

Storm Drainage:
The proposed Major Site Plan contains two (2) stormwater control measures. When the SCMs were constructed, they were built in a slightly different shape than the original approval showed. The proposed Major Site Plan shows the existing shape. The revised SCMs have been reviewed and will comply with the requirements of the UDO as shown.

Grading:
The proposed Major Site Plan meets the grading requirements of the Unified Development Ordinance.

Architectural Standards:

The architectural elevations meet the zoning conditions listed above.

Lighting:
The proposed lighting plan complies with the requirements of the UDO.

Resource Conservation Area:

UDO Requirement	Provided
20% = 2.12 acres	23% = 2.47%

Buffers:

Location	UDO Requirement	Proposed
Adjacent to Olive Chapel Rd	30' Type E	30' Type E
Adjacent to 540	50' Type A	50' Type E*
Adjacent to East	15' Type B	Northern half -30' Type B Southern half – 60' Type A Adjacent to Building E – 25' Type A
Adjacent to North	40' Type A	60' Type A

Building E was originally approved to be 4,950 sf, then was increased to 5,221 sf when the building plans were approved. That required the drive aisle adjacent to shift further east and encroach into the 60-foot Type A buffer. The applicant is requesting a reduction of the required buffer in that vicinity to a 25-foot Type A buffer. The remainder of the buffers on the plan are not affected.

*In 2014, a 50-foot Type E buffer was required. Since the applicant isn't proposing any changes to this area, they'd like to keep it as originally approved.

Parking: The proposed Major Site Plan includes a total of 204 parking spaces, including 11 accessible spaces. The UDO only requires a total of 147 parking spaces. The number of parking spaces were part of the original plan and were approved prior to the Town adopting maximum parking standards.

Landscaping: The proposed Major Site Plan meets the requirements in the UDO.

SUPPLEMENTAL STANDARDS: The proposed development meets the supplemental standards as listed in Section 4.4.1.B of the UDO.

APEX TRANSPORTATION PLAN/ACCESS AND CIRCULATION:
The proposed Major Site Plan is consistent with the Apex Transportation Plan. There is a full-movement access on Olive Chapel Road. Based on the attached memo, 540 Flex and Business Park generates less traffic than the UDO requires for a TIA. Therefore, the anticipated impact of the development on adjacent roadways is considered minor.

UNIFIED DEVELOPMENT ORDINANCE:
The proposed Major Site Plan is in *compliance* with the standards provided in the UDO.

MAJOR SITE PLAN STANDARDS:
In order to approve an application for a Major Site Plan, the Town Council shall find the following standards are met by the proposed Major Site Plan:

a) Compatibility. The development proposed in the site plan and its general location is compatible with the character of surrounding land uses.

b) Zoning district supplemental standards. The development and uses in the site plan comply with Sec. 4.4 *Supplemental Standards*.

c) Site development standards. The development proposed in the site plan and its general layout and design comply with all appropriate standards in Article 8: *General Development Standards*.

d) Mitigation of development on steep slopes. If appropriate, the site plan complies with the requirements of Sec. 8.1.4 *Slope Protection Standards*.

e) Dedication of ROW for Thoroughfare Plan. The development proposed in the site plan conforms to the requirements of Sec. 7.4 *Dedication of ROW for Thoroughfare Streets and Highways*.

f) Required improvements. The development proposed in the site plan conforms to the requirements of Sec. 7.5 *Required Improvements*.

g) Other relevant standards of this Ordinance. The development proposed in the site plan and its general layout and design comply with all other relevant standards of this Ordinance, except that a site plan is not required to comply with a setback standard if there is a permanent improvement on the site that existed prior to August 1, 2000 that makes compliance impossible and the exception to the setback standard is the minimum necessary to accommodate the pre-existing permanent improvement.

h) Applicable Standards of Article 7: *Subdivision* and Article 14: *Parks, Recreation, Greenways, and Open Space*. The development proposed in the site plan shall comply with the applicable standards of Article 7: *Subdivision* and Article 14: *Parks, Recreation, Greenways, and Open Space*, including, but not limited to, street and utility improvements and park, recreation, and open space dedication or fee-in-lieu.

i) Impact on public facilities. The proposed development shall not have a significant adverse impact on public facilities and services, including roads, potable water and wastewater facilities, parks, police, fire, and EMS facilities.

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
Phone - 919-872-5115 Fax - 919-878-5416
www.rameykemp.com

April 4, 2014

Joey Iannone
JVI Construction Co.
2509 Southwinds Run
Apex, North Carolina 27502
P: 919.387.8846
E: joey@jviconstruction.com

Reference: Proposed 540 Flex and Business Park
Apex, North Carolina

Subject: Trip Generation Assessment

Dear Mr. Iannone:

This letter presents the findings of a trip generation assessment prepared for the proposed 540 Flex and Business Park development. The purpose of the assessment is to demonstrate that a traffic impact analysis (TIA) would not be warranted for the proposed development based on the number of trips the development is expected to generate. The site is located on the north side of Olive Chapel Road, just east of I-540 in Apex. It is our understanding the development is proposed to consist of up to 49,179 sq. ft. of business park space and up to 83,540 sq. ft. of mini-warehouse storage. The Town has indicated a TIA would be required if warranted based on site trips. Per the Town UDO, a TIA is required for a site if it is expected to generate at least 1,000 daily trips or 100 peak hour trips.

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated utilizing methodology contained within the ITE *Trip Generation* Manual, 9th Edition. Based on the proposed uses for the site, and through coordination with the Town, it was determined that the Business Park (LUC 770) and Mini-Warehouse (LUC 151) land use codes should be used to generate trips for the site. Daily trips for both the business park portion and the mini-warehouse portion of the site were generated based on ITE rates for the respective land uses, since the rates yielded more a more appropriate number of daily trips than the equations. For smaller size business parks, such as the proposed 540 Flex and Business Park development, for example, the ITE equations grossly overestimate daily trips due to the large y-intercept value.

The peak hour trip generation for the mini-warehouse portion of the proposed development was estimated based on ITE rates, since peak hour trip equations do not exist for the mini-warehouse land use. The peak hour trip generation for the business park portion of the proposed development could be determined based on either rates or equations, since the data plot shown in the ITE *Trip Generation* Manual shows data points for comparably sized mini-warehouse sites located near both lines. Thus, for that reason, and at the direction of Town staff, peak hour trips for the business park portion of the proposed development were generated twice: once using ITE equations and once using ITE rates. Refer to Table 1 for a summary of the site trip generation.

Table 1
Site Trip Generation – 540 Flex and Business Park

Land Use (ITE Code)	Size	Daily Traffic (vpd)	AM Peak Hour Trips (vph)			PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Business Park (770 – rates)	49,179 sf	612	59	10	69	16	46	62
Business Park (770 – eqns.)	49,179 sf	--	61	10	71	20	58	78
Mini-Warehouse (151 – rates)	83,540 sf	209	7	5	12	11	11	22
Total Trips (using rates for Bus. Park)		**821**	**66**	**15**	**81**	**27**	**57**	**84**
Total Trips (using eqns. for Bus. Park)		**821**	**68**	**15**	**83**	**31**	**69**	**100**

As shown in Table 1, it is estimated the proposed development will generate 821 trips per day, which is below the Town's threshold for requiring a TIA. Additionally, the anticipated AM peak hour trip generation of 81 vehicles (based on rates for business park) or 83 vehicles (based on equations for business park) also falls below the Town's peak hour trip threshold for requiring a TIA. For the PM peak hour, generating trips for the business park portion of the site using rates yields 84 peak hour trips, which is below the Town's threshold for requiring a TIA. Using ITE equations to generate PM peak hour trips for the business park portion of the site yields 100 peak hour trips, which is right at the Town's 100 vehicles per hour threshold for requiring a TIA.

Since using the more conservative method to generate trips (equations) would only marginally meet the Town's traffic volume warrants for a TIA, and hourly trips based on ITE rates fall well under the 100 vehicle per hour threshold, it is probable that the actual number trips for the development would fall somewhere in between. Based on the expectation that the peak hour business park trips would be more than indicated by ITE rates and less than indicated by ITE equations, the PM peak hour trip generation for the overall development is expected to be less than 100 trips and more than 84 trips.

Based on the findings of this trip generation assessment, a TIA would not be required for the proposed development based on its anticipated trip generation potential. Please feel free to contact me at (919) 872-5115 if you have any questions relative to this assessment.

Sincerely,
Ramey Kemp & Associates, Inc.

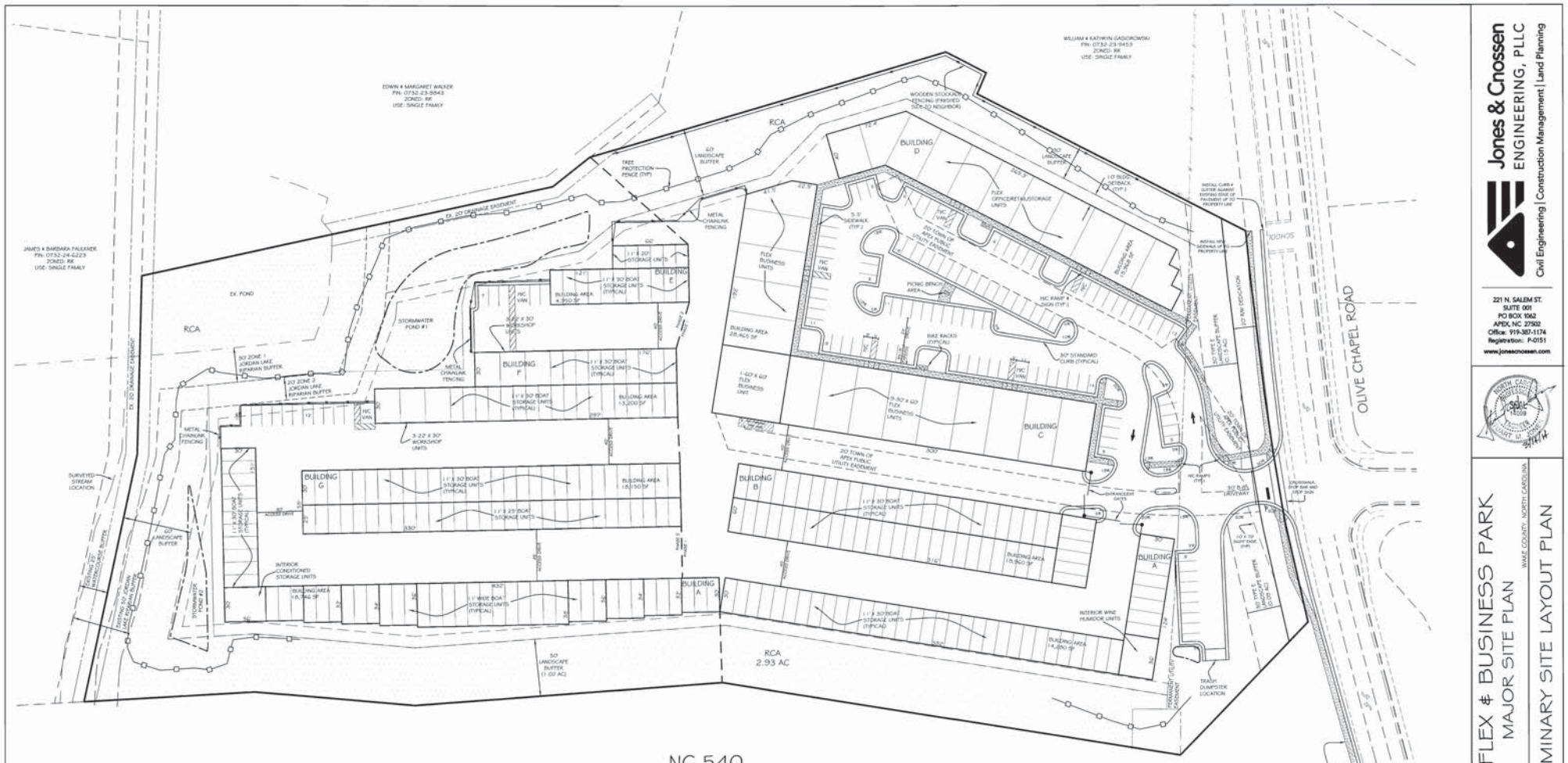
Molly Mathewson, P.E.
Transportation Engineer

NC Corporate License # C-0910

cc: Russell Dalton, Town of Apex (sent via email)

Attachments: Site Plan

RAMEY KEMP & ASSOCIATES



TOWN OF APEX REQUIRED NOTES:

1. NO SITE DEVELOPMENT ACTIVITY INCLUDING BUT NOT LIMITED TO TESTING, CLEARING, INSTALLATION OF SAE MEASURES, OR GRADING, SHALL OCCUR UNTIL REQUIRED PROTECTION FENCING HAS BEEN INSTALLED AND INSPECTED. A PROTECTION FENCING INSTALLATION PERMIT MAY BE OBTAINED AT THE PLANNING DEPARTMENT OR BY CALLING 919 249-3426.
2. PROTECTION FENCING MUST BE PLACED AWAY FROM ANY SAVED TREE ONE FOOT FOR EACH INCH OF TREE CALIPER. PROTECTION FENCING MUST BE PLACED AT LEAST 10 FEET AWAY FROM ANY OTHER DESIGNATED RESOURCE CONSERVATION AREA, SUCH AS BUT NOT LIMITED TO HISTORIC BUILDINGS AND STRUCTURES, WETLANDS, AND PONDS. PROTECTION FENCING MUST BE PLACED ALONG THE OUTSIDE LINE OF THE 100-YEAR FLOODPLAIN, AND THE OUTSIDE EDGE OF ANY RIPARIAN BUFFER. ADDITIONAL PROTECTION FENCING MAY BE REQUIRED IN OTHER LOCATIONS CLOSE TO CONSTRUCTION ACTIVITY WHERE IT IS DEEMED NECESSARY BY THE ZONING ENFORCEMENT OFFICER; SUCH AREAS MAY INCLUDE BUT ARE NOT LIMITED TO COMMON PROPERTY LINES OR NEAR PUBLIC AREAS (SIDEWALKS, ETC.).
3. ALL GRADING AND SUPPORT STRUCTURES ASSOCIATED WITH ANY RETAINING STRUCTURE SHALL NOT ENCROACH INTO ANY REQUIRED BUFFER OR PROTECTED AREA (SUCH AS BUT NOT LIMITED TO, RCA AND CRITICAL ROOT ZONES OF TREES, PUBLIC UTILITY EASEMENTS AND RIGHTS-OF-WAY), AND SHALL BE CONTAINED ENTIRELY ON SITE.
4. SITE ELEMENTS REQUIRED TO SATISFY RECREATIONAL REQUIREMENTS SUCH AS BUT NOT LIMITED TO PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS FOUND IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PARKS AND RECREATION DEPARTMENT.
5. THE SCREENING OF LOADING DOCKS, TRASH CONTAINERS (INCLUDING DUMPSTERS AND ROLL-OUT CARTS), OUTDOOR STORAGE, MECHANICAL AND HVAC EQUIPMENT, AND SIMILAR FACILITIES ON THE ROOF, ON THE GROUND, OR ON BUILDINGS SHALL MEET THE REQUIREMENTS FOUND IN SECTION 8.2.8 OF THE UNIFIED DEVELOPMENT ORDINANCE. SPECIFICALLY SCREENING MUST BE DONE SO THAT:
   I. IT IS INCORPORATED INTO THE OVERALL DESIGN THEME OF THE BUILDING AND LANDSCAPE
   II. SCREENING MATERIALS ARE NOT DIFFERENT FROM OR INFERIOR TO THE PRINCIPAL MATERIALS OF THE BUILDING OR LANDSCAPE, AND ARE SIMILAR IN MATERIALS AND COLOR.
   III. SCREENED ITEMS ARE OUT OF VIEW FROM ADJACENT PROPERTIES AND PUBLIC STREETS, AND A TOTALLY OPAQUE SCREEN IS ACHIEVED.
   IV. ANY GROUND-MOUNTED HVAC OR OTHER MECHANICAL OR UTILITY EQUIPMENT SIX-FEET TALL OR HIGHER MUST BE FENCED AND LANDSCAPED.
   V. DUMPSTER ENCLOSURES MUST MEET THE ABOVE REQUIREMENTS PLUS THEY MUST BE AT LEAST EIGHT-FEET TALL OR THE HEIGHT OF THE DUMPSTER, WHICHEVER IS TALLER; AND BE BUILT OF MASONRY MATERIAL.
6. ALL REQUIRED SITE ELEMENTS SHOWN WITHIN A PARTICULAR PHASE MUST BE INSTALLED BEFORE A FINAL CERTIFICATE OF OCCUPANCY MAY BE ISSUED FOR ANY BUILDING WITHIN THAT PHASE.
7. SITE ITEMS SUCH AS BUT NOT LIMITED TO, LIGHTING, LANDSCAPING (INCLUDING MULCH), SCREENING (I.E.: DUMPSTERS/TRASH, MECHANICAL/HVAC, ETC.), SITE STABILIZATION (SEEDING), AND PARKING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.
8. NO SIGNS ARE APPROVED AS PART OF SITE PLAN APPROVAL PROCESS. A SEPARATE SIGN PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION OF THE SIGN. A MASTER SIGN PLAN MUST BE SUBMITTED FOR APPROVAL.

NOTES:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF APEX STANDARDS AND SPECIFICATIONS.
2. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PROVIDED BY SMITH & SMITH SURVEY COMPANY.
3. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DETAIL INFORMATION.
4. NO FEMA MAPPED FLOODPLAIN EXISTS ON THIS PROPERTY PER FEMA MAP #3718 3C0483E DATED 03 MARCH 1992.
5. THIS PROJECT WILL USE BUILDING MOUNTED LIGHTS WITH LOW WATTAGE, SO NO LIGHTING PLAN IS REQUIRED.
6. PERIMETER LANDSCAPING SHALL PROVIDE REQUIRED SCREENING FOR HVAC UNITS.
7. PERIMETER SECURITY CHAINLINK FENCING TO BE 6' HIGH WITH BLACK VINYL COATING.
8. OFF-SITE ROAD IMPROVEMENTS ARE ELIGIBLE FOR TRANSPORTATION FEE CREDITS.

BUILDING SUMMARY:

11 FLEX OFFICE UNITS	15,968 SF
15 FLEX BUSINESS UNITS	28,465 SF
6 WORKSHOP SPACES	4,746 SF
256 AUTO/BOAT STORAGE SPACES	61,380 SF
1 WINE HUMIDOR AREA	1,080 SF
1 CONDITIONED STORAGE AREA	1,080 SF

OFFICE/FLEX USE AREA	2.21 AC = 20.9%
STORAGE USE AREA	4.11 AC = 38.9%

GRAPHIC SCALE (0, 20, 40, 80)

PRELIMINARY PLANS NOT FOR CONSTRUCTION

Jones & Cnossen ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning
221 N. SALEM ST.
SUITE 001
PO BOX 1062
APEX, NC 27502
Office: 919-387-1174
Registration: P-0151
www.jonescnossen.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14009 SCOTT M. JONES 3/14/14

540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX — WAKE COUNTY, NORTH CAROLINA

PRELIMINARY SITE LAYOUT PLAN

SCALE	1"=40'
DRAWN	SMJ
DATE	JANUARY 6, 2014
REVISION 221.7.14	PER TRC COMMENTS
3/14/14	PER TRC
SHEET	C-2
PROJECT	1322

540 Flex and Business Park
Abbington
Red Knot Ln
Finch Ct
Peak 502 at Beaver Creek
Kelly Rd
Clark Farm Rd
Chapel Ridge
Barnside Ln
Chapel Ridge
Olive Chapel Professional Park
Chapel Ridge Rd
NC 540 Hwy SB
NC 540 Hwy NB
540
Publix
Publix Pointe
Olive Chapel Rd
Ashley Downs
Ashbark Ct
Ashley Downs Dr
0
250
500
Feet
July, 2020
June 2020 Aerial Photography
Prepared by: Town of Apex Planning Department

MAJOR SITE PLAN APPLICATION INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: **2020-01** Submittal Date: **04-01-20**

Fee Paid $ **1,343.00** Check # **1428**

Project Information

Project Name: 540 Flex & Business Park, LLC

Address: 1600 Olive Chapel Rd

Property PIN: 0732235461 & 0732234710

Acreage: 10.74 Zoning TF-CZ

Town Limits: ☑ Inside corporate limits ☐ In ETJ ☐ *Outside corporate limits and ETJ

For Non-residential Developments

Total number of buildings: 7 Number of floors: 1

Total square footage of all buildings: 127,876

For Residential Developments

Number of multi-family units: _____ Number of floors: _____

Applicant Information

Name: 540 Flex & Business Park, LLC

Address: 2509 Southwinds Run

City: Apex State: NC Zip: 27502

Phone: 919-387-8846 Email: joey@jviconstruction.com

Owner Information

Name: 540 Flex & Business Park, LLC

Address: 2509 Southwinds Run

City: Apex State: NC Zip: 27502

Phone: 919-387-8846 Email: joey@jviconstruction.com

Attorney Information

Name: Joey Iannone

Address: 2509 Southwinds Run

City: Apex State: NC Zip: 27502

Phone: 919-387-8846 Email: joey@jviconstruction.com

Engineer Information

Name: Jones & Cnossen Engineering, PLLC

Address: PO Box 1062

City: Apex State: NC Zip: 27502

Phone: 919-387-1174 Email: patrick@jonescnossen.com

CERTIFIED LIST OF NEIGHBORING PROPERTY OWNERS

Application #: _____ Submittal Date: _____

Provide a certified list of property owners subject to this application and all property owners within 300' of the subject property and HOA Contacts.

	Owner's Name	PIN
1.	540 FLEX & BUSINESS PARK LLC	0732235461 & 0732234710
2.	See attached list.	
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

I, Peter Chasnoff, certify that this is an accurate listing of all property owners and property owners within 300' of the subject property.

Date: 4/1/20 By: Peter Chasnoff

COUNTY OF WAKE STATE OF NORTH CAROLINA

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, on this the 1st day of April, 2020.

Notary Public

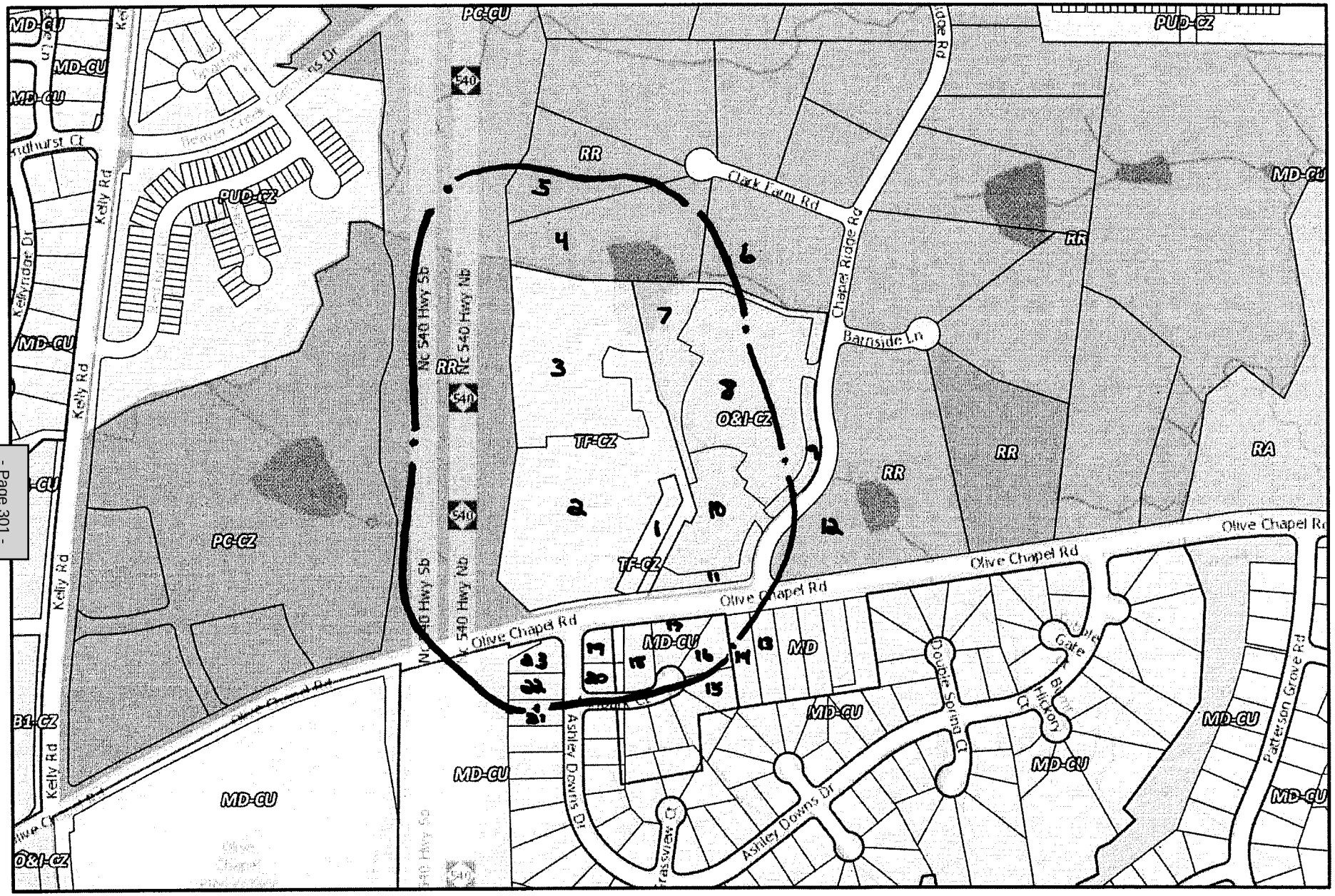
Erin Marcum
Print Name

SEAL

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/20

My Commission Expires: November 19, 2020

	A	B	C	D	E	F
1		1322-540 Flex - Major Site Revision	ADJACENT PROPERTY OWNERS LIST			
2						
3	Parcel #	Name	Address I	Address II	City/State/Zip Code	Pin #
4	NA	TOWN OF APEX	PLANNING DEPT	PO BOX 250	APEX NC 27502	
5	1a	540 FLEX & BUSINESS PARK OWNERS ASSOC	540 FLEX & BUSINESS PARK LLC	2509 SOUTHWINDS RUN	APEX NC 27502-6512	0732236371
6	1b	PEAK INVESTMENT PROPERTIES LLC	100 PASTRO CT		APEX NC 27502-8602	0732236371
7	1c	SARANGA-CHENNURI PROPERTIES LLC	1600 OLIVE CHAPEL RD STE 108		APEX NC 27502-6765	0732236371
8	1d	COURTNETHAN LAND HOLDINGS LLC	1600 OLIVE CHAPEL RD STE 112		APEX NC 27502-6765	0732236371
9	1e	COURTNETHAN LAND HOLDINGS LLC	1600 OLIVE CHAPEL RD STE 112		APEX NC 27502-6765	0732236371
10	1f	SCHTAKLEFF PROPERTIES LLC	1600 OLIVE CHAPEL RD STE 120		APEX NC 27502-6765	0732236371
11	1g	JOSEPH IANNONE JR	2509 SOUTHWINDS RUN		APEX NC 27502-6512	0732236371
12	1h	MYSTIC PROPERTIES, LLC	1714 ASHLEY DOWNS DR		APEX NC 27502-5297	0732236371
13	1i	MYSTIC PROPERTIES, LLC	1714 ASHLEY DOWNS DR		APEX NC 27502-5297	0732236371
14	1j	MANJULA PETCHETTI	1621 CARY RESERVE DR		CARY NC 27519-9629	0732236371
15	1k	MACKENZIE HOLDINGS, LLC	1600 OLIVE CHAPEL RD STE 140		APEX NC 27502-6766	0732236371
16	1l	LEXARY HOLDINGS LLC	1600 OLIVE CHAPEL RD STE 144		APEX NC 27502-6766	0732236371
17	2	540 FLEX & BUSINESS PARK LLC	2509 SOUTHWINDS RUN		APEX NC 27502-6512	0732235461
18	3	540 FLEX & BUSINESS PARK LLC	2509 SOUTHWINDS RUN		APEX NC 27502-6512	0732234710
19	4	BARBARA & JAMES FAULKNER JR	1513 CLARK FARM RD		APEX NC 27502-8500	0732246233
20	5	JOHN & MARIE ROCCOFORTE	1517 CLARK FARM RD		APEX NC 27502-8500	0732243490
21	6	MOJO PROPERTY MANAGEMENT LLC	2755 E FRANKLIN BLVD		GASTONIA NC 28056-8201	0732340146
22	7	OLIVE CHAPEL PROFESSIONAL PARK, LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732249026
23	8	OLIVE CHAPEL PROFESSIONAL PARK, LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732239775
24	9	OLIVE CHAPEL PROFESSIONAL PARK, LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732331404
25	10	OLIVE CHAPEL PROFESSIONAL PARK, LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732238377
26	11	OLIVE CHAPEL PROFESSIONAL PARK, LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732238148
27	12	GASIOROWSKI PROPERTIES LLC	1121 PEMBERTON HILL RD		APEX NC 27502-4280	0732333570
28	13	ALEXANDER THOMAS & MARISKA RAMONDINO	1517 OLIVE CHAPEL RD		APEX NC 27502-6744	0732320934
29	14	JOHN &KIMBERLY REID	1521 OLIVE CHAPEL RD		APEX NC 27502-6744	0732229953
30	15	FRANK & CECILIA NAVY	1700 ASHBARK CT		APEX NC 27502-5298	0732228864
31	16	JESSE & REGINA HOUSE	1702 ASHBARK CT		APEX NC 27502-5298	0732228956
32	17	ERICK CONTRERAS-BLANCO & TYLER WILSON	1704 ASHBARK CT		APEX NC 27502-5298	0732227949
33	18	KIM & ROBERT ROCK JR	1706 ASHBARK CT		APEX NC 27502-5298	0732226937
34	19	MARK & HEIDI GARWATOSKI	1722 ASHLEY DOWNS DR		APEX NC 27502-5297	0732225937
35	20	SAMEH SALAMA & DALIA ELFADALY	1720 ASHLEY DOWNS DR		APEX NC 27502-5297	0732225839
36	21	WENDY CERNEL	1717 ASHLEY DOWNS DR		APEX NC 27502-4800	0732223728
37	22	CHERI LEWIS & LARRY MCGOWAN	1719 ASHLEY DOWNS DR		APEX NC 27502-4800	0732223816
38	23	CLAUDE & DIANE BRANSCOME	1721 ASHLEY DOWNS DR		APEX NC 27502-4800	0732223924
39	24	Ashley Downs Homeowners Association, Inc	c/o RS FINCHER	PO BOX 1117	APEX NC 27502	



N

0 215 430 860 ft

1 inch = 400 feet

Disclaimer

*iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied ,are provided for the data therein, its use,or its interpretation.*

AGENT AUTHORIZATION FORM

Application #: 2020-01 Submittal Date: 4-1-20

540 Flex & Business Park, LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☐ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☑ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other: _____

The property address is: 1600 Olive Chapel Road

The agent for this project is: Jones & Cnossen Engineering, PLLC

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Peter Cnossen

Address: 221 N. Salem St., Suite 001, Apex NC 27502

Telephone Number: 919-387-1174

E-Mail Address: peter@jonescnossen.com

Signature(s) of Owner(s)*

Joe V. Iannone — 3-18-2020

Type or print name — Date

_____ _____

Type or print name — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: 2020-01 Submittal Date: 4-1-20

The undersigned, JOE V. IANNONE (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at 1600 Olive Chapel Rd and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").

2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.

3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated 12/18/2013, and recorded in the Wake County Register of Deeds Office on 12/20/2013, in Book 015538 Page 02065-02067.

4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).

5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on 12/18/2013, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on 12/18/2013, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the 19 day of MARCH, 2020.

(seal)

JOE V. IANNONE

Type or print name

STATE OF NORTH CAROLINA
COUNTY OF WAKE

I, the undersigned, a Notary Public in and for the County of WAKE, hereby certify that Joe V. Iannone, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's ____, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.

ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/2020

[NOTARY SEAL]

Erin Marcum
Notary Public
State of North Carolina
My Commission Expires: November 19, 2020

Last Updated: August 30, 2019

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: 2020-01 Submittal Date: 4-1-20

Insert legal description below.

Lying and being in the Town of Apex, White Oak Township, Wake County, North Carolina and described as follows more fully to wit:

BEGINNING at a NCDOT right-of-way disc on the eastern right-of-way of NC 540 Highway having a North coordinate of 723,181.477 and an East coordinate of 2,032,205.272 based on the N.C. Grid Coordinate System NAD-83 (NSRS 2007) in feet; thence the following four (4) courses and distances with the eastern right-of-way of NC 540 Highway, North 09°04'22" East, 404.86 feet to an existing NCDOT r/w disc, North 04°15'12" West, 269.32 feet to an existing NCDOT right-of-way disc, North 04°50'54" East, 140.42 feet to an existing NCDOT right-of-way and North 03°13'57" West, 148.80 feet to an iron pipe set, being the southwestern corner of James V. Faulkner, Jr., Et Ux; thence the following two (2) courses and distances with aforesaid Faulkner, South 77°44'43" East, 220.48 feet to an existing iron pipe and South 88°28'50" East, 155.02 feet to a point in a pond, a corner with Olive Chapel Professional Park; thence the following two (2) courses and distances with aforesaid Olive Chapel Professional Park, South 12°09'35" East, 367.00 feet to an existing iron pipe and South 38°30'37" East, 41.37 feet to an existing iron pipe, another corner with Olive Chapel Professional Park; thence the following four (4) courses and distances with aforesaid Olive Chapel Professional Park, South 16°25'09" East, 323.87 feet to an existing iron pipe, South 27°31'15" West, 39.66 feet to an existing iron pipe, North 66°48'09" West, 19.96 feet to an existing iron pipe and South 27°03'58" West, 239.03 feet to an existing iron pipe on the northern right-of-way of Olive Chapel Road (N.C.S.R. No. 1160); South 84°04'11" West, 40.97 feet to an existing iron pipe on aforesaid right-of-way; thence the following six (6) courses and distances with 540 Flex & Business Park Condominiums, North 27°03'08" East, 313.05 feet to an existing Mag-Nail, North 16°24'18" West, 80.84 feet to an existing Mag-Nail, South 73°06'00" West, 52.59 feet to an existing iron pipe, South 16°23'26" East, 45.03 feet to an existing Mag-Nail, South 27°04'04" west, 323.49 feet to an existing iron pipe, and South 66°14'51" East, 34.01 feet to an existing iron pipe on the northern right-of-way of Olive Chapel Road (N.C.S.R. No. 1160) ; thence the following five (5) courses and distances with the northern right-of-way of Olive Chapel Road (N.C.S.R. No. 1160), South 83°03'53" West, 81.65 feet to an existing iron pipe, South 81°40'04" West, 51.17 feet to an existing iron pipe, South 80°22'49" West, 51.29 feet to an existing iron pipe, point, South 78°52'41" West, 14.51 feet to a point and a curve in a counter-clockwise direction having a radius of 2844.04 feet, a length of 99.20 feet and a chord of South 76°57'06" West, 99.19 feet to an iron pipe set on the northern right-of-way of Olive Chapel Road (N.C.S.R. No. 1160) at its intersection with the eastern right-of-way of NC 540 Highway; thence with the eastern right-of-way of NC 540 Highway North 46°06'13" West, 137.29 feet to the point and place of BEGINNING, containing 10.039 acres more or less. The above-described property is all of Wake County PIN's 0732.03-23-4710 and PIN 0732.03-23-5461.

NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

March 20, 2020
Date

Dear Neighbor:
You are invited to a neighborhood meeting to review and discuss the development proposal at

1600 Olive Chapel Rd (Address(es)) | 0732235461 & 0732234710 (PIN(s))

in accordance with the Town of Apex Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org.

A Neighborhood Meeting is required because this project includes (check all that apply):

	Application Type	Approving Authority
☐	Rezoning (including Planned Unit Development)	Town Council
☑	Major Site Plan	Town Council (QJPH*)
☐	Special Use Permit	Town Council (QJPH*)
☐	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):
Please see enclosed letter.

Estimated submittal date: 04/01/2020

MEETING INFORMATION:

Property Owner(s) name(s): 540 Flex & Business Park, LLC
Applicant(s): 540 Flex & Business Park, LLC
Contact information (email/phone): peter@jonescnossen.com, 919-387-1174
Meeting Address: Call-in #: 1-503-300-6864 Conference Code: 588481
Date of meeting**: March 31, 2020
Time of meeting**: 6:00 - 8:00 pm

MEETING AGENDA TIMES:
Welcome: 6:00 pm Project Presentation: 6:15 pm Question & Answer: 6:30 pm

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

Jones & Cnossen
ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning

221 N. SALEM ST, SUITE 001
PO BOX 1062
APEX, NC 27502
Office: 919-387-1174
Fax: 919-387-3375
www.jonescnossen.com

March 20, 2020

RE: 540 Flex & Business Park - Major Site Plan Revision

Dear Property Owner,

On behalf of our client, 540 Flex & Business Park LLC, we are preparing a revised Major Site Plan for two (2) parcels of land on Olive Chapel Road. This letter has been sent to you because the Wake County tax records indicate that you own property within 300 feet of the subject property. We are preparing a revised site plan that involves reducing a portion of a 60' Type A Landscape Buffer along the eastern property boundary with Olive Chapel Professional Park to a 25' Type A Landscape Buffer to accommodate covered parking access. This change is shown on the attached Exhibit. Please note that the required Town of Apex Landscape Buffer along the eastern property line is a 15' Type B Landscape Buffer, so the revised buffer remains larger and more opaque than required. We are also revising the Major Site Plan to reflect As-Built conditions for the development that vary from the approved plan. These conditions include minor changes to building sizes and footprints, adjustments to a stormwater pond, removal of a retaining wall and changes to the parking.

We are planning on submitting the Major Site Plan application on April 1, 2020. There will be at least one official public hearing where you will have the opportunity to voice your opinion about this site plan revision. The application should go before the Town Council for a final vote within the next few months. In the Town of Apex, a Major Site Plan approval is a quasi-judicial process with sworn testimony, and no one can directly contact the voting parties.

The Town of Apex requires that we hold an informal meeting to offer you an additional opportunity to comment on this revised site plan. During these difficult times, we will hold a conference call instead of an in-person meeting to present the site plan and answer any questions. The conference call will be held on March 31, 2020 at 6 pm. The call-in phone number and meeting code are listed below. After dialing the Call-In number, you will be prompted to enter the Conference Code to join the call.

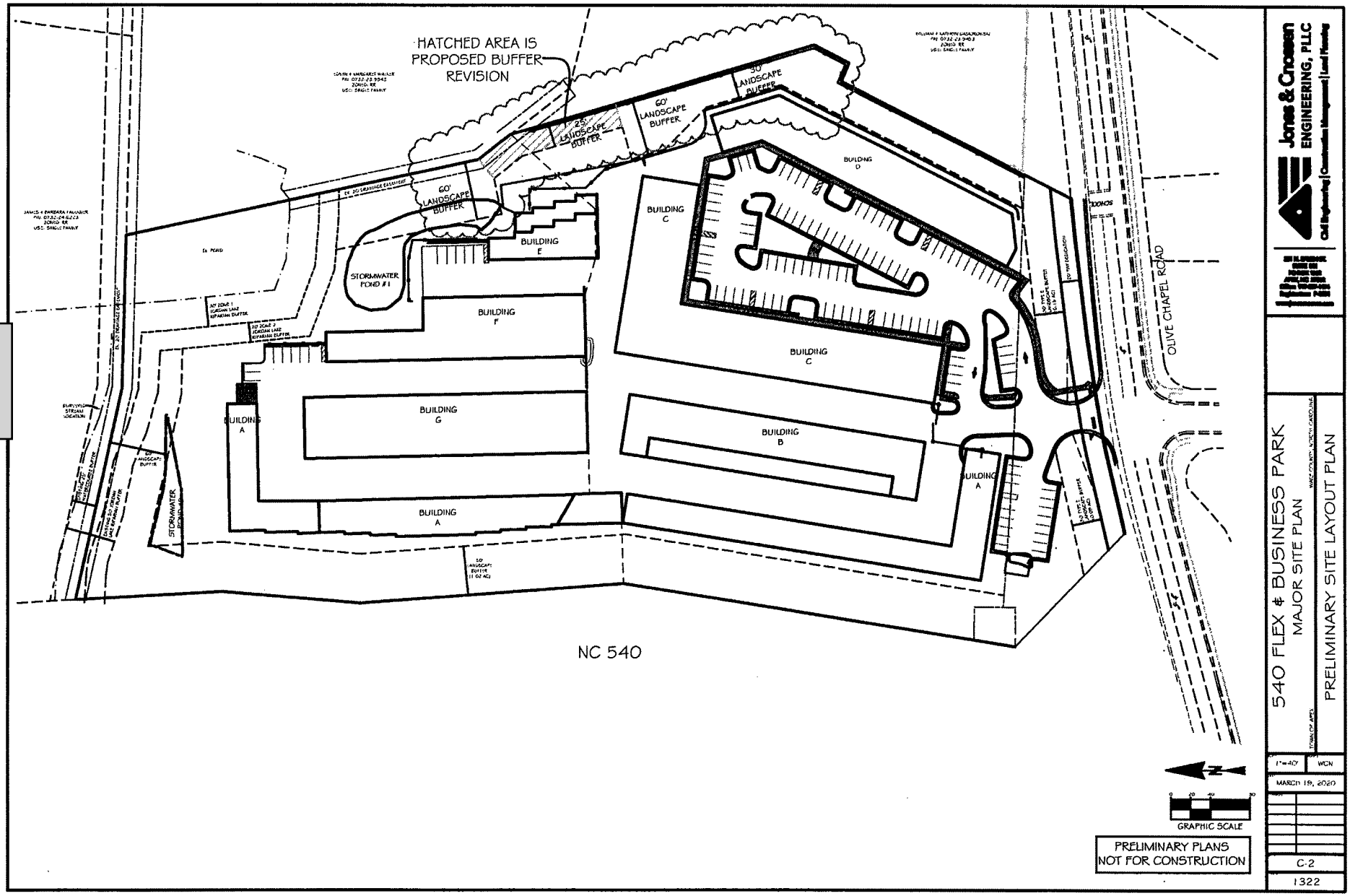
Dial In Phone Number: 1-503-300-6864 **Conference Code:** 588481

An in-person meeting will still be held prior to the public hearing Town Council meeting. Those meeting details will be provided at a later date. If you have any questions about the major site plan approval process or this informal meeting, please feel free to contact our office or the Apex Planning Department.

Respectfully,

Peter D. Cnossen, P.E.
Jones & Cnossen Engineering, PLLC

CC: JVI Building & Development, Inc.


HATCHED AREA IS PROPOSED BUFFER REVISION
30' LANDSCAPE BUFFER
60' LANDSCAPE BUFFER
25' LANDSCAPE BUFFER
60' LANDSCAPE BUFFER
BUILDING D
BUILDING C
BUILDING E
STORMWATER POND #1
BUILDING F
BUILDING C
OLIVE CHAPEL ROAD
BUILDING A
BUILDING G
BUILDING B
BUILDING A
BUILDING A
STORMWATER
NC 540
N
GRAPHIC SCALE
PRELIMINARY PLANS NOT FOR CONSTRUCTION
Jones & Cranson ENGINEERING, PLLC
540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
PRELIMINARY SITE LAYOUT PLAN
1"=40'
WCN
MARCH 19, 2020
C-2
1322

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: 540 Flex & Business Park Zoning: TF-CZ

Location: 1600 Olive Chapel Road

Property PIN(s): 0732235461, 0732234710 Acreage/Square Feet: 10.04

Property Owner: 540 Flex & Business Park, LLC

Address: 2509 Southwinds Run

City: Apex State: NC Zip: 27502

Phone: 919-387-8846 Email: joey@jviconstruction.com

Developer:

Address:

City: State: Zip:

Phone: Fax: Email:

Engineer: Jones & Cnossen Engineering, PLLC

Address: PO Box 1062

City: Apex State: NC Zip: 27502

Phone: 919-387-1174 Fax: 919-387-3375 Email: peter@jonescnossen.com

Builder (if known):

Address:

City: State: Zip:

Phone: Fax: Email:

Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts	
Planning Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Senior Transportation Engineer	(919) 249-3358
Water Resources Department Mike Deaton, Stormwater & Utility Engineering Manager Stan Fortier, Senior Engineer (Sedimentation & Erosion Control)	 (919) 249-3413 (919) 249-1166
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

Providing Input to Town Council:

Each Town Council meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Town Council meets on the 1st and 3rd Tuesdays of each month at 6:00 p.m. (except for holidays, see schedule of meetings at http://www.apexnc.org/838/Agendas-Minutes). You may also contact Town Council by e-mail at AllCouncil@apexnc.org.

Private Agreements and Easement Negotiation:

The Town of Apex cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Apex can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Town Council public hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the Town Council public hearing if the agreement is included in the conditions. If it is not, you may request that the Town Council not approve the rezoning without the agreement being included in the conditions (note that it is up to Town Council whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Interactive Development Map at: http://apexnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=fa9ba2017b784030b15ef4da27d9e795

Documentation:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

COMMON CONSTRUCTION ISSUES & WHO TO CALL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Noise & Hours of Construction:	Non-Emergency Police	919-362-8661

Noise from tree removal, grading, excavating, paving, and building structures is a routine part of the construction process. The Town generally limits construction hours from 7:00 a.m. to 8:30 p.m. so that there are quiet times even during the construction process. Note that construction outside of these hours is allowed with special permission from the Town when it makes more sense to have the construction occur at night, often to avoid traffic issues. In addition, the Town limits hours of blasting rock to Monday through Friday from 8:00 a.m. to 5:00 p.m. Report violations of construction hours and other noise complaints to the Non-Emergency Police phone number at 919-362-8661.

Construction Traffic:	James Misciagno	919-372-7470

Construction truck traffic will be heavy throughout the development process, including but not limited to removal of trees from site, loads of dirt coming in and/or out of the site, construction materials such as brick and wood brought to the site, asphalt and concrete trucks come in to pave, etc. The Town requires a construction entrance that is graveled to try to prevent as much dirt from leaving the site as possible. If dirt does get into the road, the Town can require they clean the street (see "Dirt in the Road" below).

Road Damage & Traffic Control:	Water Resources – Infrastructure Inspections	919-362-8166

There can be issues with roadway damage, roadway improvements, and traffic control. Potholes, rutting, inadequate lanes/signing/striping, poor traffic control, blocked sidewalks/paths are all common issues that should be reported to Water Resources – Infrastructure Inspections at 919-249-3427. The Town will get NCDOT involved if needed.

Parking Violations:	Non-Emergency Police	919-362-8661

Unless a neighbor gives permission, there should be no construction parking in neighbors' driveways or on their property. Note that parking in the right-of-way is allowed, but Town regulations prohibit parking within 15 feet of driveways so as not to block sight triangles. Trespassing and parking complaints should be reported to the Non-Emergency Police phone number at 919-362-8661.

Dirt in the Road:	James Misciagno	919-372-7470

Sediment (dirt) and mud gets into the existing roads due to rain events and/or vehicle traffic. These incidents should be reported to James Misciagno. He will coordinate the cleaning of the roadways with the developer.

Dirt on Properties or in Streams:	James Misciagno	919-372-7470
	Danny Smith	Danny.Smith@ncdenr.gov

Sediment (dirt) can leave the site and get onto adjacent properties or into streams and stream buffers; it is typically transported off-site by rain events. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the appropriate repairs with the developer. Impacts to the streams and stream buffers should also be reported to Danny Smith (danny.smith@ncdenr.gov) with the State.

Dust:	James Misciagno	919-372-7470

During dry weather dust often becomes a problem blowing into existing neighborhoods or roadways. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the use of water trucks onsite with the grading contractor to help control the dust.

Trash:	James Misciagno	919-372-7470

Excessive garbage and construction debris can blow around on a site or even off of the site. These incidents should be reported to James Misciagno at 919-372-7470. He will coordinate the cleanup and trash collection with the developer/home builder.

Temporary Sediment Basins:	James Misciagno	919-372-7470

Temporary sediment basins during construction (prior to the conversion to the final stormwater pond) are often quite unattractive. Concerns should be reported to James Misciagno at 919-372-7470 so that he can coordinate the cleaning and/or mowing of the slopes and bottom of the pond with the developer.

Stormwater Control Measures:	Mike Deaton	919-249-3413

Post-construction concerns related to Stormwater Control Measures (typically a stormwater pond) such as conversion and long-term maintenance should be reported to Mike Deaton at 919-249-3413.

Electric Utility Installation:	Rodney Smith	919-249-3342

Concerns with electric utility installation can be addressed by the Apex Electric Utilities Department. Contact Rodney Smith at 919-249-3342.

ELECTRONIC NEIGHBORHOOD MEETING ATTENDANCE SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Format: Conference call

Date of meeting: 03/31/2020 Time of meeting: 6:00pm

Property Owner(s) name(s): 540 Flex & Business Park, LLC

Applicant(s): 540 Flex & Business Park, LLC & Jones & Grossen Engineering, PLLC

Please list Electronic Neighborhood Meeting Attendees who provided their name and/or contact information either during the meeting or via phone/email before or after the meeting.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	No one attended.				
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

SUMMARY OF DISCUSSION FROM THE ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): 540 Flex & Business Park, LLC

Applicant(s): 540 Flex & Business Park, LLC and Jones & Cnossen Engineering, PLLC

Contact information (email/phone): peter@jonescnossen.com/919-387-1174

Meeting Format: Conference Call

Date of meeting: 03/31/2020 Time of meeting: 6:00-8:00 pm

Please summarize the questions/comments and your response from the Electronic Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

No one attended the conference call.

Applicant's Response:

Question/Concern #2:

Applicant's Response:

Question/Concern #3:

Applicant's Response:

Question/Concern #4:

Applicant's Response:

AFFIDAVIT OF CONDUCTING AN ELECTRONIC NEIGHBORHOOD MEETING AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Peter D. Cnossen, do hereby declare as follows:
Print Name

1. I have conducted an Electronic Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.

2. The meeting invitations were mailed to the Apex Planning Department, all property owners within 300 feet of the subject property and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the Electronic Neighborhood Meeting.

3. The meeting was conducted via Conference Call (indicate format of meeting) on 03/31/2020 (date) from 6:00 pm (start time) to 6:30 pm (end time).

4. I have included the mailing list, meeting invitation, attendance sheet issue/response summary, and zoning map/reduced plans with the application.

5. I have prepared these materials in good faith and to the best of my ability.

4/1/20
Date

By: P.D. Cnossen

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Erin Marcum, a Notary Public for the above State and County, on this the 1st day of April, 2020.

SEAL
ERIN MARCUM
NOTARY PUBLIC
Wake County
North Carolina
My Commission Expires 11/19/20

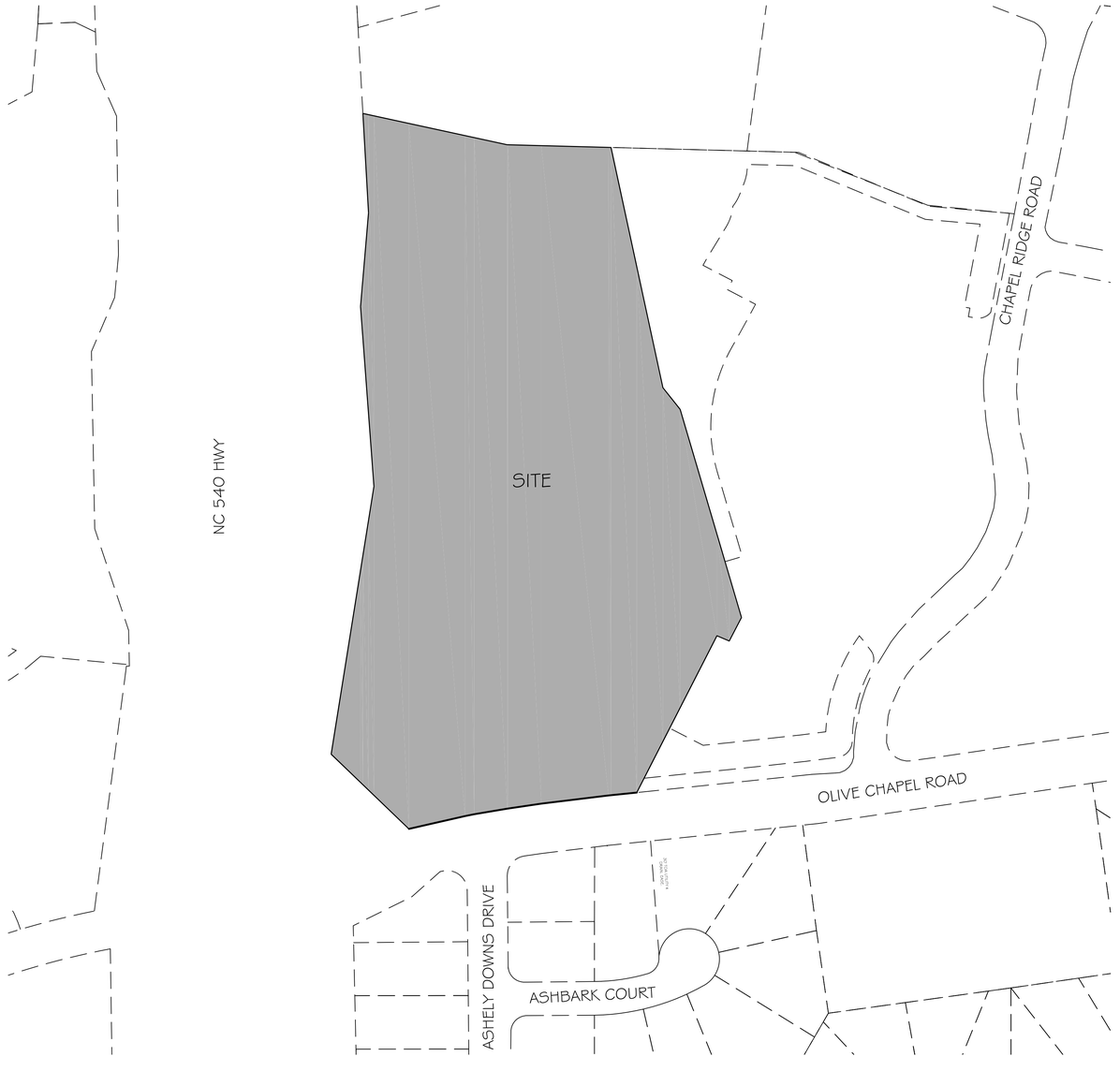
Notary Public

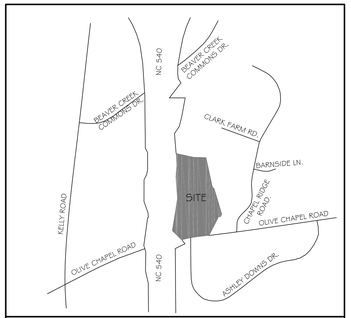
Erin Marcum
Print Name

My Commission Expires: November 19, 2020

540 FLEX & BUSINESS PARK

MAJOR SITE PLAN





VICINITY MAP
N.T.S.

SITE DATA	
PROJECT NAME	540 FLEX & BUSINESS PARK
PROJECT ADDRESS	1640 OLIVE CHAPEL ROAD
PREPARER'S CONTACT INFORMATION	JONES & CNOSSEN ENGINEERING, PLLC P.O. BOX 1062 APEX, NORTH CAROLINA 27502 PHONE - 919-387-1174 FAX - 919-387-3375 CONTACT PERSON - PETER D. CNOSSEN
OWNER CONTACT INFORMATION	JVI DEVELOPMENT II, INC. 2509 SOUTHWINDS RUN APEX, NC 27502 PHONE - (919) 387-8846 FAX - (919) 387-6962 CONTACT PERSON - JOSEPH V. IANNONE
CURRENT PROPERTY ZONING	TF-CZ #18CZ27
WAKE COUNTY PINS	0732-23-5461, 0732-23-4710
TOTAL PROPERTY AREA	10.74 AC
AREA DEDICATED - OLIVE CHAPEL RD. R/W	0.16 AC
NET PROPERTY AREA	10.58 AC
TOTAL BUILDING AREA	127,876 SF
WATERSHED PROTECTION OVERLAY DISTRICT	PRIMARY
DESIGNATED 100-YEAR FEMA FLOODPLAIN	N/A
RCA / LANDSCAPE BUFFER AREA REQUIRED	2.12 AC (20%)
RCA / LANDSCAPE BUFFER AREA PROVIDED	2.47 AC (23.0%)
2045 LAND USE MAP	OFFICE EMPLOYMENT
PROPOSED USE	INDUSTRIAL FLEX & STORAGE

PARKING SUMMARY

BASIS OF DETERMINATION:
- 1 PER 300 SF OFFICE AREA - 54 (16,170 SF OFFICE SPACE)
- 3 PER FLEX BUSINESS UNIT - 45 (15 UNITS)
- 1.5 PER SHOP UNIT - 48 (32 UNITS)

TOTAL SPACES REQUIRED - 147 SPACES (5 HANDICAP)
TOTAL SPACES PROVIDED - 204 SPACES (11 HANDICAP)

PRELIMINARY SHEET INDEX

C-1	COVER SHEET
C-2	PRELIMINARY SITE LAYOUT PLAN
C-3	EXISTING CONDITIONS PLAN
C-4	PRELIMINARY UTILITY PLAN
C-5	PRELIMINARY GRADING PLAN
C-6	CONSTRUCTION DETAILS
LA-1	PRELIMINARY LANDSCAPE PLAN
LA-2	PRELIMINARY LANDSCAPE DETAILS
A-1	ARCHITECTURAL SITE KEY PLAN
A-2	ARCHITECTURAL ELEVATIONS
A-3	ARCHITECTURAL ELEVATIONS
A-4	ARCHITECTURAL ELEVATIONS
A-5	ARCHITECTURAL ELEVATIONS
LP	LIGHTING PLAN

ZONING CONDITIONS:

The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

1. Automotive Accessory Sales and Installation
2. Commissary
3. Contractor's office and storage yard
4. Glass sales
5. Health/fitness center or spa
6. Manufacturing and Processing, Minor
7. Medical or dental office or clinic
8. Monument sales, retail
9. Office, business or professional
10. Personal services
11. Pet services
12. Printing or copying service
13. Real estate sales
14. Repair services, limited
15. Retail sales, general
16. Security or caretaker quarters
17. Self-service storage
18. Studio for art
19. Tailor shop
20. Upholstery shop
21. Utility, minor
22. Warehousing
23. Wholesaling, general
24. Woodworking or cabinetmaking

CONDITIONS:

1. The buildings adjacent to Olive Chapel Road shall be designed to look like office buildings. They shall be constructed of entirely of masonry products on each facade and include storefront windows.
2. The buildings along NC 540 shall be constructed of entirely of masonry products on each facade and designed to look like office buildings.
3. The storage building area (including drives and parking) shall not cover more than sixty percent of the total project area.
4. The office building and flex space building area (including drives and parking) shall cover at least twenty percent of the total project area.
5. Each commissary use shall be limited to an interior area of no more than 5,000 square feet.
6. Evergreen screening with a 6' minimum height at time of planting will be provided from Olive Chapel Road along the eastern property line behind Building D.
7. The project shall provide rooftop solar systems that produce a minimum of 14KW of electricity. The system shall be installed and completed prior to signature of the final site plan plat for the last phase of the development.
8. The uses Commissary and Manufacturing and Processing, Minor shall only be located in buildings accessed behind the security gate

N

0 50 100 200

GRAPHIC SCALE

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

Jones & Cnossen
ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning

221 N. SALEM ST.
SUITE 001
PO BOX 1062
APEX, NC 27502
Office: 919-387-1174
Registration: P-0151
www.jonescnossen.com

FOR REVIEW ONLY

540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX
WAKE COUNTY, NORTH CAROLINA

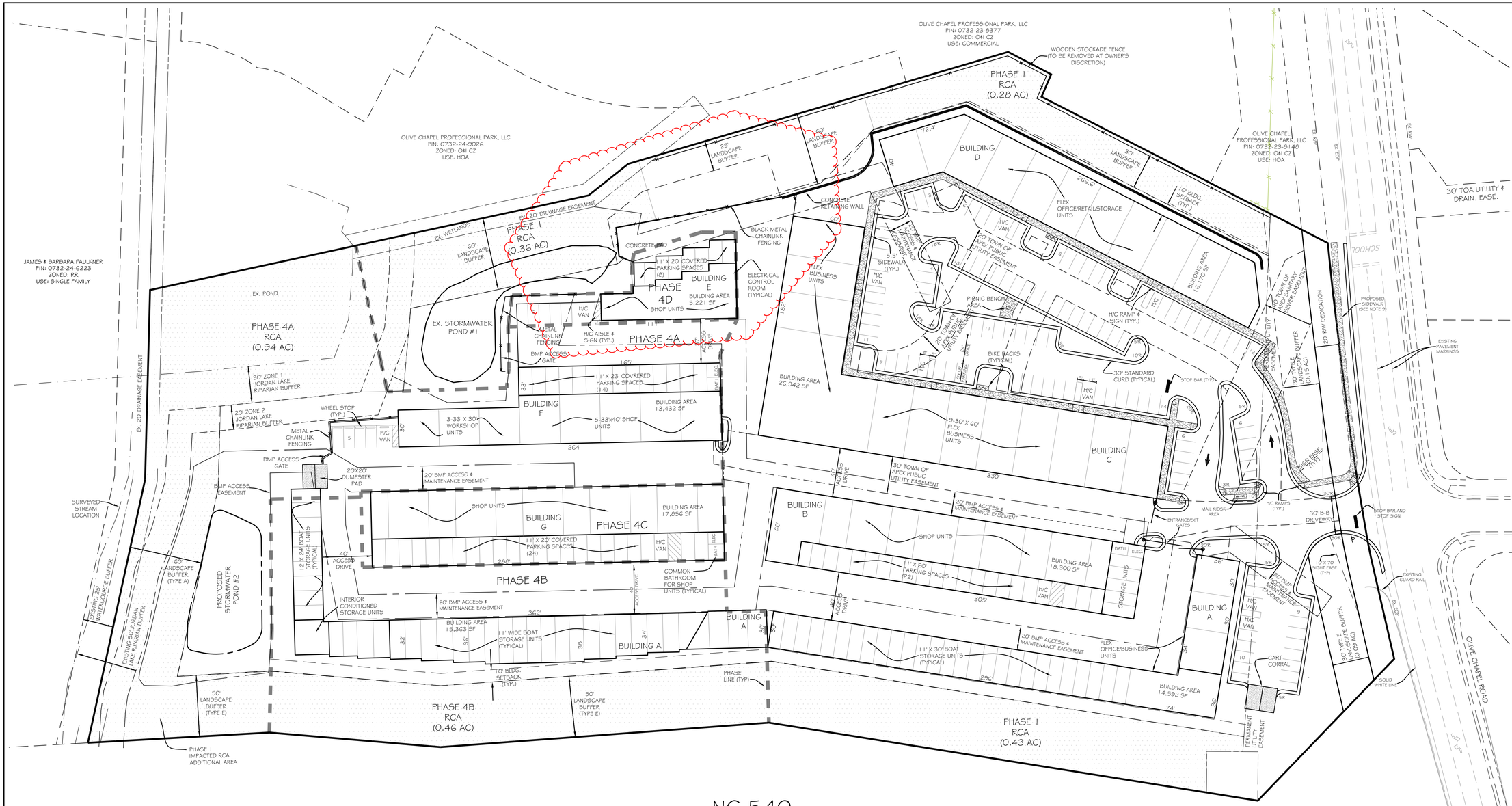
COVER SHEET

SCALE	1"= 100'
DRAWN	PDC
DATE	JANUARY 6, 2014

REVISION	
2/17/14	SITE DATA
3/14/14	PER TRC
3/26/14	PER TRC
03/27/20	SITE UPDATES
05/12/20	1st TRC REVIEW
06/12/20	2nd TRC REVIEW

SHEET C-1

PROJECT 1322



TOWN OF APEX REQUIRED NOTES:

1. NO SITE DEVELOPMENT ACTIVITY INCLUDING BUT NOT LIMITED TO TESTING, CLEARING, INSTALLATION OF S&E MEASURES, OR GRADING, SHALL OCCUR UNTIL REQUIRED PROTECTION FENCING HAS BEEN INSTALLED AND INSPECTED. A PROTECTION FENCING INSTALLATION PERMIT MAY BE OBTAINED AT THE PLANNING DEPARTMENT OR BY CALLING 919 249-3426.
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3. ALL GRADING AND SUPPORT STRUCTURES ASSOCIATED WITH ANY RETAINING STRUCTURE SHALL NOT ENCROACH INTO ANY REQUIRED BUFFER OR PROTECTED AREA (SUCH AS BUT NOT LIMITED TO, RCA AND CRITICAL ROOT ZONES OF TREES, PUBLIC UTILITY EASEMENTS AND RIGHTS-OF-WAY), AND SHALL BE CONTAINED ENTIRELY ON SITE.
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NOTES:

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2. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PROVIDED BY SMITH & SMITH SURVEY COMPANY.
3. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DETAIL INFORMATION.
4. NO FEMA MAPPED FLOODPLAIN EXISTS ON THIS PROPERTY PER FEMA MAP #3720073200J DATED MAY 2, 2006.
5. THIS PROJECT WILL USE BUILDING MOUNTED LIGHTS WITH LOW WATTAGE, SO NO LIGHTING PLAN IS REQUIRED.
6. PERIMETER LANDSCAPING SHALL PROVIDE REQUIRED SCREENING FOR HVAC UNITS.
7. PERIMETER SECURITY CHAINLINK FENCING TO BE 6' HIGH WITH BLACK VINYL COATING.
8. DEVELOPER WILL BE RESPONSIBLE FOR A FEE-IN-LIEU FOR THE SIDEWALK ALONG THE OLIVE CHAPEL ROAD FRONTAGE.
9. PROPOSED SIDEWALK ALONG OLIVE CHAPEL ROAD IS PLANNED FOR CONSTRUCTION AS PART OF THE GOAPEX TRANSIT IMPROVEMENT PROJECT.

BUILDING SUMMARY:

11 FLEX OFFICE UNITS	16,170 SF
15 FLEX BUSINESS UNITS	32,670 SF
32 WORKSHOP SPACES	36,715 SF
63 AUTO/BOAT STORAGE SPACES	23,483 SF
68 COVERED PARKING SPACES	16,519 SF
5 STORAGE UNITS	1,800 SF
1 CONDITIONED STORAGE AREA	790 SF

0 20 40 80
GRAPHIC SCALE

PRELIMINARY PLANS
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Jones & Cnossen ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning
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Registration: P-0151
www.jonescnossen.com

FOR REVIEW ONLY

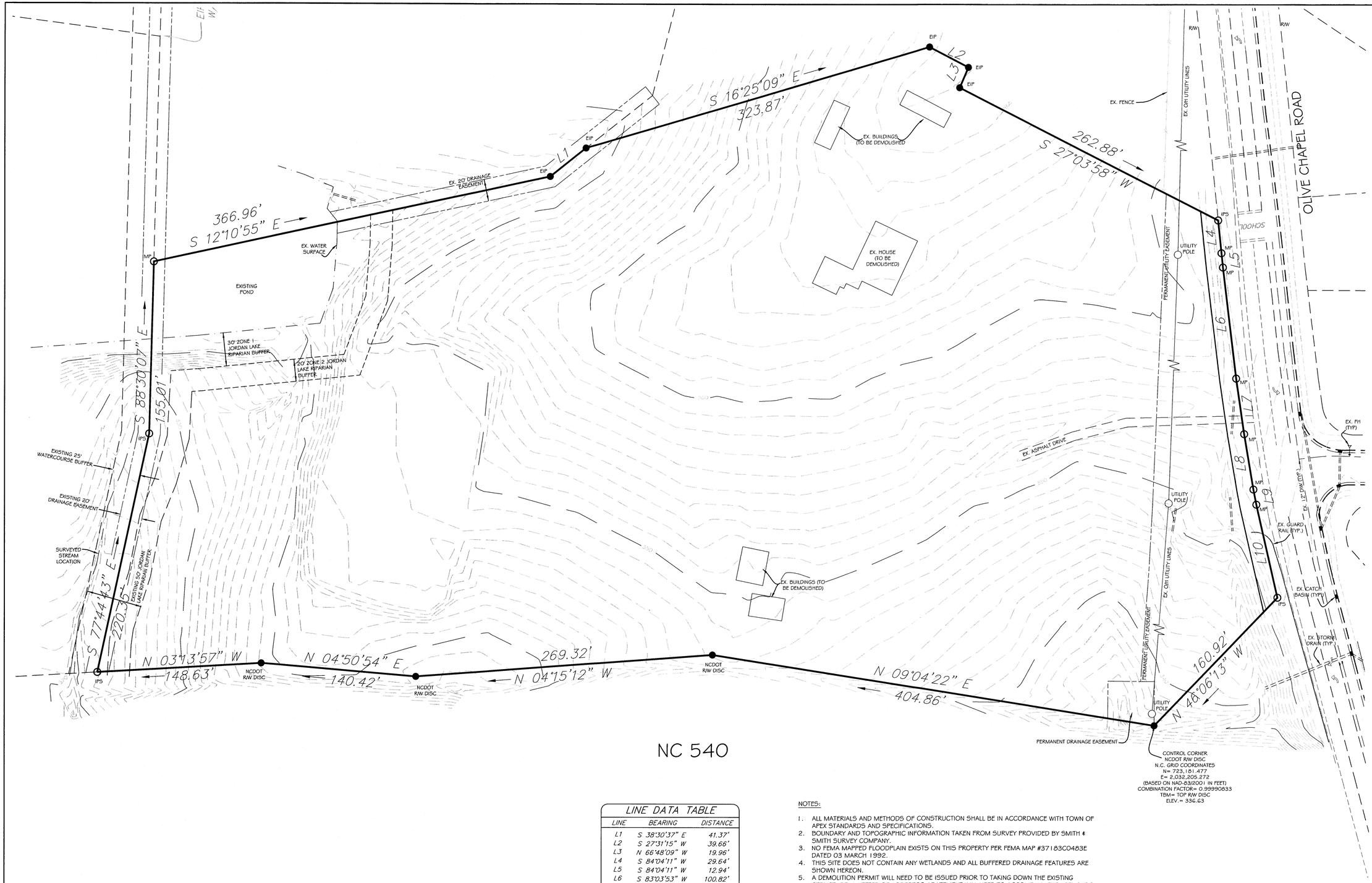
540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX — WAKE COUNTY, NORTH CAROLINA

PRELIMINARY SITE LAYOUT PLAN

SCALE	1"=40'
DRAWN	PDC
DATE	JANUARY 6, 2014

REVISION	
2/17/14	PER TRC COMMENTS
3/14/14	PER TRC
3/26/14	PER TRC
03/27/20	SITE UPDATES
05/12/20	1st TRC REVIEW
06/12/20	2nd TRC REVIEW

SHEET C-2
PROJECT 1322



LINE DATA TABLE		
LINE	BEARING	DISTANCE
L1	S 38°30'37" E	41.37'
L2	S 27°31'15" W	39.66'
L3	N 66°48'09" W	19.96'
L4	S 84°04'11" W	29.64'
L5	S 84°04'11" W	12.94'
L6	S 83°03'53" W	100.82'
L7	S 81°40'04" W	50.70'
L8	S 80°22'49" W	50.80'
L9	S 78°52'41" W	13.92'
L10	S 77°04'44" W	85.95'

NOTES:

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2. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY PROVIDED BY SMITH & SMITH SURVEY COMPANY.
3. NO FEMA MAPPED FLOODPLAIN EXISTS ON THIS PROPERTY PER FEMA MAP #3718 3C0483E DATED 03 MARCH 1992.
4. THIS SITE DOES NOT CONTAIN ANY WETLANDS AND ALL BUFFERED DRAINAGE FEATURES ARE SHOWN HEREON.
5. A DEMOLITION PERMIT WILL NEED TO BE ISSUED PRIOR TO TAKING DOWN THE EXISTING STRUCTURE. A LETTER OF ASBESTOS ABATEMENT WILL NEED TO ACCOMPANY THE APPLICATION FOR PERMIT.

0 20 40 80
GRAPHIC SCALE

N

PRELIMINARY PLANS
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NORTH CAROLINA PROFESSIONAL SEAL 040099 ENGINEER STUART M. JONES 2/17/14

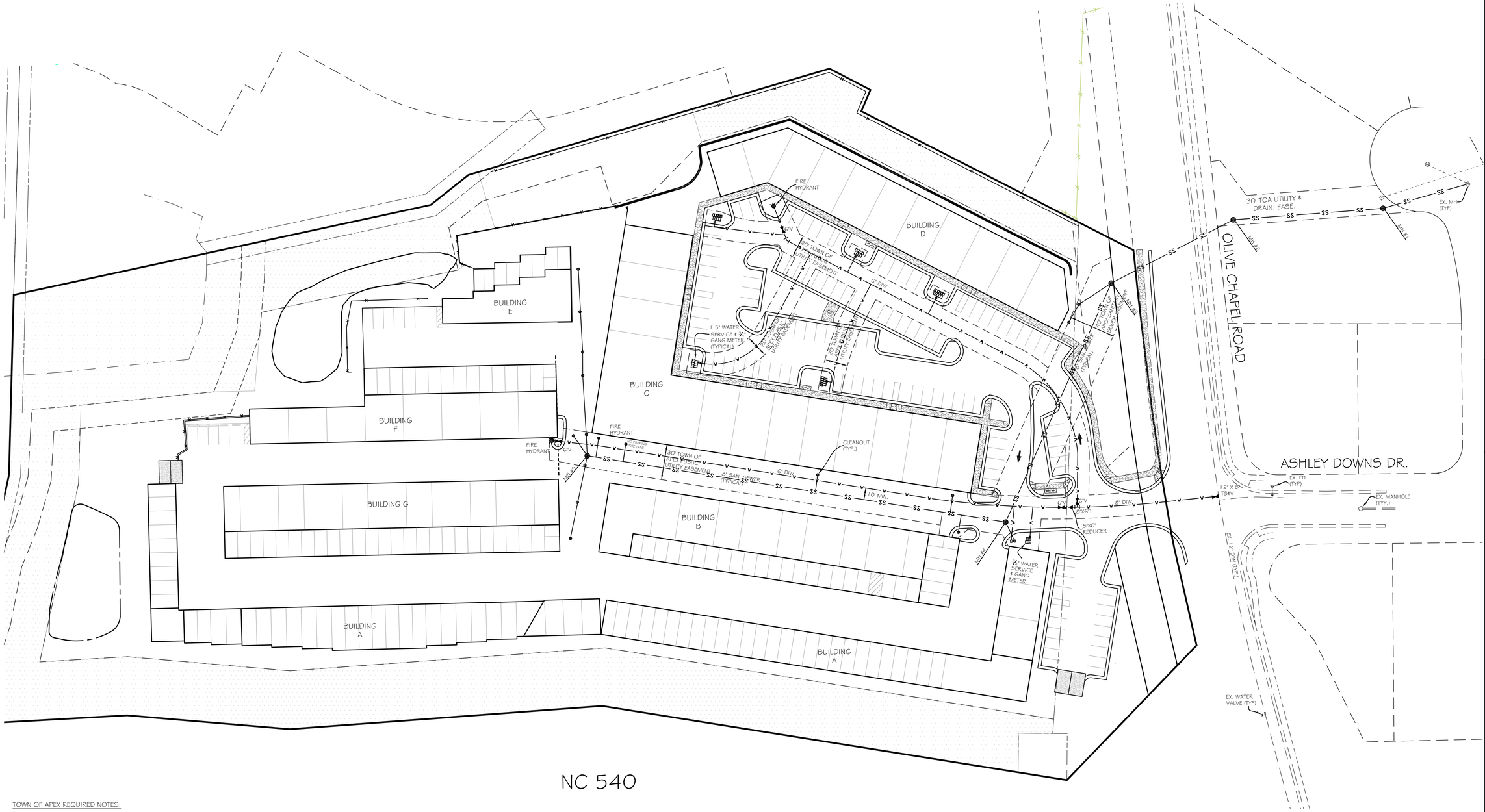
540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX
WAKE COUNTY, NORTH CAROLINA

EXISTING CONDITIONS PLAN

SCALE	1"=40'
DRAWN	SMJ
DATE	JANUARY 6, 2014

REVISION	NOTES & BUFFERS
2/17/14	

SHEET C-3
PROJECT 1322



NC 540

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5. ALL HANDICAP PARKING SPACES AND ACCESSIBLE PATHS SHALL MEET CURRENT HANDICAP CODE REQUIREMENTS.
6. SEWER AND WATER CONNECTIONS ACROSS OLIVE CHAPEL ROAD SHALL BE BY BORE AND JACK.
7. ELECTRICAL SERVICE CONTACT FOR THE TOWN OF APEX ELECTRIC UTILITIES IS RODNEY SMITH AT 919-249-3342.
8. ALL UTILITY TIES INTO OLIVE CHAPEL CHURCH ROAD WILL NEED TO BE PERFORMED UTILIZING THE BORE & JACK METHOD IN ACCORDANCE WITH NCDOT REQUIREMENTS.

0 20 40 80

GRAPHIC SCALE

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PRELIMINARY UTILITY PLAN

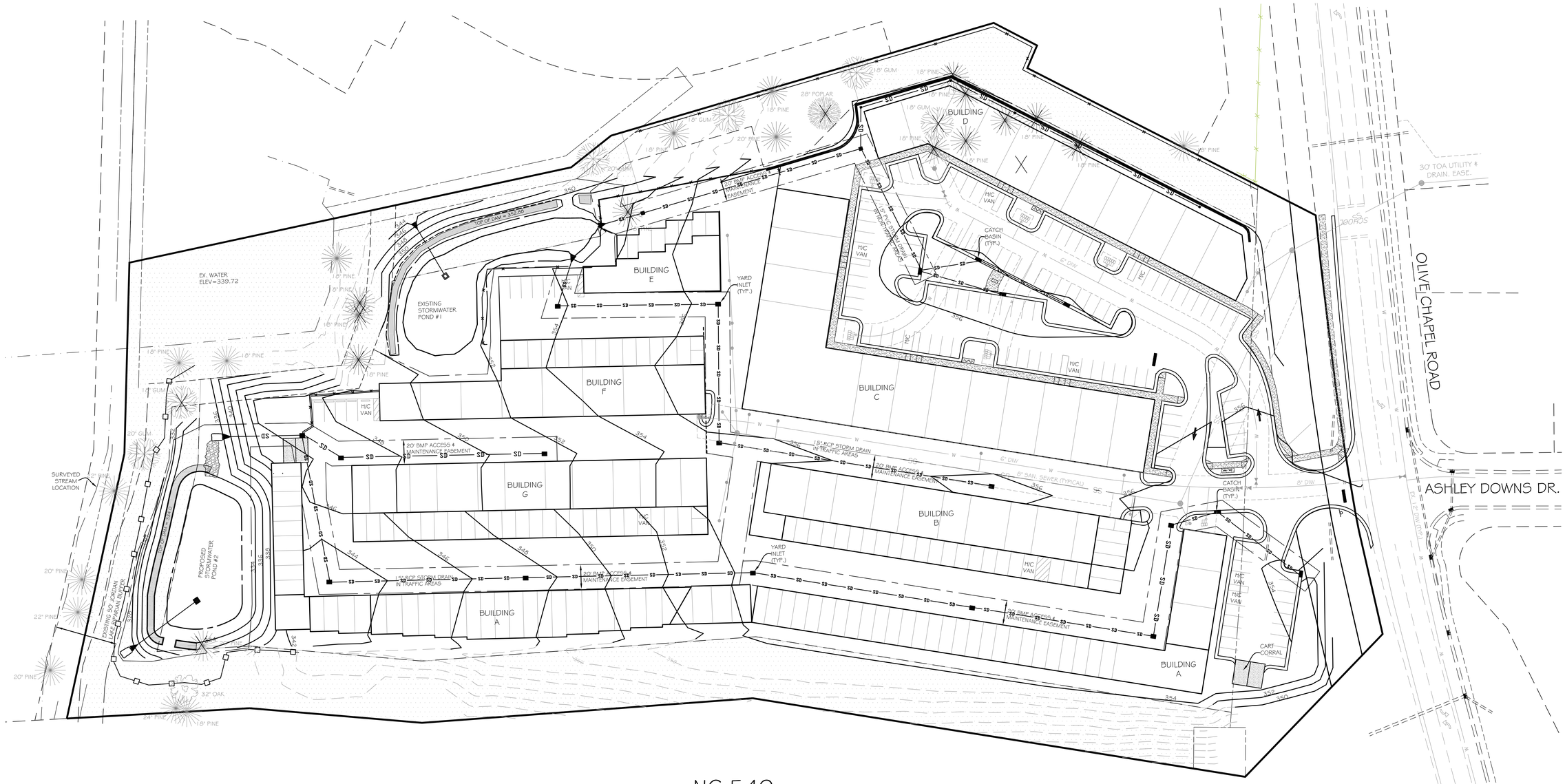
SCALE	DRAWN
1"=40'	PDC

DATE: JANUARY 6, 2014

REVISION	
2/17/14	UTILITIES
3/14/14	PER TRC
3/26/14	PER TRC
03/27/20	SITE UPDATES
05/12/20	1st TRC REVIEW
06/12/20	2nd TRC REVIEW

SHEET: C-4

PROJECT: 1322



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6. A GRADING PERMIT FROM THE BUILDING INSPECTION DIVISION IS REQUIRED PRIOR TO ANY GRADING ON THE SITE IN CONFORMANCE TO THE NC BUILDING CODE APPENDIX J (GRADING).

X - TREE TO BE REMOVED

0 20 40 80
GRAPHIC SCALE

PRELIMINARY PLANS
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MAJOR SITE PLAN
TOWN OF APEX — WAKE COUNTY, NORTH CAROLINA

PRELIMINARY GRADING PLAN

SCALE	DRAWN
1"=40'	PDC

DATE: JANUARY 6, 2014

REVISION	
2/17/14	PER TRC COMMENTS
3/14/14	PER TRC
3/26/14	PER TRC
03/27/20	SITE UPDATES
05/12/20	1st TRC REVIEW
06/12/20	2nd TRC REVIEW

SHEET: C-5

PROJECT: 1322

SEEDBED PREPARATION

1.) Chisel compacted areas and spread topsoil 3 inches deep over adverse soil conditions, if available.

2.) Rip the entire area to 6 inches deep.

3.) Remove all loose rock, roots, and other obstructions leaving surface reasonably smooth and uniform.

4.) Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil. (see below)

5.) Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared 4 to 6 inches deep.

6.) Seed on freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.

7.) Mulch immediately after seeding and anchor mulch.

8.) Inspect all seeded areas and make necessary repairs or reseedings within the planting season, if possible. If stand should be over 60% damaged, reestablish following original lime, fertilizer, and seeding rates.

9.) Consult Conservation Inspector for maintenance treatment and fertilization after permanent cover is established.

Apply: Agricultural Limestone – 2 tons / acre (3 tons / acre in clay soils). Fertilizer – 1000 lbs. / acre 10–10–10. Superphosphate – 500 lbs. / acre – 20%. Mulch – 2 tons / acre – small grain straw. Anchor – Asphalt Emulsion @ 300 gals. / acre.

SEEDING SCHEDULE
(REVISED, 1–1–86)

Shoulders, Side ditches, Slopes, (Max. 3:1)

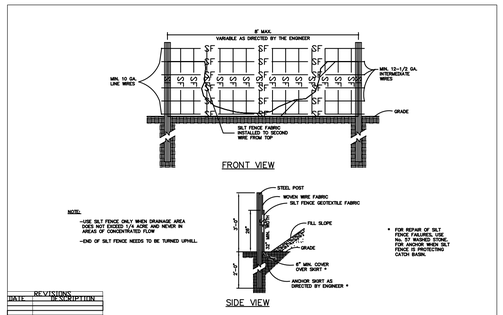
DATE	TYPE	PLANTING RATE
Aug. 15 – Nov. 1	Tall Fescue	300 lbs. / acre
Nov. 1 – March 1	Tall Fescue and	300 lbs. / acre
	Abruzzi Rye	25 lbs. / acre
March 1 – April 15	Tall Fescue	300 lbs. / acre
April 15 – June 30	Hulled Common Bermudagrass	25 lbs. / acre
July 1 – Aug. 15	Tall Fescue and	120 lbs. / acre
	and Browntop Millet	35 lbs. / acre
	or Sorghum – Sudan Hybrids	30 lbs. / acre

SLOPES (3:1 to 2:1)

March 1 – June 1	Sericea Lespedeza (scarified)	50 lbs. / acre
	and	
(March 1 – April 15)	Add Tall Fescue	120 lbs. / acre
(March 1 – June 30)	Or Add Weeping Lovegrass	10 lbs. / acre
(March 1 – June 30)	Or Add Hulled Common Bermudagrass	25 lbs. / acre
June 1 – Sept. 1	Tall Fescue and	120 lbs. / acre
	Browntop Millet	35 lbs. / acre
	or Sorghum – Sudan Hybrids	30 lbs. / acre
Sept. 1 – March 1	Sericea Lespedeza (unhulled – unscarified)	70 lbs. / acre
	and Tall Fescue	120 lbs. / acre
Nov. 1 – March 1	Add Abruzzi Rye	25 lbs. / acre

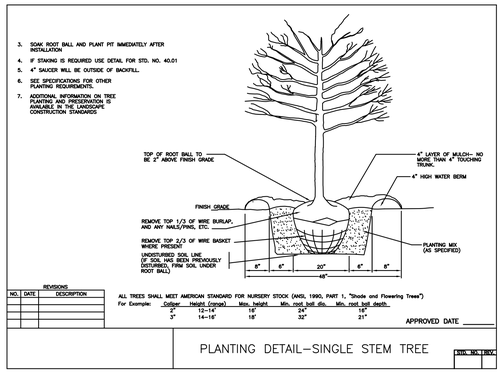
Consult Conservation Engineer or Soil Conservation Service for additional information concerning other alternatives for vegitation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible.

Reseed according to optimum season for desired perminate vegitation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.



REVISIONS		
DATE	DESCRIPTION	

TOWN OF APEX STANDARDS	MOD: RMG APP: RMG 22 SEP 98	STANDARD TEMPORARY SILT FENCE DETAIL	STD. NO. 2.01



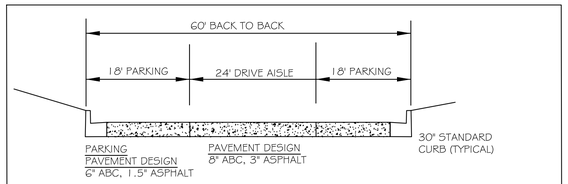
REVISIONS		
NO.	DATE	DESCRIPTION

ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "Shade and Flowering Trees")

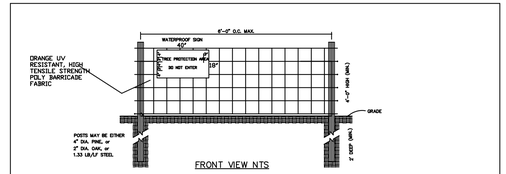
For Example:	Caliper	Height (range)	Min. height	Min. root ball dia.	Min. root ball depth
	2"	12–14'	10'	24"	16"
	3"	14–16'	18'	32"	21"

APPROVED DATE

PLANTING DETAIL–SINGLE STEM TREE	STD. NO. REV.



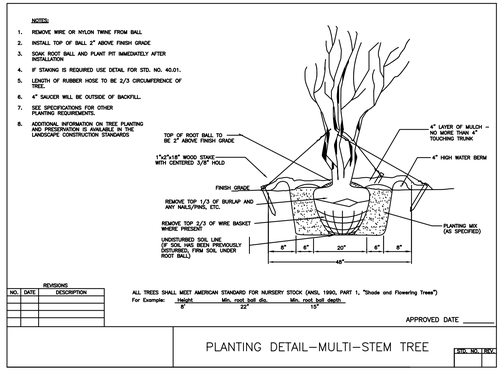
PARKING LOT TYPICAL SECTION
N.T.S.



NOTES:
1. WARNING SIGNS TO BE MADE OF DURABLE WATERPROOF MATERIAL.
2. ALL LETTERS TO BE AT LEAST 2 INCHES HIGH, CLEARLY LEGIBLE, AND SPACED AS SHOWN ABOVE.
3. SIGNS TO BE PLACED AT 200 FT. INTERVALS, MAX. AND AT EACH END.
4. FOR LENGTHS LESS THAN 200 FT. IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER AREA AND/OR SIDE.
5. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. FABRIC MUST BE ATTACHED TO POSTS ONLY, DO NOT ATTACH TO TREES.
6. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. FENCING MUST REMAIN UPRIGHT AND SLACK FREE.
7. ADDITIONAL SIGNS AND OR PROTECTION MEASURES MAY BE REQUIRED BY THE PLANNING DEPARTMENT BASED UPON ACTUAL FIELD CONDITIONS.
8. FAILING TO MAINTAIN TREE PROTECTION MEASURES MAY RESULT IN FINES AND/OR PERMIT REVOKATION.

REVISIONS	
DATE	DESCRIPTION

TOWN OF APEX STANDARDS		STANDARD TREE PROTECTION FENCE DETAIL	STD. NO. 2.01



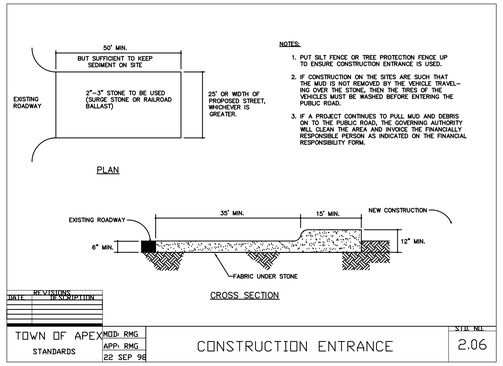
REVISIONS		
NO.	DATE	DESCRIPTION

ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "Shade and Flowering Trees")

For Example:	Height	Min. root ball dia.	Min. root ball depth
	8'	24"	15"

APPROVED DATE

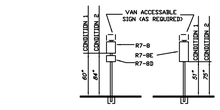
PLANTING DETAIL–MULTI–STEM TREE	STD. NO. REV.



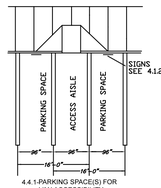
NOTES:
1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.

REVISIONS	
DATE	DESCRIPTION

TOWN OF APEX STANDARDS	MOD: RMG APP: RMG 22 SEP 98	CONSTRUCTION ENTRANCE	STD. NO. 2.06



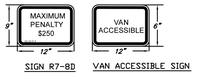
4.1.2–SIGNS AT ACCESSIBLE SPACES (PART 3)



4.4.1-PARKING SPACE(S) FOR VAN ACCESSIBILITY

SIGN R7-8

STANDARD COLORS (ALL SIGNS)
BACKGROUND–WHITE
LETTERING/BORDER–GREEN
ARROW–GREEN
FIGURE–WHITE ON BLUE FIELD
CORNER RADIUS–1½"(TYPICAL)



SIGN R7-8D VAN ACCESSIBLE SIGN

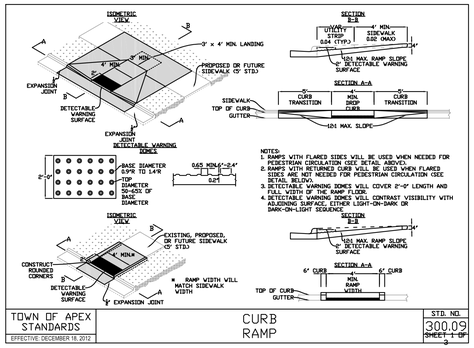
4.1.2–SIGNS AT ACCESSIBLE SPACES (PART 1)

SIGN R7-8E

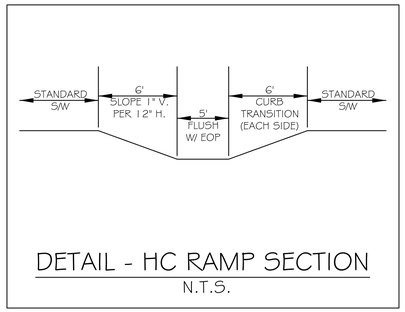
(COLORS/CORNER RADII SAME AS 4.1.2–PART 1)

THIS SIGN MAY BE USED IN PLACE OF SIGNS R7-8/R7-8DKSEE 4.1.2–PART 3)

4.1.2–SIGNS AT ACCESSIBLE SPACES (PART 2)



TOWN OF APEX STANDARDS	EFFECTIVE: DECEMBER 18, 2012	CURB RAMP	STD. NO. 300.09 SHEET 1 OF 2

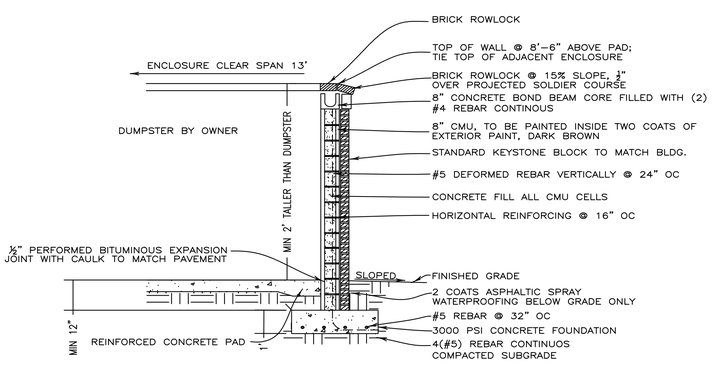


DETAIL - HC RAMP SECTION
N.T.S.

CONSTRUCTION SEQUENCE

THE FOLLOWING BEGINS ONLY AFTER CONSTRUCTION PLANS ARE APPROVED AND SIGNED BY APPROPRIATE TOWN STAFF.

1. FILL OUT TREE/PROTECTION FENCING INSTALLATION PERMIT APPLICATION (OBTAIN FROM PLANNING DEPARTMENT).
2. HAVE A SURVEYOR FLAG PROPERTY LINES, EASEMENTS, BUFFERS, TREE PROTECTION AREAS, AND FLAG THE PROTECTION LIMITS.
3. CONTACT AN APEX PLANNING DEPARTMENT ZONING COMPLIANCE OFFICER AT 249-3426 TO REQUEST APPROVAL FOR TREE PROTECTION FENCING LOCATIONS.
4. INSTALL APPROVED TREE PROTECTION FENCING, SIGNS, AND/OR ANY OTHER PROTECTION MEASURES THAT MAY BE REQUIRED. CALL PLANNING AT 249-3426 FOR A FINAL INSPECTION OF PROTECTION MEASURES. PLANNING WILL FORWARD APPROVAL TO PUBLIC WORKS STAFF.
5. SUBMIT THE APPLICABLE S&E PERFORMANCE GUARANTEE TO THE DEVELOPMENT PROJECTS COORDINATOR AT 249-3394 IN THE ENGINEERING DEPARTMENT. A LETTER OF PLAN APPROVAL CANNOT BE ISSUED UNTIL THE GUARANTEE IS SUBMITTED.
6. REQUEST A LETTER OF PLAN APPROVAL FOR SEDIMENTATION AND EROSION CONTROL MEASURES FROM PUBLIC WORKS STAFF.
7. THROUGH THE ENGINEERING FIELD SERVICES SUPERVISOR AT 249-3510, SCHEDULE A PRE-CONSTRUCTION MEETING WITH ENGINEERING INSPECTORS AND OTHER TOWN STAFF.
8. INSTALL GRAVEL CONSTRUCTION ENTRANCE, TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, BYPASS CHANNELS, AND/OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
9. CALL THE PUBLIC WORKS STAFF AT 249-3427 FOR AN ON-SITE INSPECTION AND TO REQUEST A CERTIFICATE OF COMPLIANCE.
10. COMPLETE GRADING PERMIT APPLICATION (OBTAIN FROM BUILDING INSPECTIONS DIVISION).
11. ONCE GRADING PERMIT IS REVIEWED AND ISSUED BY BUILDING INSPECTIONS, ARRANGE A PRE-CONSTRUCTION MEETING WITH BUILDING INSPECTIONS (RUDY BAKER) AT 249-3381 PRIOR TO ANY GRADING ACTIVITIES. THIS MEETING IS SEPARATE FROM ANY OTHER PRE-CONSTRUCTION MEETINGS REQUIRED IN THE CONSTRUCTION SEQUENCE.
12. POST GRADING PERMIT PROMINENTLY ON SITE AT ALL TIMES.
13. BEGIN CLEARING, GRUBBING, AND ROUGH GRADE OF THE SITE IN ACCORDANCE WITH THE APPROVED GRADING PLAN.
14. STOCKPILE SUFFICIENT AMOUNT OF TOPSOIL TO COVER 3 INCHES OVER LANDSCAPED AREAS AT THE END OF THE PROJECT.
15. INSTALL STORM SEWER, IF APPLICABLE, AND PROTECT INLETS WITH INLET PROTECTION DEVICES, SEDIMENT DEVICES, AND/OR OTHER APPROVED MEASURES. MAINTAIN S&E MEASURES AS NEEDED. ONCE THE FIRST LIFT OF ASPHALT HAS BEEN INSTALLED, INSTALL CATCH BASIN INLET PROTECTION .
16. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE: (1) ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS OF THE LAST LAND-DISTURBING ACTIVITY (2) ALL OTHER DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 CALENDAR DAYS OF THE LAST LAND-DISTURBING ACTIVITY.
17. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION OR PAVING.
18. FLUSH AND CLEAN ALL STORMWATER SYSTEM PIPES. CLEAN AND REMOVE SEDIMENT FROM TEMPORARY SEDIMENT TRAPPING DEVICES. FOLLOW BMP CONSTRUCTION SEQUENCE FOUND ON THE GRADING AND/OR BMP DETAIL SHEET ON THE CONSTRUCTION PLAN SET.
19. REMOVE TEMPORARY DIVERSIONS, SILT FENCING, SEDIMENT BASINS, ETC. AND PROVIDE ADEQUATE COVER OR PAVE ANY RESULTING BARE AREAS. ALL PERMANENT EROSION CONTROL DEVICES SHOULD BE INSTALLED AT THIS POINT.
20. WHEN VEGETATION HAS BEEN ESTABLISHED, CALL PUBLIC WORKS AT 249-3427 FOR FINAL SITE INSPECTION AND TO REQUEST A CERTIFICATE OF COMPLETION.
21. OWNER IS RESPONSIBLE FOR PERMANENT EROSION CONTROL MAINTENANCE OF THE SITE.



DUMPSTER ENCLOSURE WALL

PRELIMINARY PLANS
NOT FOR CONSTRUCTION

Jones & Cnossen
ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning
221 N. SALEM ST.
SUITE 001
PO BOX 1062
APEX, NC 27502
Office: 919-387-1174
Registration: P-0151
www.jonescnossen.com

FOR REVIEW ONLY

540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX WAKE COUNTY, NORTH CAROLINA

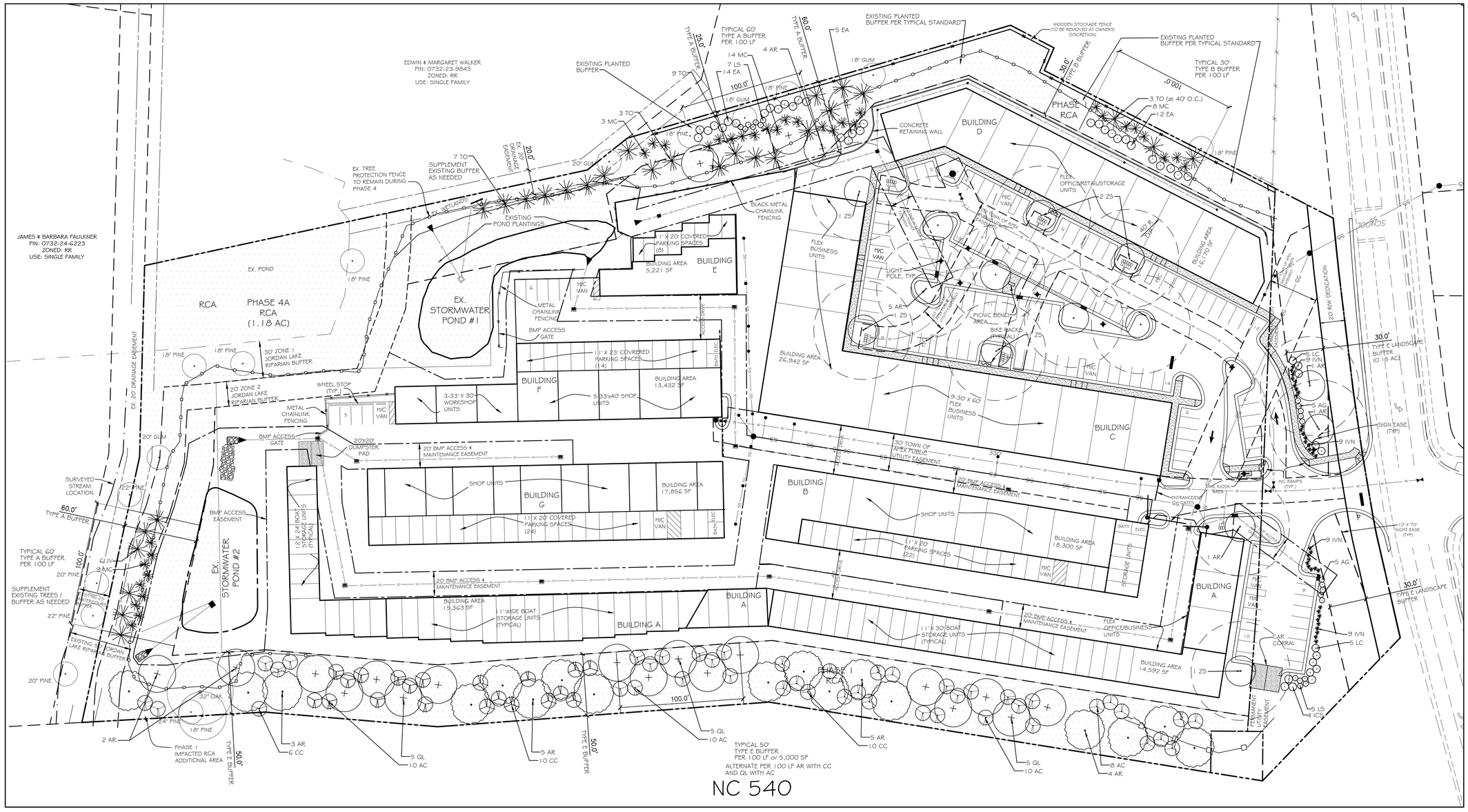
CONSTRUCTION DETAIL SHEET

SCALE	NTS
DRAWN	PDC
DATE	JANUARY 6, 2014

REVISION	
2/17/14	PER TRC COMMENTS
06/12/20	2nd TRC REVIEW

SHEET C-6

PROJECT 1322



PLANTING NOTES:

1. All plant materials to comply with American Standard for Nursery Stock ANSI.Z60.
2. Substitutions of plant materials specified can only occur with prior approval by Landscape Architect.
3. Establish plant bed configurations. Landscape Architect to approve bed layout in field.
4. Install plants and mulch beds with 3" of pinestraw.
5. Lawn areas to be seeded and strawed.
6. Landscape Contractor to maintain plant materials for a one year period following substantial completion per specifications
7. Areas damaged from plant relocation or other activities of Landscape Contractor to be reseeded and established at no additional cost to the owner.
8. No trees to be planted under overhead power line.
9. The final landscape plan will be completed with pond plantings at time of construction drawings.
10. The buffer plantings indicated for each perimeter buffer are a sample of plantings to be repeated every 100 lf for length of buffer. Trees and shrubs to be planted and alternated as indicated.
11. All retaining walls and other retention structures must be integrally tinted an earth tone color.

PLANT SCHEDULE

KEY	BOTANICAL / COMMON NAME	SIZE	ROOT	SPACING
QL	QUERCUS LYRATA 'HIGHBEAM' / OVERCUP OAK	12' HT./2" CAL.	B & B	N/A
ZS	ZELKOVA SERRATA 'GREEN VASE' / JAPANESE ZELKOVA	12' HT./2" CAL.	B & B	N/A
ICS	ILEX CRENATA 'STEEDS' / STEEDS HOLLY	18" HT.	CONT.	4' O.C.
LC	LOROPETALUM CHINENSIS 'RUBY' / CHINESE FRINGE FLOWER	18" HT.	CONT.	4' O.C.
AR	ACER RUBRUM 'RED POINT' / RED POINT MAPLE	12' HT./2" CAL.	B & B	N/A
LJ	LIGUSTRUM JAPONICUM 'EASTBAY' / WAX LEAF PRIVET	24" HT.	CONT.	5' O.C.
AG	ABELIA X GRANDIFLORA 'EDWARD GOUCHER' / GLOSSY ABELIA	18" HT.	CONT.	4' O.C.
LS	LIGUSTRUM SINENSE 'SWIFT CREEK' / SWIFT CREEK PRIVET	24" HT.	CONT.	5' O.C.
AC	AMELANCHIER CANADENSIS / SERVICE BERRY	8' HT./1" CAL.	B & B	15' O.C.
CC	CERCIS CANADENSIS 'FOREST PANSY' / REDBUD	8' HT./1" CAL.	B & B	15' O.C.
IVN	ILEX VOMITORIA 'NANA' / DWARF YAUPON HOLLY	18" HT.	CONT.	4' O.C.
EA	EUONYMUS ALATUS / BURNING BUSH	24" HT.	CONT.	5' O.C.
JV	JUNIPER VIRGINIANA / EASTERN RED CEDAR	8' HT./1" CAL.	B & B	9' O.C.
MC	MYRICA CERIFERA / WAX MYRTLE	36" HT.	CONT.	8' O.C.
TO	THUJA OCCIDENTALIS 'EMERALD' / EASTERN ARBORVITAE	8' HT./1" CAL.	B & B	12' O.C.

Town of Apex Planting Requirements:

1) VEHICLE USE AREA:

Required : All portions of vehicle use area within 40 feet of a trunk of a large deciduous tree where possible.
All parking rows screened from off site.

2) BUFFER PLANTINGS:

The 60' Type A buffer required along the north and east property lines are planted to the standards of an opaque buffer from the ground to a height of 6'. A sample of trees and shrubs is indicated and is to be repeated for the length of the property line or watercourse / pond buffers.
The proposed trees and shrubs should be planted at the discretion of the inspector and respect the existing trees.

The 30' Type B buffer required along the east property line is planted to the standards of a semi-opaque screen from the ground to a height of between 3 and 6'.
A wood stockade fence is also indicated along the east property line as per the zoning conditions.

The 50' Type E buffer required along 540 is planted to the standards of 1 large tree and 2 small trees per 1,000 sf. A sample of trees is indicated and is to be repeated for the length of the buffer.
The small and large trees are to be alternated as indicated.

The 30' Type E street front buffer required along Olive Chapel Road conflicts with a permanent utility easement and an overhead power line. Shrubs are indicated to screen the VSA from the ROW.

Existing trees 18" and greater are indicated. Buffer trees and shrubs are to be planted supplemental to the existing trees and shrubs and to the discretion of the site inspector.

LANDSCAPE PLAN

40 20 0 40 80 120

Jones & Cnossen ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning

COALY DESIGN
LANDSCAPE ARCHITECTURE
300 / 200 Perkins Street
Raleigh, NC 27601
919.539.0012

540 FLEX AND BUSINESS PARK

MAJOR SITE PLAN REVISION

APEX, NC

Professional Seals

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT KIMBERLY J. WICKER S520

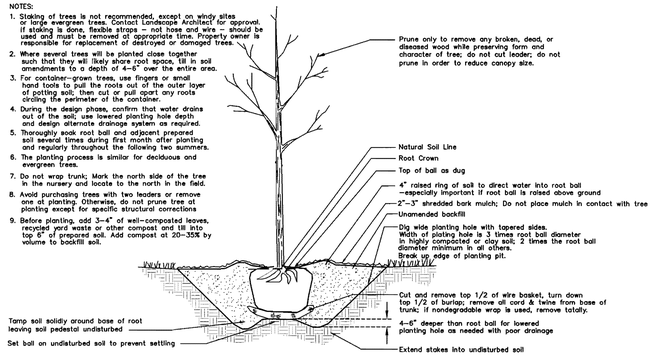
NORTH CAROLINA LANDSCAPE ARCHITECTURAL COMPANY DESIGNER P.C. C-262

Date Issued:	4.1.20
Scale	1"=40'
Drawn by:	RBS
Checked by:	KJW

Revisions

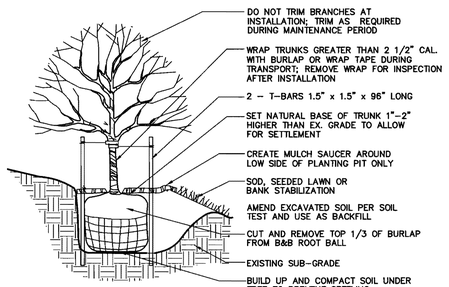
No.	Description	Date	By
1	Per Comments	5.5.20	KJW

LA-1



NOTES:
1. Staking of trees is not recommended, except on windy sites or large evergreen trees. Contact Landscape Architect for approval. If staking is done, flexible straps – not hose and wire – should be used and must be removed at appropriate time. Property owner is responsible for replacement of destroyed or damaged trees.
2. Where several trees will be planted close together such that they will likely share root space, till in soil amendments to a depth of 4–6" over the entire area.
3. For container–grown trees, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull apart any roots circling the perimeter of the container.
4. During the design phase, confirm that water drains out of the soil; use lowered planting hole depth and design alternate drainage system as required.
5. Thoroughly soak root ball and adjacent prepared soil several times during first month after planting and regularly throughout the following two summers.
6. The planting process is similar for deciduous and evergreen trees.
7. Do not wrap trunk; Mark the north side of the tree in the nursery and locate to the north in the field.
8. Avoid purchasing trees with two leaders or remove one at planting. Otherwise, do not prune tree at planting except for specific structural corrections
9. Before planting, add 3–4" of well–composted leaves, recycled yard waste or other compost and till into top 6" of prepared soil. Add compost at 20–35% by volume to backfill soil.

1/6 TREE PLANTING
NTS

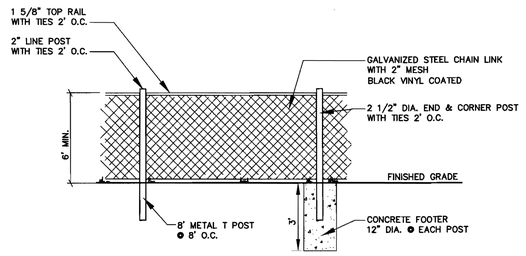


NOTES:
1. PERFORM SOIL TEST AND INCORPORATE AMENDMENTS
2. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES
3. WATER TWICE PER WEEK AFTER INSTALLATION
4. REMOVE TREE GUYING AND STAKES ONE YEAR AFTER INSTALLATION
5. VERIFY NEED AND LOCATIO OF BELOW GRADE DRAINAGE WITH LANDSCAPE ARCHITECT BEFORE PLANTING
6. CONTRACTOR TO REGRADE, SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED BY PLANTING ACTIVITIES

4/6 TREE PLANTING ON STEEP SLOPE
NTS

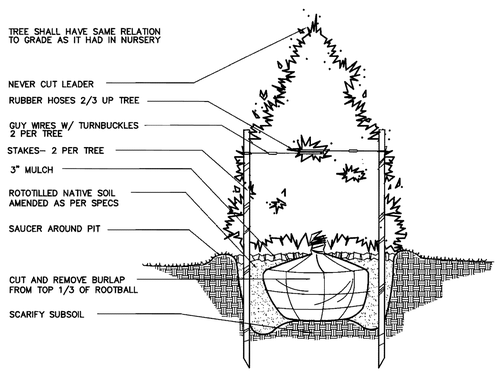
NOTES:
1. SOIL MIX–1/3 ORGANIC MATTER, 2/3 EXIST SOIL.
2. WIDTH OF PLANT PIT
   –SANDY SOIL, 24" WIDER THAN PLANT BALL
   –CLAY SOIL, 12" WIDER THAN PLANT BALL
3. FOR PLANTING AREAS WHERE SOIL HAS BEEN COMPACTED BY EQUIPMENT, CONTACT LA PRIOR TO PLANTING.
4. FOR CAMELLIAS, RHODOS, AZALEAS, AND LAURELS: SOIL MIX=2/3 ORGANIC AND 1/3 EXISTING SOIL.
5. SHRUB SHALL BEAR SAME RELATIONSHIP TO GRADE AS IT DID PRIOR TO DIGGING.

2/6 SHRUB PLANTING
NTS



NOTE: ALL POSTS & HARDWARE TO BE HOT DIPPED GALVANIZED SCHEDULE 40

5/6 CHAIN LINK FENCE
NTS



3/6 EVERGREEN TREE PLANTING
NTS

Jones & Crossen ENGINEERING, PLLC
Civil Engineering | Construction Management | Land Planning
221 N. SALEM ST.
SUITE 001
PO BOX 1062
APEX, NC 27502
Office: 919-387-1174
Registration: P-0151
www.jonescrossen.com

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1252 KIMBERLY J. SIRAK 3.12.14

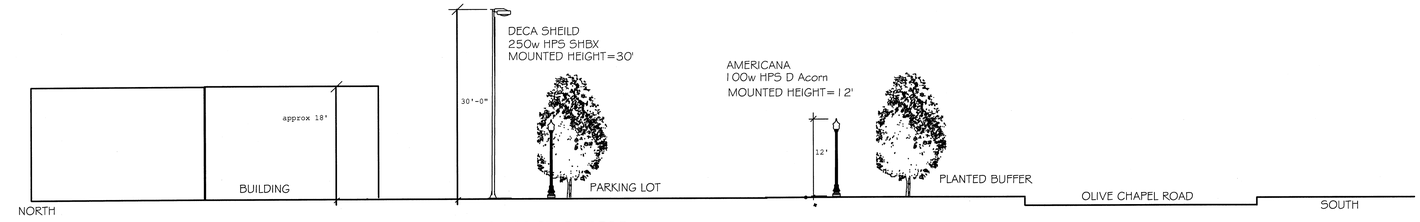
540 FLEX & BUSINESS PARK
MAJOR SITE PLAN
TOWN OF APEX WAKE COUNTY, NORTH CAROLINA

PRELIMINARY LANDSCAPE DETAILS

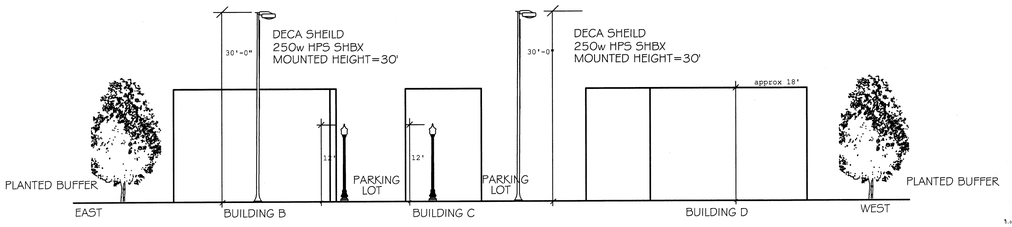
SCALE	1"=40'
DRAWN	KJS
DATE	JANUARY 6, 2014

REVISION	
TOWN	3.12.14

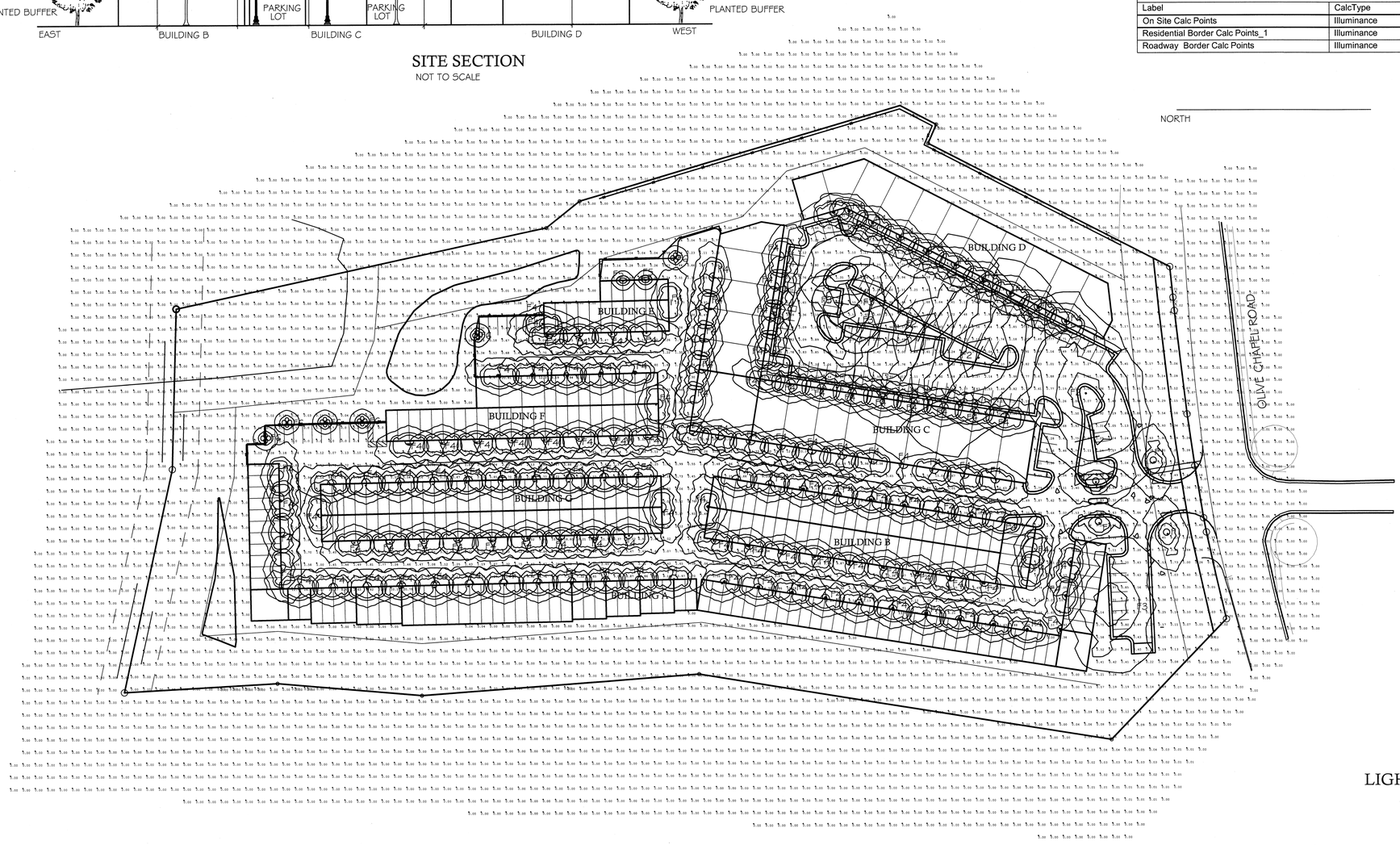
SHEET LA-2
PROJECT 1322



SITE SECTION
NOT TO SCALE



SITE SECTION
NOT TO SCALE



LIGHTING & PHOTOMETRIC PLAN
NOT TO SCALE

NOTES:

a. All outdoor lighting fixtures shall be located a minimum of 10 feet from a property or right-of-way line, and at least two feet away from any required perimeter or streetscape buffer and tree save area.

b. Lamps for non-cutoff fixtures shall not exceed 100 watts.

c. Wall pack fixtures shall be fully shielded, true cutoff type fixtures (concealed lamp/light source). The lighting must be directed downward, and the wattage must not exceed 100 watts

d. Floodlights or other types of lighting are prohibited unless approval is given through the development review process and reflected on the approved site plan.

e. Awnings and canopies used for accents over doors and windows shall not be internally lit.

f. Before certificates of occupancy are released, the owner/builder must supply the Town with a final letter of certification from the lighting engineer and/or lighting manufacturer verifying that all site lighting is installed according to Town standards, the approved plans, and any applicable conditions.

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
●	4	F1	SINGLE	9500	0.850	100W HPS Acorn Mounted 12'
▯	129	F4	SINGLE	9500	0.850	Wall Mount 42W CFM Mtd 8' on fac
▪	4	F3	SINGLE	9500	0.850	250W HPS SHBX Type III Mtd 30'
▪	3	F2	BACK-BACK	19000	0.850	2- 250W HPS SHBX Type III Mtd 30
▯	2	F5	SINGLE	1710	0.850	Wall Mount 27 watt 8' on facade
⊖	6	F6	SINGLE	1710	0.850	3' 29W fluor bollard

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min
On Site Calc Points	Illuminance	Fc	1.95	12.31	0.00	N.A.
Residential Border Calc Points_1	Illuminance	Fc	0.00	0.10	0.00	N.A.
Roadway Border Calc Points	Illuminance	Fc	0.01	0.15	0.00	N.A.

ELECTRICAL LEGEND

FIXTURE NUMBER	BLACK FIXTURES & POLES
	ALL LIGHTING PROJECTS DOWNWARD
F1	○ 100w HPS D Acorn MOUNTED HEIGHT=12' WITH GLARE SHIELD AS REQ
F2	□ 250w HPS dbl SHBX MOUNTED HEIGHT=30'
F3	□ 250w HPS SHBX MOUNTED HEIGHT=30'
F4	▱ WALL MOUNT (42w) MOUNTED HEIGHT 8'-0" ON BLDGS. C/D HEIGHTS WILL VARY ON ADDITIONAL BLDGS.
F5	▱ WALL MOUNT (27w) MOUNTED HEIGHT 8'-0" ON BLDGS. C/D HEIGHTS WILL VARY ON ADDITIONAL BLDGS.
F6	○ BOLLARD (27w) aROUND MTD HEIGHT 3'-0" ON BLDGS. C/D HEIGHTS WILL VARY PROVIDE SHIELD AS REQ'D.

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919-809-8803

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REVISIONS:	
DATE:	NAME:

DATE:
3-27-14

JACLIN MARIE WARD
REGISTERED ARCHITECT
11464
NORTH CAROLINA
MIDLAND, N.C.
3.27.14

540 FLEX
AND BUSINESS PARK

SHEET NO.
LP
OF

ARCHITECTURAL SITE PLAN REFERENCING EXTERIOR ELEVATIONS

NC 540

S 16°25'09" E
323.87'
RCA

S 27°07'58" E
262.88'

366.96'
2°10'55" E

N 04°50'54" E
140.42'

N 04°15'12" W
269.32'

N 09°04'22" E
404.86'

EX. 20' DRAINAGE EASEMENT

EX. POND

STORMWATER POND #1

TREE PROTECTION FENCE (TYP)

60' LANDSCAPE BUFFER

METAL CHAINLINK FENCING

30' ZONE 1 JORDAN LAKE RIPARIAN BUFFER

20' ZONE 2 JORDAN LAKE RIPARIAN BUFFER

WOODEN STOCKADE FENCING (FINISHED SIDE TO NEIGHBOR)

BUILDING D

FLEX OFFICE/RETAIL/STORAGE UNITS

30' LANDSCAPED BUFFER

10' BLDG. SETBACK (TYP.)

5.5' SIDEWALK (TYP.)

FLEX BUSINESS UNITS

BUILDING AREA 28,465 SF

1-60' X 60' FLEX BUSINESS UNIT

9-30' X 60' FLEX BUSINESS UNITS

BUILDING C

BUILDING AREA 15,968 SF

PICNIC BENCH AREA

H/C RAMP & SIGN (TYP.)

BIKE RACKS (TYPICAL)

30" STANDARD CURB (TYPICAL)

MANHOLE (TYPICAL)

6" SS SVC (TYPICAL)

INSTALL CURB & GUTTER AGAINST EXISTING EDGE OF PAVEMENT UP TO PROPERTY LINE

INSTALL NEW SIDEWALK UP TO PROPERTY LINE

PERMANENT UTILITY EASEMENT

30' TYPE E LANDSCAPE BUFFER (0.15 AC)

20' TOWN OF APEX UTILITY EASEMENT

ENTRANCE/EXIT GATES

H/C RAMPS (TYP.)

BUILDING A

BUILDING AREA 18,960 SF

INTERIOR WINE HUMIDOR UNITS

BUILDING AREA 14,280 SF

BUILDING B

11' X 30' BOAT STORAGE UNITS (TYPICAL)

BUILDING E

11' X 20' STORAGE UNITS

BUILDING AREA 4,950 SF

11' X 30' BOAT STORAGE UNITS (TYPICAL)

3-22' X 30' WORKSHOP UNITS

BUILDING F

BUILDING AREA 13,200 SF

3-22' X 30" WORKSHOP UNITS

BUILDING G

BUILDING AREA 18,150 SF

11' X 25' BOAT STORAGE UNITS

11' X 30' BOAT STORAGE UNITS (TYPICAL)

INTERIOR CONDITIONED STORAGE UNITS

BUILDING AREA 18,746 SF

11' WIDE BOAT STORAGE UNITS (TYPICAL)

50' LANDSCAPE BUFFER (1.02 AC)

RCA 2.93 AC

TRASH DUMPSTER LOCATION

PERMANENT UTILITY EASEMENT

H/C VAN

H/C

ACCESS DRIVE

PHASE 2 PHASE 1

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ARCHITECTURE

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REVISIONS:

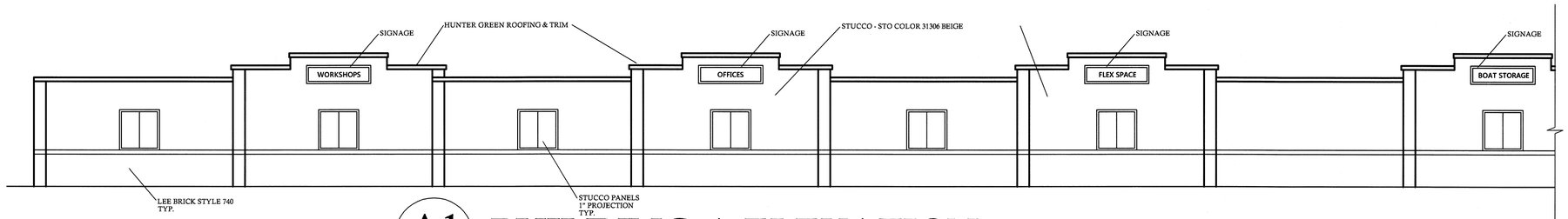
DATE: NAME:

DATE:
3-27-14

JOHN MARIE HARGETT
REGISTERED ARCHITECT
11464
NORTH CAROLINA
MIDLAND, N.C.
03.27.14

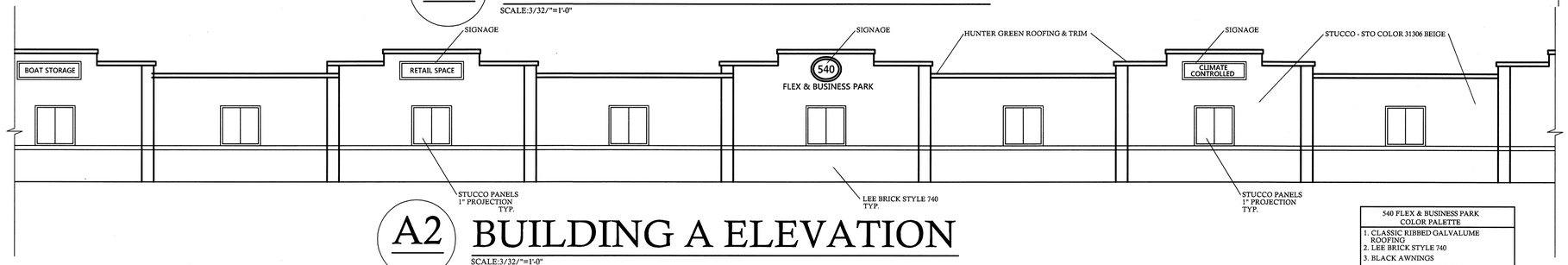
540 FLEX
AND BUSINESS PARK

SHEET NO.
A1
OF



A1 BUILDING A ELEVATION

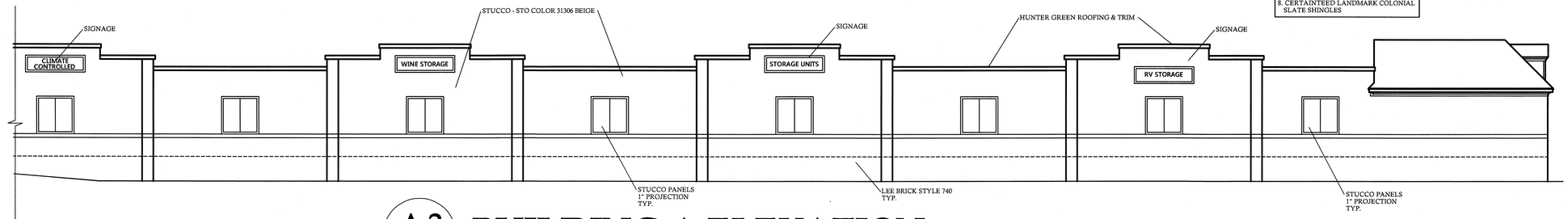
SCALE:3/32"=1'-0"



A2 BUILDING A ELEVATION

SCALE:3/32"=1'-0"

540 FLEX & BUSINESS PARK COLOR PALETTE
1. CLASSIC RIBBED GALVALUME ROOFING
2. LEE BRICK STYLE 740
3. BLACK AWNINGS
4. BLACK LIGHT FIXTURES
5. BLACK ALUMINUM STOREFRONT WINDOW & DOOR FRAMES
6. STUCCO - STO COLOR BEIGE
7. BLACK METAL PARAPET CAPS
8. CERTAINTEED LANDMARK COLONIAL SLATE SHINGLES



A3 BUILDING A ELEVATION

SCALE:3/32"=1'-0"

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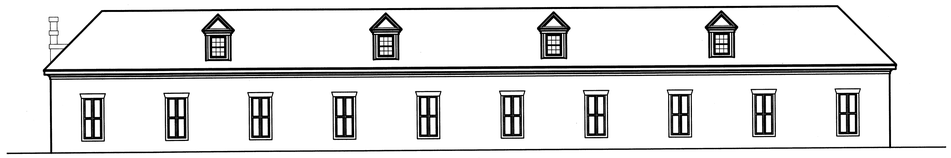
REVISIONS:	
DATE:	NAME:

DATE:
3-27-14

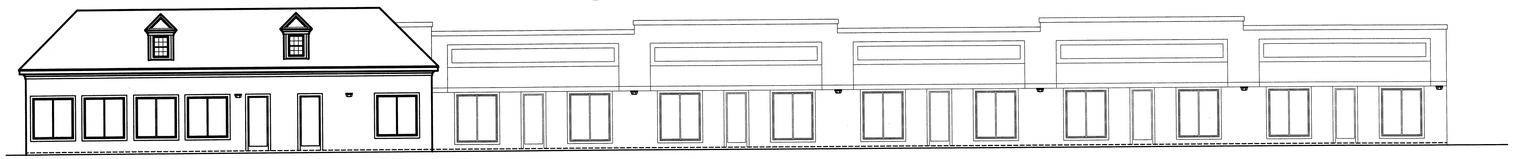
JACKLYN MARIE WARREN
REGISTERED ARCHITECT
11464
NORTH CAROLINA
MIDLAND, N.C.
3.27.14

540 FLEX
AND BUSINESS PARK

SHEET NO.
A2
OF

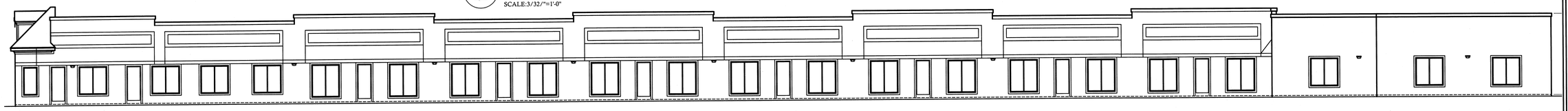


B BUILDING A ELEVATION
SCALE:3/32"=1'-0"

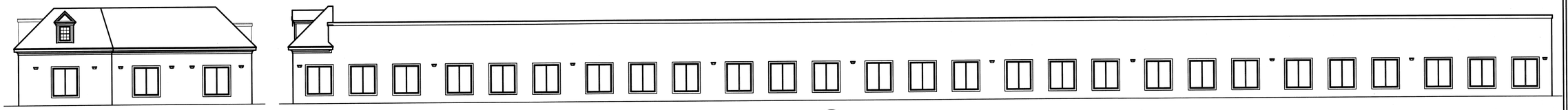


540 FLEX & BUSINESS PARK COLOR PALETTE
1. CLASSIC RIBBED GALVALUME ROOFING
2. LEE BRICK STYLE 740
3. BLACK AWNINGS
4. BLACK LIGHT FIXTURES
5. BLACK ALUMINUM STOREFRONT WINDOW & DOOR FRAMES
6. STUCCO - STO COLOR BEIGE
7. BLACK METAL PARAPET CAPS
8. CERTAINTEED LANDMARK COLONIAL SLATE SHINGLES

C BUILDING C ELEVATION
SCALE:3/32"=1'-0"

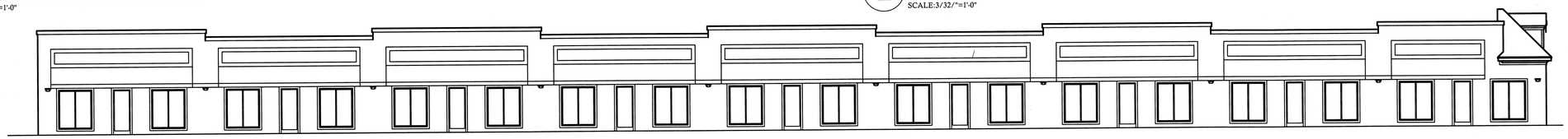


D BUILDING C ELEVATION
SCALE:3/32"=1'-0"

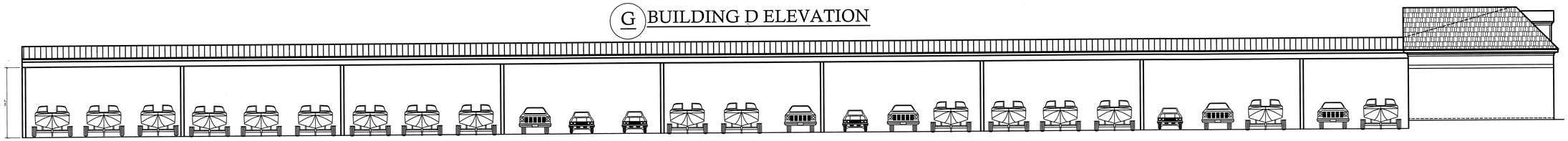


E BUILDING D ELEVATION
SCALE:3/32"=1'-0"

F BUILDING D ELEVATION
SCALE:3/32"=1'-0"

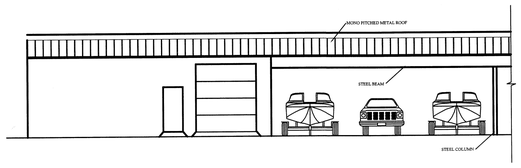


G BUILDING D ELEVATION



H BUILDING B ELEVATION
SCALE:3/32"=1'-0"

I BUILDING B ELEVATION
SCALE:3/32"=1'-0"



K TYPICAL WORKSHOP ELEVATION
SCALE:3/32"=1'-0"

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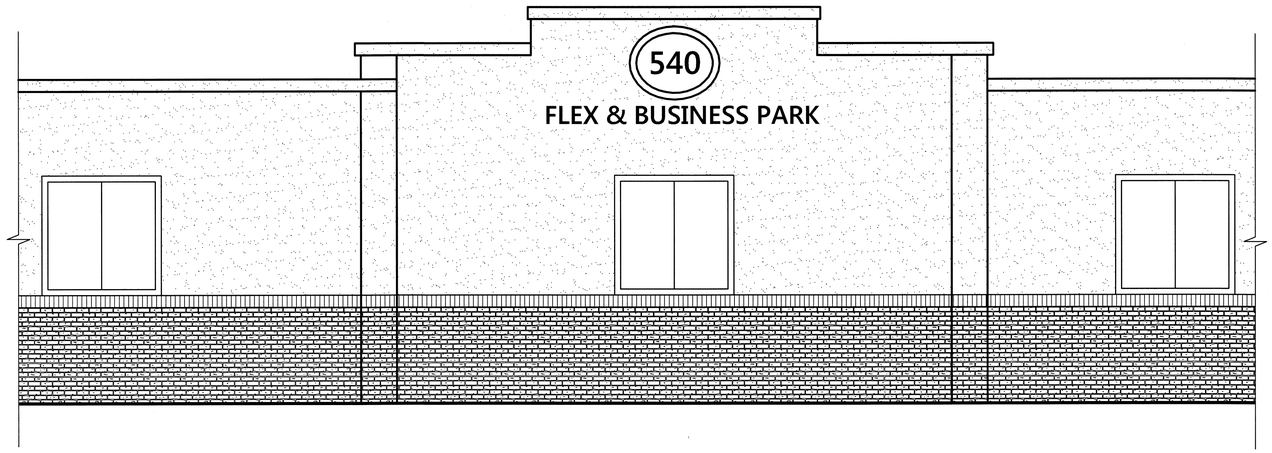
REVISIONS:	
DATE:	NAME:

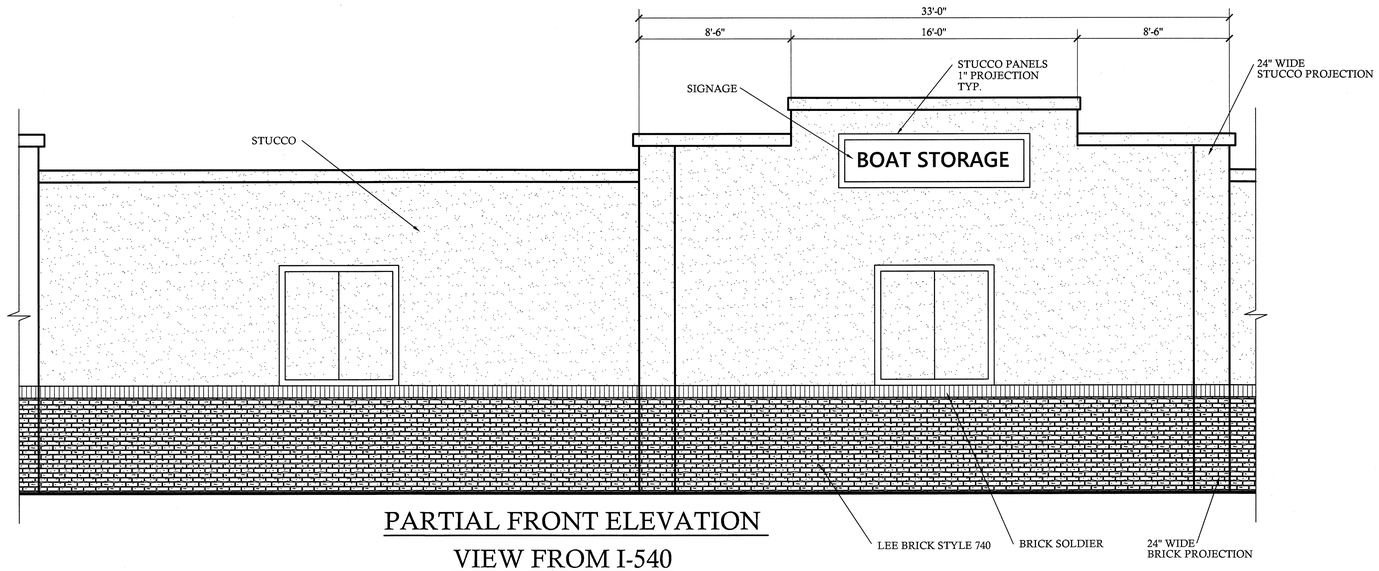
DATE:
3-27-14

540 FLEX
AND BUSINESS PARK

SHEET NO.
A3
OF



540 FLEX & BUSINESS PARK COLOR PALETTE
1. CLASSIC RIBBED GALVALUME ROOFING
2. LEE BRICK STYLE 740
3. BLACK AWNINGS
4. BLACK LIGHT FIXTURES
5. BLACK ALUMINUM STOREFRONT WINDOW & DOOR FRAMES
6. STUCCO - STO COLOR BEIGE
7. BLACK METAL PARAPET CAPS
8. CERTAINTEED LANDMARK COLONIAL SLATE SHINGLES



PARTIAL FRONT ELEVATION
VIEW FROM I-540
SCALE: 1/4"=1'-0"

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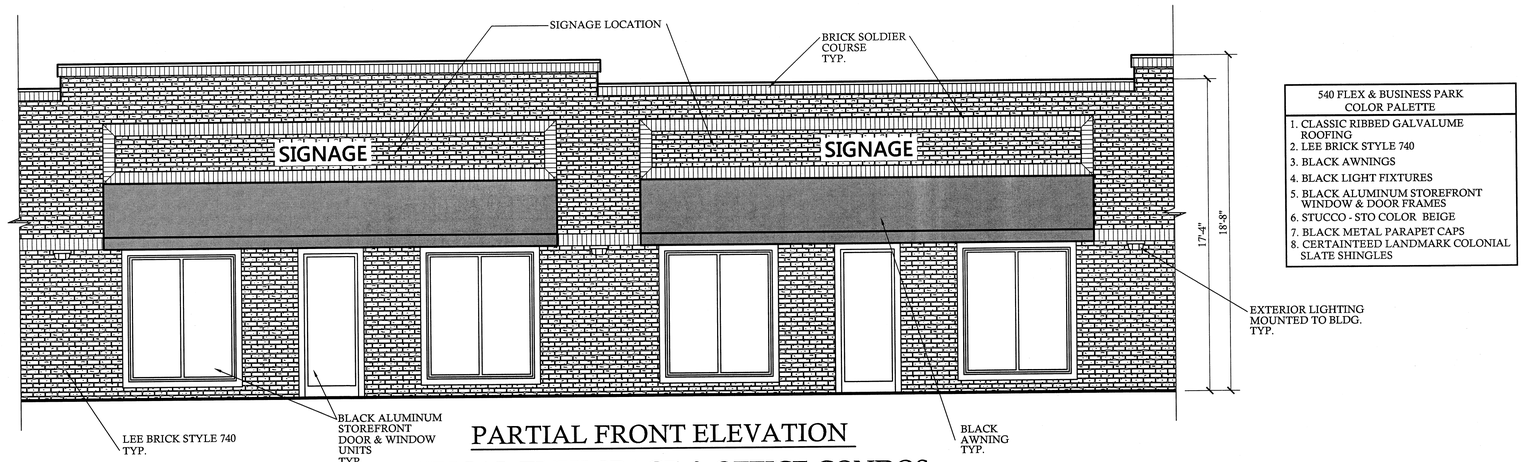
REVISIONS:	
DATE:	NAME:

DATE:
3-27-14

JOLIN MARIE KOSKI
REGISTERED ARCHITECT
11464
NORTH CAROLINA
MIDLAND, N.C.
03.27.14

540 FLEX
AND BUSINESS PARK

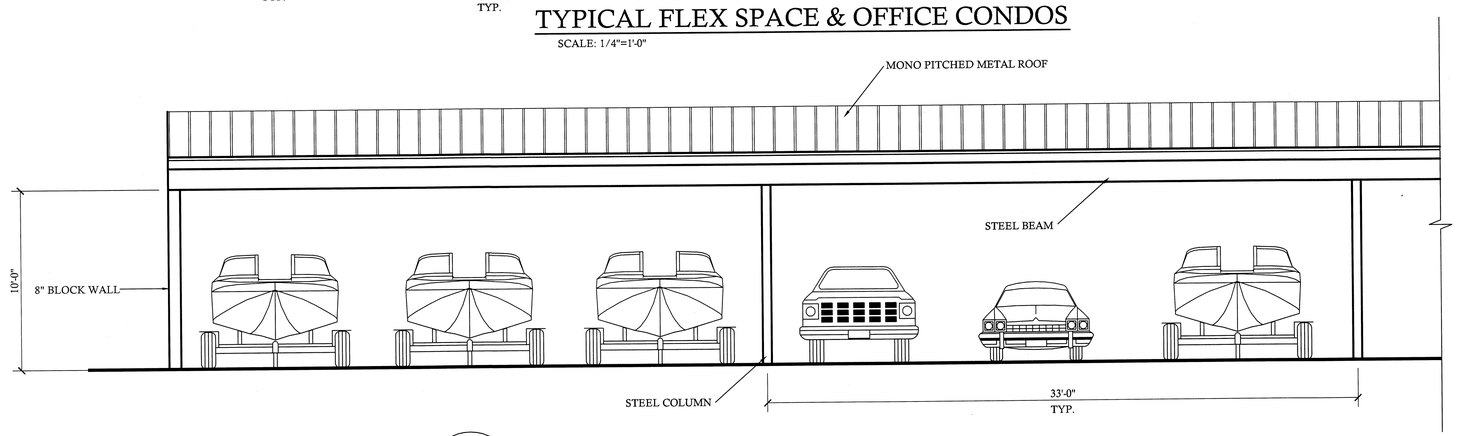
SHEET NO.
A4
OF



540 FLEX & BUSINESS PARK COLOR PALETTE
1. CLASSIC RIBBED GALVALUME ROOFING
2. LEE BRICK STYLE 740
3. BLACK AWNINGS
4. BLACK LIGHT FIXTURES
5. BLACK ALUMINUM STOREFRONT WINDOW & DOOR FRAMES
6. STUCCO - STO COLOR BEIGE
7. BLACK METAL PARAPET CAPS
8. CERTAINTEED LANDMARK COLONIAL SLATE SHINGLES

PARTIAL FRONT ELEVATION
TYPICAL FLEX SPACE & OFFICE CONDOS

SCALE: 1/4"=1'-0"



J

PARTIAL FRONT ELEVATION
TYPICAL BOAT /VEHICLE STORAGE

SCALE: 1/4"=1'-0"

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REVISIONS:	
DATE:	NAME:

DATE:
3-27-14

JACLIN MARIE HINSON
REGISTERED ARCHITECT
11464
NORTH CAROLINA
MIDLAND, N.C.
3.27.14

540 FLEX
AND BUSINESS PARK

SHEET NO.
A5
OF

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF QUASI-JUDICIAL PUBLIC HEARING

REVISED MAJOR SITE PLAN FOR
540 Flex & Business Park

Pursuant to the provisions of North Carolina General Statutes Section 160A-364 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of a quasi-judicial public hearing before the Town Council of the Town of Apex. The purpose of this hearing is to consider the following:

Applicant: Joseph Iannone, 540 Flex & Business Park, LLC
Authorized Agent: Patrick Kiernan, Jones & Cnossen Engineering, PLLC
Property Address: 1600 Olive Chapel Rd.
Acreage: +/- 10.74
Proposed Use and Square Footage of Buildings: Office, Industrial Flex Space & Shop; 7 buildings totaling 132,559 ft^2
Property Identification Numbers (PINs): 0732235461 & 0732234710

Public Hearing Location: Apex Town Hall
73 Hunter Street, Apex, North Carolina
Council Chambers, 2nd Floor

Town Council Public Hearing Date and Time: July 21, 2020 6:00 PM

You are invited to attend this meeting and will have an opportunity to make comments during the public hearing. Those planning to testify must appear in person and be sworn in. Those not planning to testify may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov.

Vicinity Map:

Property owners within 300 feet of the proposed major site plan have been sent this notice via first class mail. All interested parties may appear at the public hearing and provide sworn testimony with respect to the application. Maps showing the location for the above site(s) to be considered in addition to a copy of the 2045 Land Use Map can be inspected at the Apex Town Hall or call 919-249-3426, Department of Planning and Community Development for further information. To view the application and related documents on-line: https://www.apexnc.org/DocumentCenter/View/31358.

Published Dates: June 26, 2020 – July 21, 2020

Dianne F. Khin, AICP
Director of Planning and Community Development

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF QUASI-JUDICIAL PUBLIC HEARING

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540 Flex & Business Park

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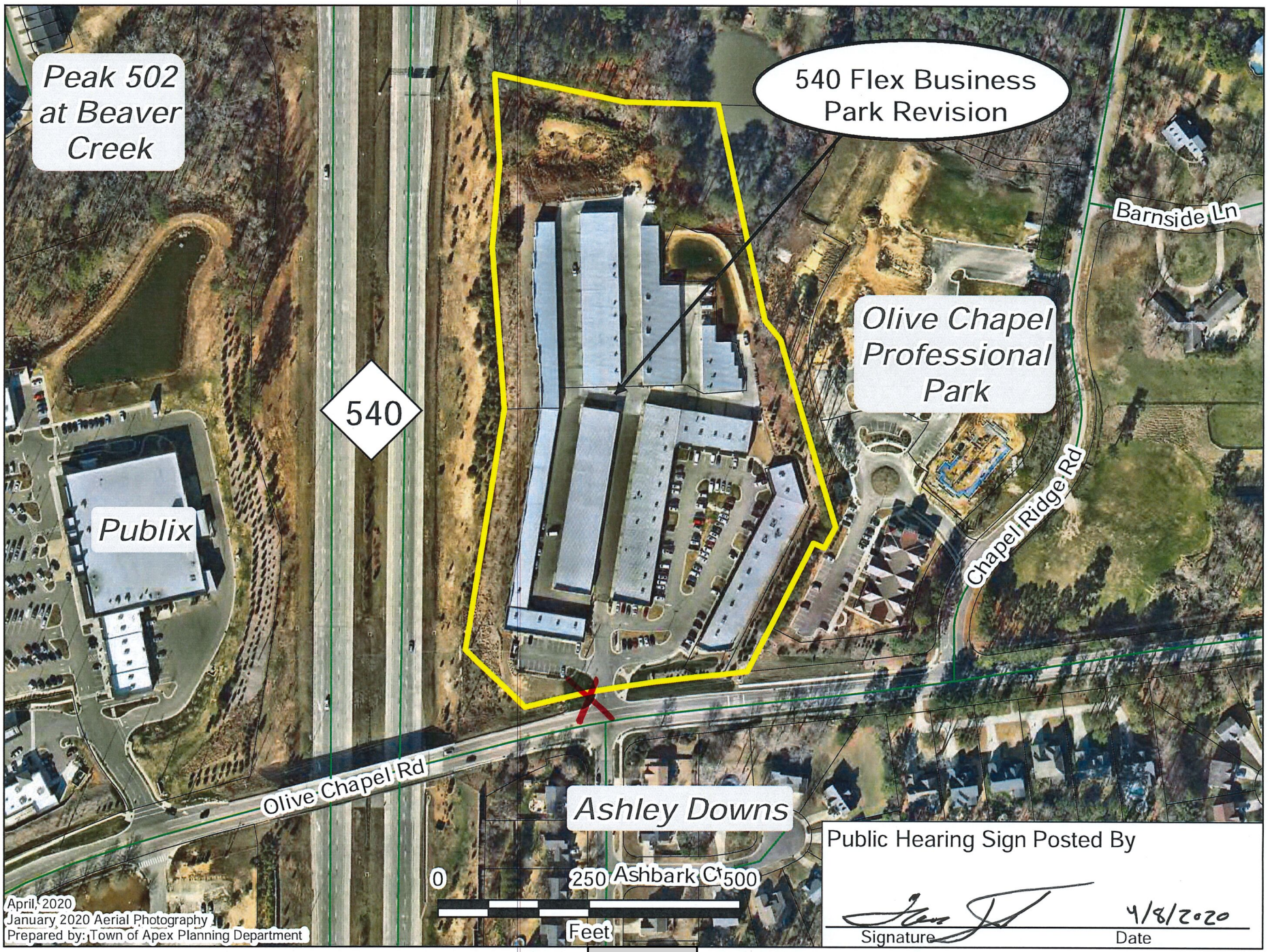
Published Dates: June 26, 2020 – July 21, 2020

Dianne F. Khin, AICP
Director of Planning and Community Development



Public Hearing Sign Posted By

Signature

4/8/2020
Date

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice

Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name:	540 Flex & Business Park Revised Major Site Plan
Project Location:	1600 Olive Chapel Road
Applicant or Authorized Agent:	Patrick Kiernan
Firm:	Jones & Cnossen, PLLC

This is to certify that I, as Planning Director, mailed or caused to have mailed by first class postage for the above mentioned project **June 26, 2020** a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners within 300' of the land subject to notification. I further certify that I relied on information provided to me by the above-mentioned person as to accuracy and mailing addresses of property owners within 300' of the land subject to notification.

6/26/2020
Date

Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Jeri Chastain Pederson, a Notary Public for the above State and County, this the 26 day of June, 2020.

JERI CHASTAIN PEDERSON
Notary Public
Wake County, North Carolina
My Commission Expires
March 10, 2024
SEAL

Jeri Chastain Pederson
Notary Public

My Commission Expires: 03/10/2024

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING
Meeting Date: July 21,2020

Item Details

Presenter(s): Shannon Cox, Long Range Planning Manager
Department(s): Planning and Community Development

Requested Motion

Public hearing and possible motion regarding proposed amendments to the Transit Plan map and the Thoroughfare and Collector Street Plan map of the Comprehensive Transportation Plan.

Approval Recommended?

The Planning and Community Development Department recommends approval of the amendment to the Transit Plan map and of the amendments to the Thoroughfare and Collector Street Plan map which are described in the attached staff report as Scenario One.

The applicants for Rezoning Case #20CZ01 Depot 499 PUD recommend approval of the amendments to the Thoroughfare and Collector Street Plan map which are described in the attached staff report as Scenario Two.

The Planning Board considered the amendments at their July 13, 2020 meeting and unanimously recommended approval of the Transit Plan map amendment and of the amendments to the Thoroughfare and Collector Street Plan map described in the attached staff report as Scenario One.

Item Details

The purpose of this public hearing is to consider removal of the future Rail and Bus Transit Center along South Salem Street on the Transit Plan map and to consider numerous revisions grouped under two separate scenarios to the Thoroughfare and Collector Street Plan map in the vicinity of NC 540, Apex Barbecue Road, and South Salem Street. These amendments are related, in part, to Rezoning Case #20CZ01 Depot 499 PUD.

Attachments

- Staff report
- Memorandum from the applicants for Rezoning Case #20CZ01 Depot 499 PUD

The purpose of the public hearing is to consider the facts in order to formulate a decision. The Thoroughfare and Collector Street Plan map (adopted February 2019) and the Transit Plan map (amended May 2020) of Advance Apex: The 2045 Comprehensive Transportation Plan represent a network of current and future facilities that provide guidance on what is likely to be suitable for long term growth. The plans do not require a schedule for implementation nor do they set aside funding for improvements. Instead, the plans help the Town establish long term priorities.

Proposed Amendment to the Transit Plan Map:

(1) Remove the Proposed Rail and Bus Transit Center along South Salem Street between NC 540 and Apex Barbecue Road

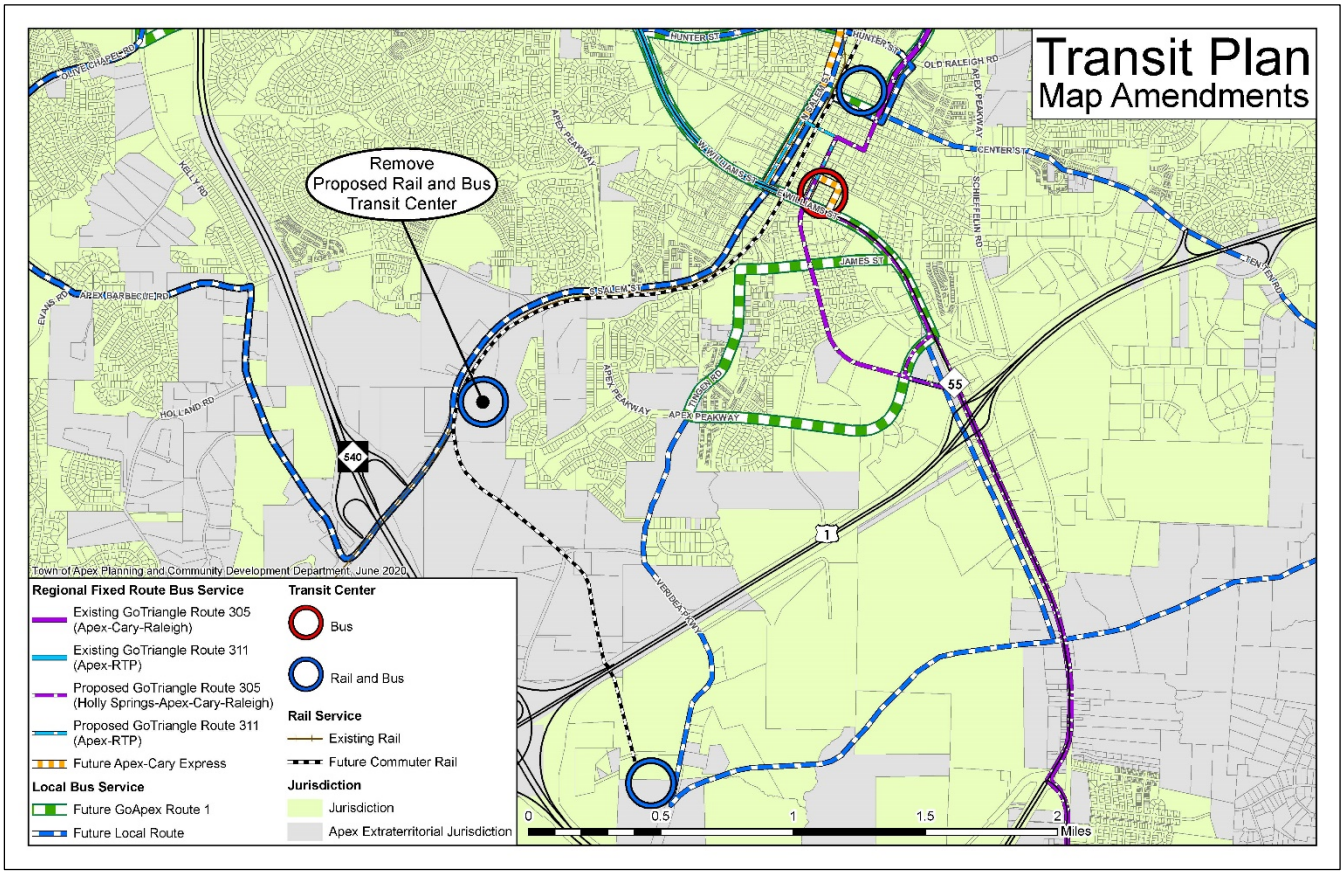


Figure 1. Proposed Transit Plan map amendment

The adopted Transit Plan map currently shows three potential future commuter rail stations in Apex: (1) In downtown; (2) Along a realigned South Salem Street, between NC 540 and Apex Barbecue Road; and (3) East of US 1, within future Veridea. Removal of the Proposed Rail and Bus Transit Center in the middle location is proposed for three main reasons: (1) The future rail stations shown on the Transit Plan map were originally proposed for light rail and are too close together for commuter rail, (2) Both existing and anticipated future land use densities surrounding this proposed station do not support commuter rail and increased densities proposed as part of *Advance Apex: The 2045 Land Use Plan Update* were met with public opposition, and (3) There are design constraints to constructing and operating a station in this location. Finally, the commuter rail station

proposed in this location is associated with the proposed realignment of South Salem Street shown on the Thoroughfare and Collector Street Plan map, which is also proposed for removal under a separate amendment. Additional information supporting the three reasons above follows.

Distance between commuter rail stations and land uses supportive of commuter rail transit:

- Three rail stations were initially identified when light rail was a possibility in Wake County. This is no longer the case, as funding for light rail was never supported and the region is actively working to implement commuter rail. Generally, light rail stations are closer together than commuter rail stations.
- Commuter rail studies are underway for the Wake Transit Plan recommended project from Morrisville to Garner and there are some critical lessons learned from that work that can inform future plans:
    - In a study of peer systems, it was found that the average distance between commuter rail stations is 4.7 miles. For the Wake Transit Plan commuter rail:
        - In areas with medium-to-high density (defined in study as 10 or more people plus jobs per acre) stations are recommended to be at least 2 miles apart.
        - In areas with relatively low density (less than 10 or more people plus jobs per acre) stations are recommended to be about 5 miles apart.
        - Federal Transit Administration research actually recommends an ideal station spacing of 3 miles and suggests much higher densities – 25-35 residential dwelling units per acre and 100-150 employees per acre for centers around commuter rail.
- The station in question would be roughly 2 miles from a future downtown station and a little less than that from a future Veridea station. The existing land uses and the vision for future land uses shown on the 2045 Future Land Use map do not recommend the intensity of development in this location supportive of commuter rail.
    - Zoning conditions for the adjacent residential area known as Salem Village limit density to a maximum of four dwelling units per acre (or approximately 11 people per acre based on average people per dwelling unit from the Apex Development Report).
    - The adjacent land areas southeast of South Salem Street are shown similarly as Medium/High Density residential on the future land use map.

Design constraints:
GoTriangle, the agency leading the current commuter rail studies between Morrisville and Garner, provided the following general guidance regarding conceptual planning for station locations:

- Avoid areas where there are existing track switches.
- Offset station platforms from grade crossings by as much distance as possible.
- Avoid areas where there is horizontal track curvature. Station platforms need a minimum of 600 feet of straight, relatively flat track.
- Assume room for an additional track within the corridor, in addition to 20 foot-wide station platforms on both sides of the corridor
- An end of line station or one that is proximate to US 1 or NC 540 would need around 1,000 parking spaces.

A suitability analysis for commuter rail station locations in the vicinity of the proposed location using this information is shown in Figure 2. There are three locations shown with at least 600 feet of straight track. One is adjacent to the Apex Peakway and is constrained by existing switches and private crossings. The two others are pushed even closer to the proposed station in Veridea and still have the land use compatibility concerns previously presented. Further, there is limited width between NC 540 and the proposed rail line extension to support necessary parking, platforms, and supporting uses.

While a conceptual analysis shows that there are feasible station locations for a mid-point commuter rail station in Apex, the station would have design constraints, would not meet recommended spacing guidelines, and the future land use map does not support the intensity of development for commuter rail.

Staff Recommendation:
Planning staff recommend approval of the proposed amendment. The proposed amendment was reviewed with staff from Public Works and Transportation, Police, and Fire and there were no concerns.

Town of Apex Transit Advisory Committee Recommendation:
The Town of Apex Transit Committee has not had an opportunity to formulate a recommendation regarding the proposed amendment; however, a summary of the above information was shared with committee members and no concerns were expressed regarding the staff recommendation.

Planning Board Recommendation:
The Planning Board considered the amendment at their July 13, 2020 meeting and unanimously recommended approval.

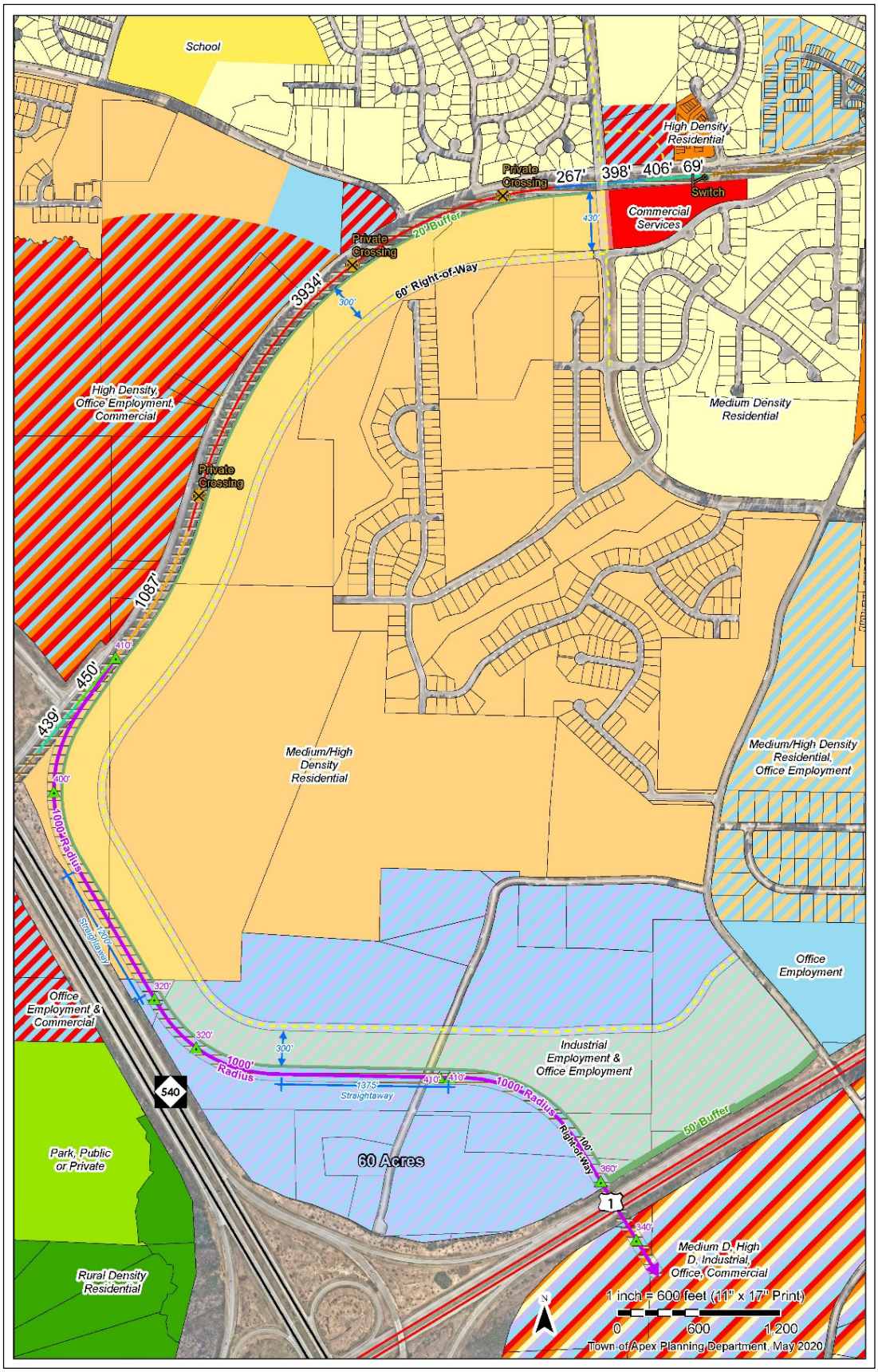


Figure 2. Analysis of constraints for Proposed Bus/Rail Transit Center

Proposed Amendments to the Thoroughfare and Collector Street Plan Map:

Two possible scenarios combining several amendments to the Thoroughfare and Collector Street Plan map are presented for consideration. The main difference is that Scenario One maintains the future grade-separated crossings of NC 540 and South Salem Street, while Scenario Two removes these future grade-separated crossings.

Scenario One, shown in Figure 3 and Figure 4, represents the planned roadway network with a revised alignment of the future bridge crossing of South Salem Street and removal of the future realignment of South Salem Street. These changes result in necessary adjustments to the network of collector streets. In addition, this scenario includes reclassifying the function of some roadways, realignments to improve design, and removal of the future roundabout at Apex Barbecue Road and South Salem Street.

Scenario Two, shown in Figure 5 and Figure 6, represents the planned roadway network with removal of: the future bridge crossings of NC 540 and South Salem Street, the future realignment of South Salem Street, and the future roundabout at Apex Barbecue Road and South Salem Street. These changes also result in necessary adjustments to the network of collector streets.

An explanation of the proposed amendments for each scenario, along with recommendations are provided following the figures. The amendments proposed in Scenario Two are requested by the applicants of Rezoning Case #20CZ01 Depot 499 PUD. A memorandum provided by the applicants supporting their request is provided as Attachment 1.

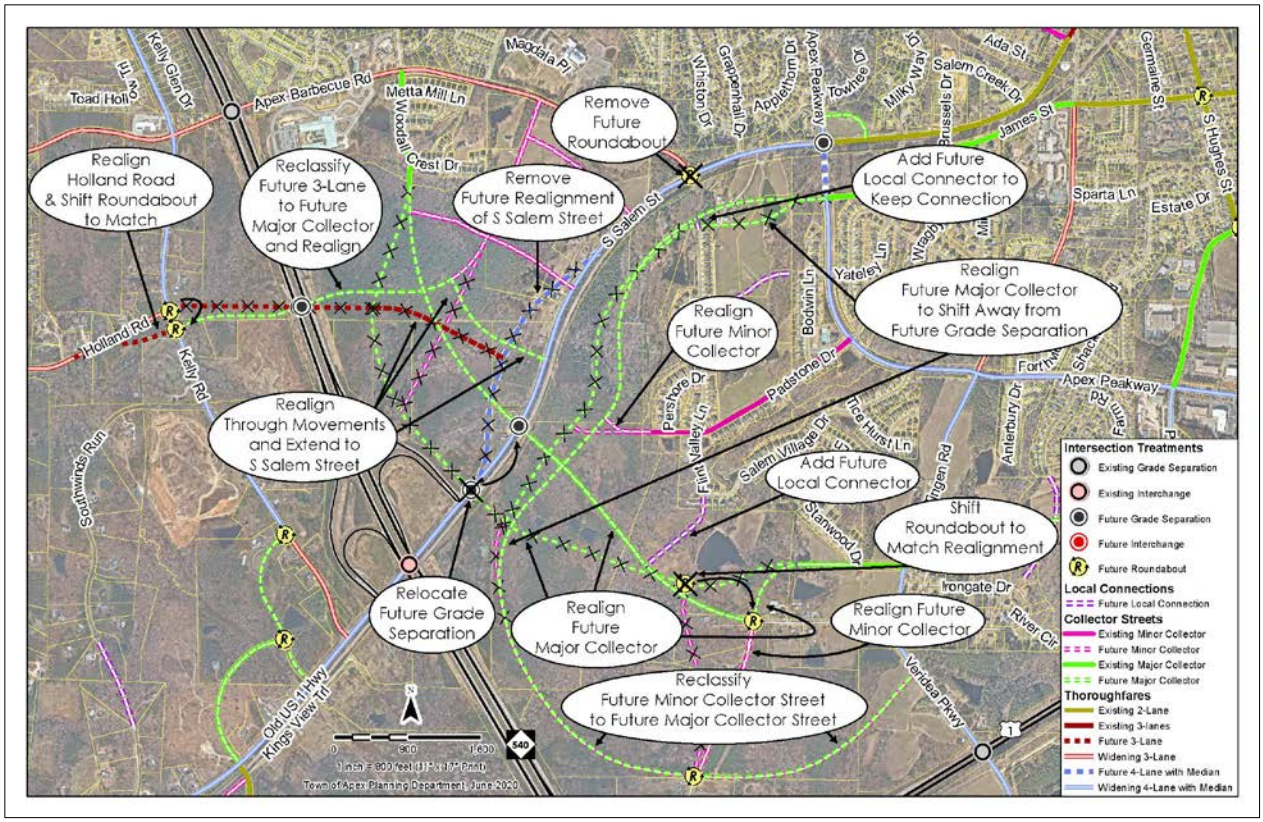


Figure 3. Scenario One, showing proposed amendments

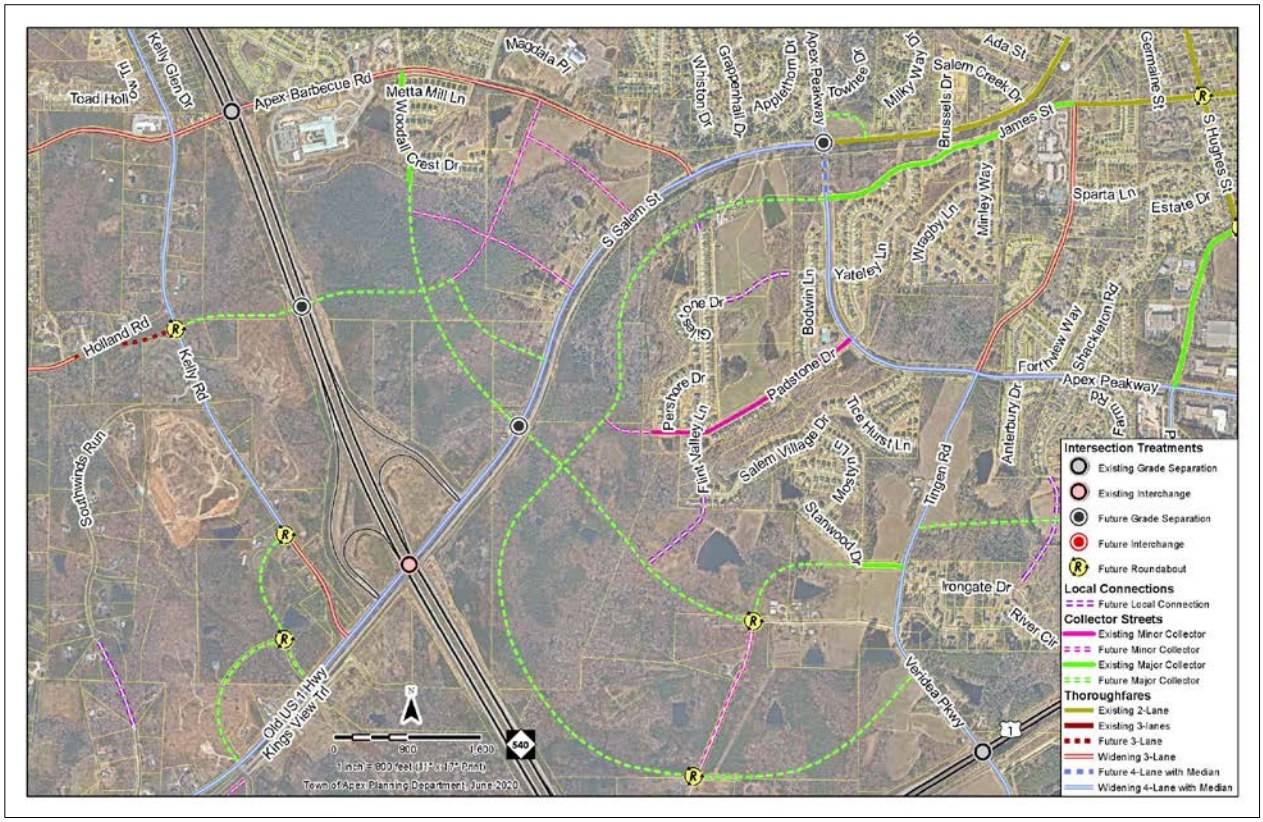


Figure 4. Scenario One, showing resultant plan with amendments

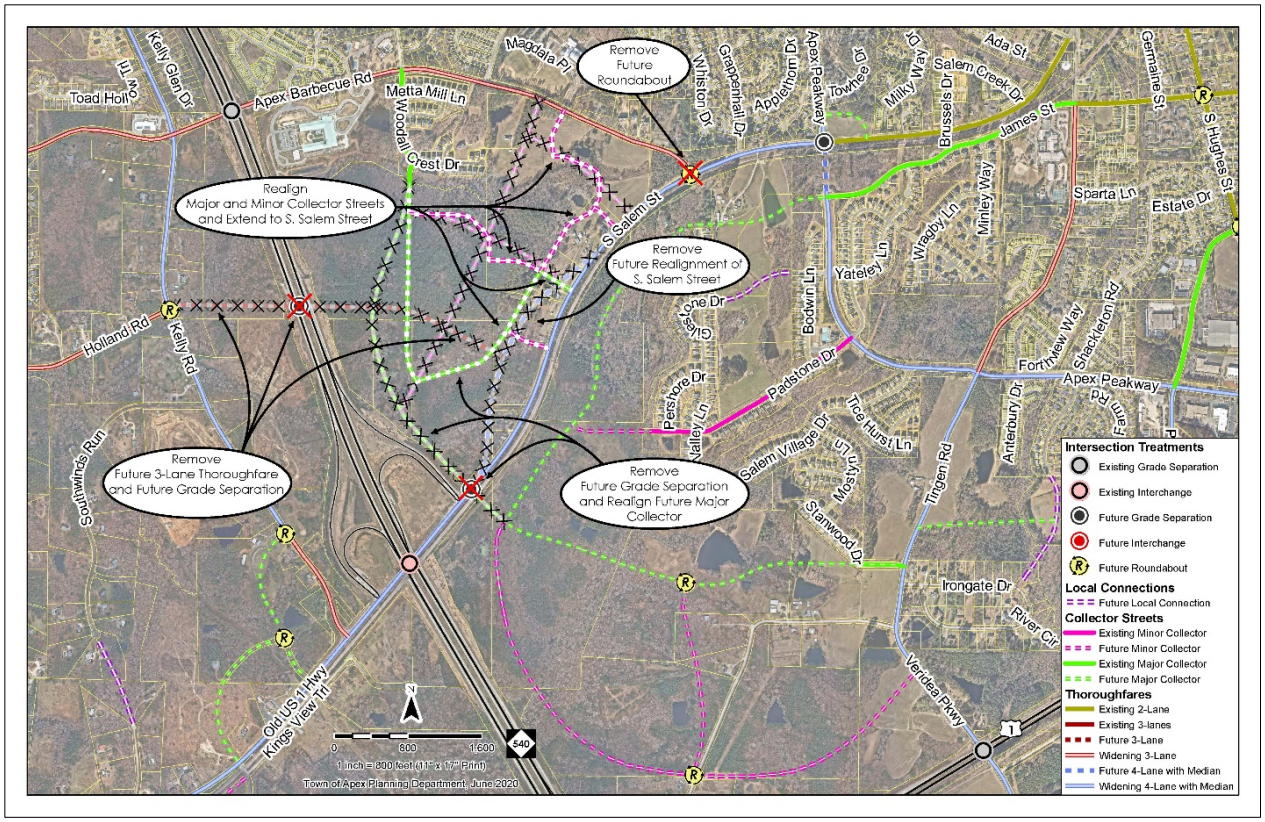


Figure 5. Scenario Two, showing proposed amendments

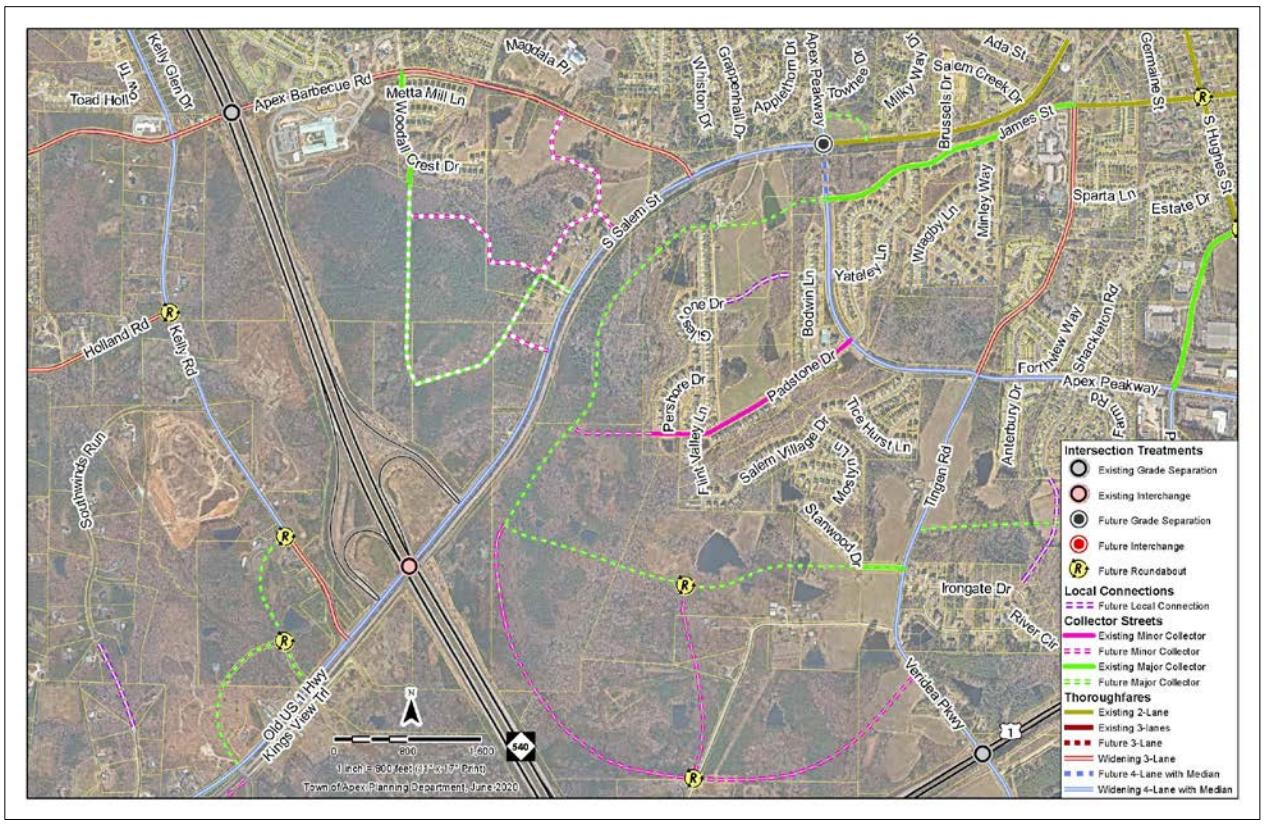
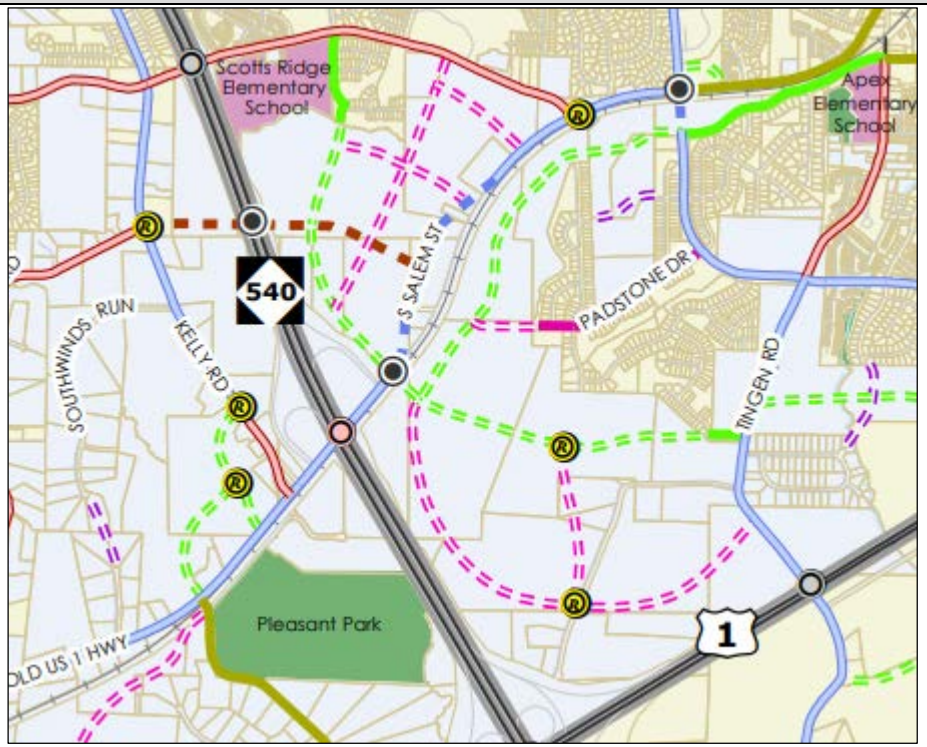


Figure 6. Scenario Two, showing resultant plan with amendments

Table 1. Comparison of Proposed Amendments with Scenario One and Scenario Two

Description		Explanation	SCENARIO		RECOMMENDED BY:	
			One	Two	Staff	Applicant
A	Remove Future Realignment of South Salem Street between NC 540 and Apex Barbecue Road	The intent of the realignment is to create space for a rail station that could be boarded on the southwest side of S. Salem Street. The applicant for 20CZ01 is requesting to remove this realignment as it would negatively impact developable area. Staff are requesting this amendment based on the proposed Transit Plan map amendment to remove the Future Rail and Bus Transit Center in this location.	Y	Y	Y	Y
B	Remove Future Roundabout at South Salem Street and Apex Barbecue Road	The roundabout was initially added to the Transportation Plan based on available 2013 Annual Average Daily Traffic data. Even then, it was noted the roundabout would need to be sized for future multi-lanes. More recent traffic projections, and the Traffic Impact Analysis completed for 20ZC01, indicate that this location would not operate well with a roundabout. In addition, a substantial shift in the intersection and acquisition of new right-of-way would be required due to the proximity of the railroad.	Y	Y	Y	Y
C	Relocate Future Grade Separation of South Salem Street and realign Future Major Collector Street	As part of the Southwest Area Study, led by the Capitol Area Metropolitan Planning Organization (CAMPO) and adopted in 2020, the Town requested analysis of existing and planned future grade-separated crossings of the railroad. This means locations where either a bridge or tunnel is anticipated so that the roadway and railroad do not intersect at the same grade. Based on this analysis, the SWAS recommended a revised alignment for the future Major Collector street extending from Woodall Crest Drive, over NC 540, to Tingen Road.	Y	N	Y	N
D	Remove Future Grade Separation of South Salem Street and realign Future Major Collector Street	The applicants of 20CZ01 recommend removing the Future Grade Separation of South Salem Street. Summarizing from Attachment 1, the applicants provide the following basis for the request: (1) Relatively low traffic projections of 5,100 vehicles per day (vpd) by 2045, (2) The substantial land area that would be required to build a bridge over South Salem Street and the railroad, and (3) The anticipated cost (estimated $20M) of constructing this future crossing. The applicant correctly cites the projected traffic volumes from the SWAS. Staff followed up with CAMPO to further investigate the inputs resulting in these projected volumes, which do seem low. The volumes are the result of runs of the Regional Transportation Demand Model. One of the inputs to the model is projected change in residential dwelling units. For the land area that closely matches the area encompassed by 20CZ01, the regional model anticipates a total of 333 new single-family dwelling units and 18 multi-family units by 2045. This is in contrast to 1,500 dwelling units (with a 2028 projected build-out) proposed with 20CZ01. It should also	N	Y	N	Y

Description		Explanation	SCENARIO		RECOMMENDED BY:	
			One	Two	Staff	Applicant
		be noted that the model forecasts 6,500-6,700 vpd for Apex Barbecue Road by 2045, which is equivalent to the actual Annual Average Daily Traffic measured by NCDOT in 2018. The bottom line is that there are weaknesses in the regional model and the close examination of this particular area revealed that the model is not accurately projecting future traffic volumes. In addition to the capacity provided by this future roadway, it will serve a critical role in vehicular connectivity. There are limited existing and planned opportunities to cross South Salem Street and the parallel railroad tracks, especially if tolled facilities and future roadways are excluded: • 1.3 miles – approximate distance between future Apex Peakway and NC 540 • 1.8 miles – approximate distance between future Apex Peakway and Pleasant Plains Road (excluding tolled roads) • 2.4 miles – approximate distance between Pleasant Plains Road and Tingen Road (excluding tolled roads and future roads) Assuming that the conservative projected volumes of 5,100 vpd on this future roadway are correct, if removed from the plan, those volumes will put additional pressure on those existing and potential future crossings including Pleasant Plains Road, Tingen Road, and the Apex Peakway. In addition, the side path proposed along this future roadway would also be eliminated, impacting bicycle and pedestrian connectivity. While the current focus is development on the west side of South Salem Street and the railroad tracks, there is also substantial future development potential to the east of South Salem Street and the need for connectivity from this area across the railroad tracks is important. The snip from the Thoroughfare and Collector Street Plan map demonstrates that this future Major Collector Street extends to Tingen Road, which is also planned to have a future grade separation of US 1. The grade-separated crossing of South Salem Street was originally added to the Transportation Plan in 2002. It was retained with the updates in 2011 and 2019, and with the NC 540/S. Salem Street Small Area Plan. Each of these planning processes involved substantial public engagement.				

	Description	Explanation	SCENARIO		RECOMMENDED BY:	
			One	Two	Staff	Applicant
						
E	Remove Future 3-Lane Thoroughfare and Future Grade Separation of NC 540	The applicants of 20CZ01 request removing the future grade separation of NC 540. Summarizing from Attachment 1, the applicants provide the following basis for the request: (1) Low (2,600 vpd) projected traffic volumes for this road by 2045 in the SWAS; (2) Concerns about potential conflicts with the gantries and tolling system on NC 540; (3) The anticipated need for substantial fill and potential environmental impacts and costs; (4) Redundancy with S. Salem Street; and (5) Concerns about bisecting planned residential areas associated with the rezoning case. The same issues regarding the regional travel demand model and the validity of the projected traffic volumes explained with the grade separation of South Salem Street are relevant for this roadway.	N	Y	N	Y

Description		Explanation	SCENARIO		RECOMMENDED BY:	
			One	Two	Staff	Applicant
		This future roadway would provide important connectivity. The intersection of Kelly Road at Old US 1 Highway is anticipated to become a right-in/right-out intersection in the future. Once this happens, if the future grade separation is removed, all of the southbound traffic on Kelly Road desiring to make a left turn on Old US 1 Highway will instead need to use Apex Barbecue Road or go through the West Village development. Without the additional option of using the proposed roadway, this will result in substantial increased traffic on Apex Barbecue Road and residential streets. In addition to this function, Fire Department staff indicate this roadway will provide important connectivity to Fire Station No. 5 (at the corner of Apex Barbecue Road and Kelly Road) and will serve as a relief valve for evacuation purposes. Measures to address concerns related to conflicts with toll gantries on NC 540, land use context concerns, and environmental impacts are addressed with the recommended amendment in Row F.				
F	Realign Holland Road at Kelly Road, realign Future Grade Separation of NC 540, and reclassify Future 3-Lane Thoroughfare to Future Major Collector Street	This alternative to removing the grade separation of NC 540 is intended to address the concerns regarding potential conflicts with tolling equipment, environmental impacts, and bisecting residential land uses. The realignment of Holland Road at Kelly Road and associated shift in the location of the future roundabout is intended to avoid a stream crossing of the extension of Holland Road. This realignment is also proposed to plan for a future perpendicular crossing of NC 540. The grade separated crossing is in the same location and, without completing an engineering feasibility study, avoids impacting tolling equipment to the extent feasible. The reclassification of the Future 3-Lane Thoroughfare to a Future Major Collector Street is suggested to be complementary of the walkable residential land uses anticipated on either side of this future roadway.	Y	N	Y	N
G	West of South Salem Street - realign through movements and extend future collector streets associated with the **realignment** of the Future Grade Separation of South Salem Street and the	The amendments proposed in Row A, Row C, and Row F result in necessary adjustments to the network of future collector streets between Apex Barbecue Road, South Salem Street and NC 540. The amendments, as proposed, retain a Future Minor Collector Street connection to Apex Barbecue Road and South Salem Street and a Future Major Collector Street connection to South Salem Street. The amendments are planned to provide appropriate spacing between intersections and minimize impacts to streams.	Y	N	Y	N

Description		Explanation	SCENARIO		RECOMMENDED BY:	
			One	Two	Staff	Applicant
	removal of the Realignment of South Salem Street					
H	West of South Salem Street – realign future collector streets associated with **removal** of Future Grade Separation of South Salem Street and removal of Realignment of South Salem Street	The amendments proposed in Row A, Row D, and Row E result in different adjustments to the network of future collector streets between Apex Barbecue Road, South Salem Street, and NC 540. These adjustments reflect the collector street network proposed by the applicants of 20CZ01. The proposed network maintains a Major Collector Street connection to South Salem Street and Minor Collector Street connections to South Salem Street and Apex Barbecue Road. *Staff support the recommended changes only if the Town Council approves the amendments in Row D and Row E, which are not supported by staff.	N	Y	Y*	Y
I	East of South Salem Street – shift the Future Major Collector Street away from the Future Grade Separation and reclassify from Future Minor Collector Street to Future Major Collector Street	The purpose of realigning the Future Major Collector Street extending from James Street is to shift it away from realigned grade-separated crossing of South Salem Street. While not related to the realignment, this roadway is also recommended to be upgraded from a Minor Collector Street to a Major Collector Street to reflect the anticipated function it will serve as a connection between two Thoroughfares. This change is unrelated to 20CZ01, therefore the applicant recommendation is noted as "Not Related" (NR).	Y	N	Y	NR
J	East of South Salem Street - realign the Future Minor Collector Street (Padstone Drive)	The purpose of this amendment is to plan for a perpendicular connection of the future extension of Padstone Drive to the realigned Major Collector Street noted in Row I. This change is unrelated to 20CZ01, therefore the applicant recommendation is noted as NR.	Y	N	Y	NR
K	East of South Salem Street - add Future Local Connectors at Flint Valley Lane	The purpose of this amendment is to plan for connectivity by showing Future "Local Connectors" extending from Flint Valley Lane. This change is unrelated to 20CZ01, therefore the applicant recommendation is noted as NR.	Y	N	Y	NR
L	East of South Salem Street – realign the Future Minor Collector Street (Tingen Road) and shift the roundabout to match realignment	The purpose of the proposed realignment is to use existing right-of-way (for Tingen Road) for the Future Minor Collector street and to adjust the alignment and roundabout location to intersect with the realigned Major Collector Street described in Row A. This change is unrelated to 20CZ01, therefore the applicant recommendation is noted as NR.	Y	N	Y	NR

Rezoning Case #20CZ01 Depot 499 Request:
The applicants for Rezoning Case # 20CZ01 Depot 499 PUD request the amendments to the Thoroughfare and Collector Street Plan map described as Scenario Two and shown in Figure 5 and Figure 6. Further explanation for their requests is provided as Attachment 1.

Staff Recommendation:
Planning Staff recommend the amendments to the Thoroughfare and Collector Street Plan map described as Scenario One and shown in Figure 3 and Figure 4. Staff from the following departments support this recommendation: Public Works and Transportation, Fire, and Police.

If the Town Council approves the removal of the future grade separations of South Salem Street and NC 540, which staff do not recommend, then staff recommend approval of the revised network of collector streets west of South Salem Street as proposed in Scenario Two and requested by the applicant.

Planning Board Recommendation:
The Planning Board considered the proposed amendments at their July 13, 2020 meeting and unanimously recommended approval of the amendments described as Scenario One and shown in Figure 3 and Figure 4.

Transportation Plan Amendments: Attachment 1

RAMEY KEMP ASSOCIATES
Moving forward.

T 919 872 5115

5808 Faringdon Place
Raleigh, NC 27609

February 27, 2020

Shannon Cox, AICP
Long Range Planning Manager
Town of Apex
919-249-3505
Shannon.Cox@apexnc.org

Subject: Comprehensive Transportation Plan Amendment – Depot 499
Apex, North Carolina

Dear Ms. Cox:

At the request of staff and in connection with the rezoning case #20CZ01, this letter presents proposed amendments to the Town of Apex (Town) Comprehensive Transportation Plan (CTP) as proposed by the Depot 499 development (the "Project"). Ramey Kemp & Associates (RKA) has coordinated with the Town, NCDOT, and the project team to discuss these proposed modifications and their impacts on the proposed development. As part of this request, the development team is proposing elimination of the grade separation of S. Salem Street north of NC-540, elimination of the Holland Road extension over NC-540, elimination of the S. Salem Street realignment south of Apex Barbecue Road, and elimination of the roundabout at the intersection of S. Salem Street and Apex Barbecue Road. A summary of the amendments being proposed and additional information pertaining to each request is below:

1. Elimination of the grade separation of S. Salem Street, north of NC-540
    a. This grade separation was proposed in the Southwest Area Study, a recent planning document initiated by the North Carolina Capital Area Metropolitan Planning Organization (CAMPO). Per review of the daily traffic volumes produced by the Project in the transportation model, this grade separation is anticipated to have a daily traffic volume of 5,100 vehicles per day (vpd) by 2045. Due to this low volume of traffic, this connection is assumed to have been recommended to provide additional connectivity and not to provide additional capacity
    b. RKA prepared the attached conceptual design of this grade separation utilizing topography available via LIDAR. With this grade separation, 80 feet in height will be needed from the Project site to provide sufficient clearance above the existing rail line. The grade associated with this design would require a significant amount of property within the Project, with significant fill in order to reach the required heights. The road would sever the site and create further connectivity issues with developable land next to the interchange. These created connectivity issues are counterproductive to and further exacerbate the connectivity issues this grade separation was intended to improve. Thus, when applied to actual topographical data and clearance requirements, this conceptual connection is not practical, and undermines the intent of the existing CTP.
    c. Further, this requirement does not appear to be proportional in cost or burden to the impact of the Project, and is instead an improvement that if required, should be completed and funded by the Town after just compensation. We estimate the cost of the connection to be over $20 million. This is exclusive of the land

T 919 872 5115
5808 Faringdon Place
Raleigh, NC 27609

required to be taken from the Hunter property, which we estimate to be approximately 4-5 acres. Neither amount or burden appear to be proportional to a relatively low amount of vehicular trips generated by the Project.

2. Elimination of the Holland Road extension over NC-540
    a. Per review of the daily traffic volumes produced in the Project's transportation model, as part of the Southwest Area Study, this roadway extension is anticipated to have a daily traffic volume of 2,600 vpd by 2045. Due to this low volume of traffic, this connection is assumed to have been recommended to provide additional connectivity over NC-540 and not to provide additional capacity. Excerpts from the Southwest Area Study are included in the attachments.
    b. Based on the existing location of Holland Road, this extension would cross NC-540 in the approximate location of the toll gantries and overhead variable message signage along NC-540. Per discussions with the North Carolina Department of Transportation (NCDOT) District office and North Carolina Turnpike authority (NCTA), this crossing location is concerning to both agencies. It would require an offset of the roadway to avoid the gantries and special consideration to avoid vibration of the tolling system during construction. The location and need for the crossing was set in previous planning documents, before the toll road was designed and gantries constructed. Thus, with the reality of the actual improvements now in place, this connection and location is no longer appropriate.
    c. The topography at the location of this crossing necessitates significant fill between NC-540 and existing Holland Road. This has the potential to cause significant environmental impacts and costs related to the necessary creek crossing.
    d. Due to the relatively close proximity of the Apex Barbecue Road and S. Salem Street crossings of NC-540 (1 mile) this additional grade separation is expected to create excessive redundancies for traffic in the area that will not provide a significant benefit.
    e. The Southwest Area Study requires 30% of the site to be non-residential. To ensure the Project's viability, the commercial uses must have sufficient access and visibility from local roads, which requires the commercial to be located along S. Salem St. and not buried within or in the rear of the site. This in turn requires placing the bulk of the residential uses away from S. Salem Street toward NC-540, in the location where the CTP designates the bridge to land on the site. At the same time, planning policies within the Southwest Area Study promote walkability, preservation of green space, and human scale pedestrian connections – each of which conflict with the provision of a bridge or major connecting street across NC-540 and bisecting the residential uses. In order to more fully realize these planning objectives, this bridge should be removed.
3. Elimination of the S. Salem Street realignment north of NC-540
    a. Due to the existing railroad line, east of S. Salem Street, all widening of S. Salem Street in this area would be required on the west side with some located within the Depot 499 development. This realignment would occupy land within the Project and create a relatively isolated island of land between the railroad and a 4-lane divided road. Staff has indicated that this realignment was connected to a future train station that has since been decided to be relocated. As such, the purpose of the realignment and its practical application indicate realignment is no longer needed.

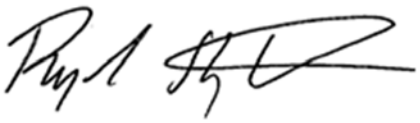
T 919 872 5115
5808 Faringdon Place
Raleigh, NC 27609

4. Elimination of the roundabout at the intersection of S. Salem Street and Apex Barbecue Road
    a. Per the CTP, S. Salem Street is planned as a four-lane median divided roadway. Multi lane roundabouts are typically discouraged by NCDOT. Additionally, the Project's outlined intersection / signal improvements at this intersection that would be needed to mitigate future traffic volumes at this intersection.
    b. We understand this change was planned to be suggested by staff independent of this project and were asked to include this element.
    c. A roundabout is expected to also require a significant amount of additional right-of-way due to the proximity of the rail line and large cross-section of S. Salem Street in future conditions.

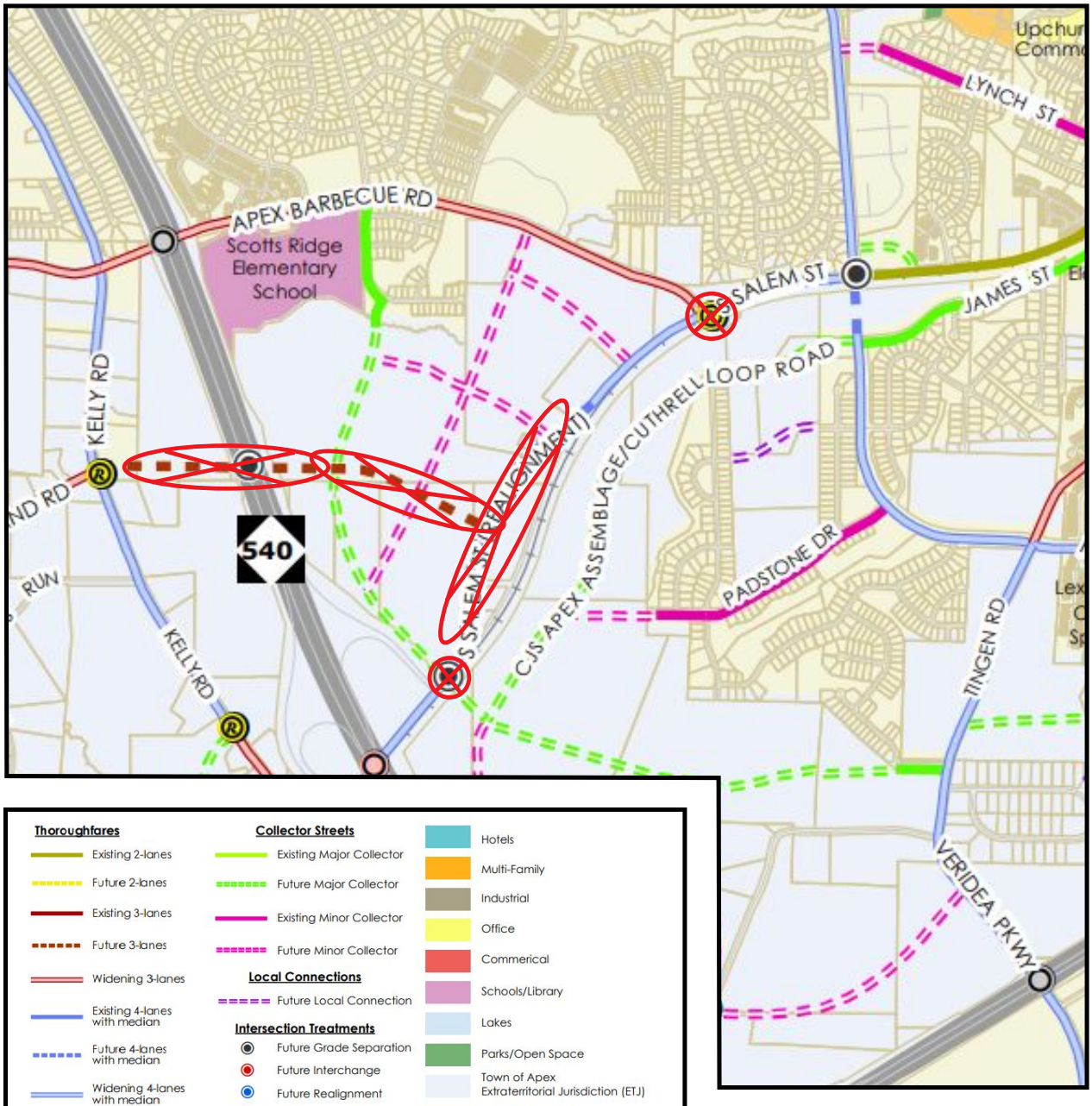
Due to the reasons outlined above, the Project is requesting elimination of the grade separation of S. Salem Street north of NC-540, elimination of the Holland Road extension over NC-540, elimination of the S. Salem Street realignment south of Apex Barbecue Road, and elimination of the roundabout at the intersection of S. Salem Street and Apex Barbecue Road from the Town's CTP. The traffic impact analysis for the Project did not include any of these CTP improvements. The CTP improvements discussed in this letter are expected to have a negligible impact on the area traffic capacity.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,
Ramey Kemp & Associates, Inc.



Rynal Stephenson, PE
Director of North Carolina



Moving forward. RKA RAMEY KEMP ASSOCIATES	Depot 499 Apex, NC	Proposed CTP Amendments Scale: Not to Scale

PROJECT REFERENCE NO.	SHEET NO.
19399	CPTI
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

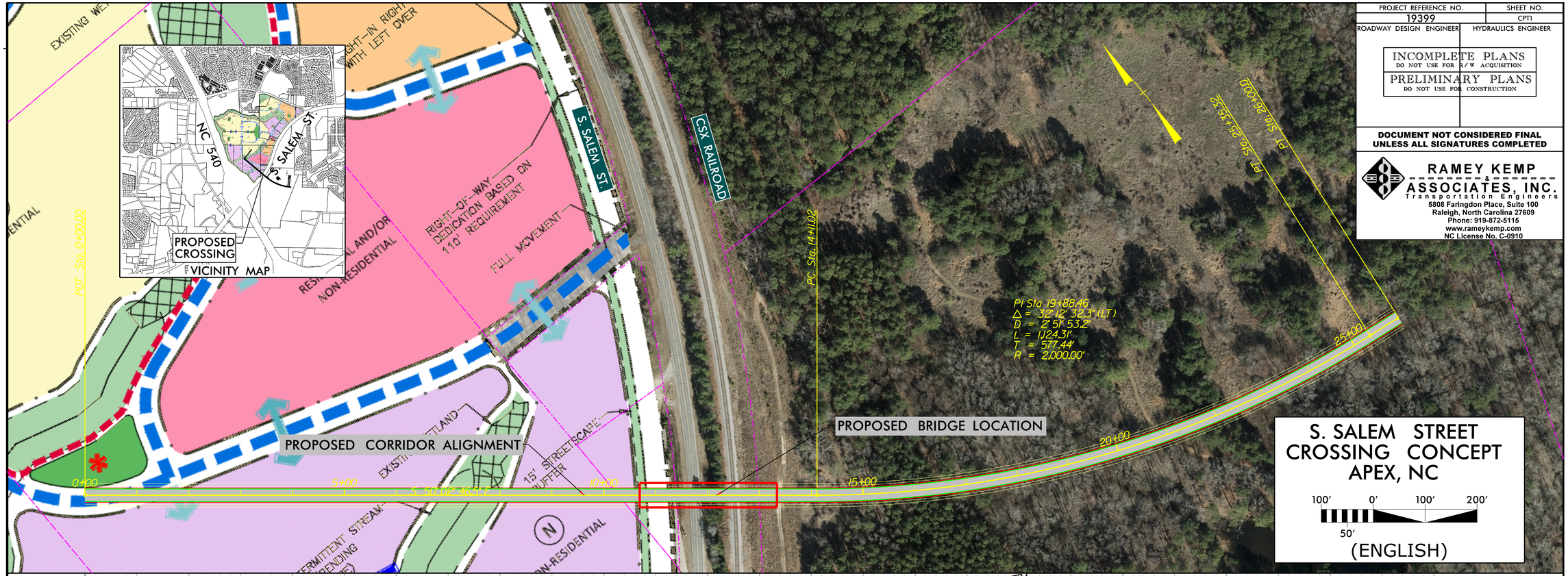
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

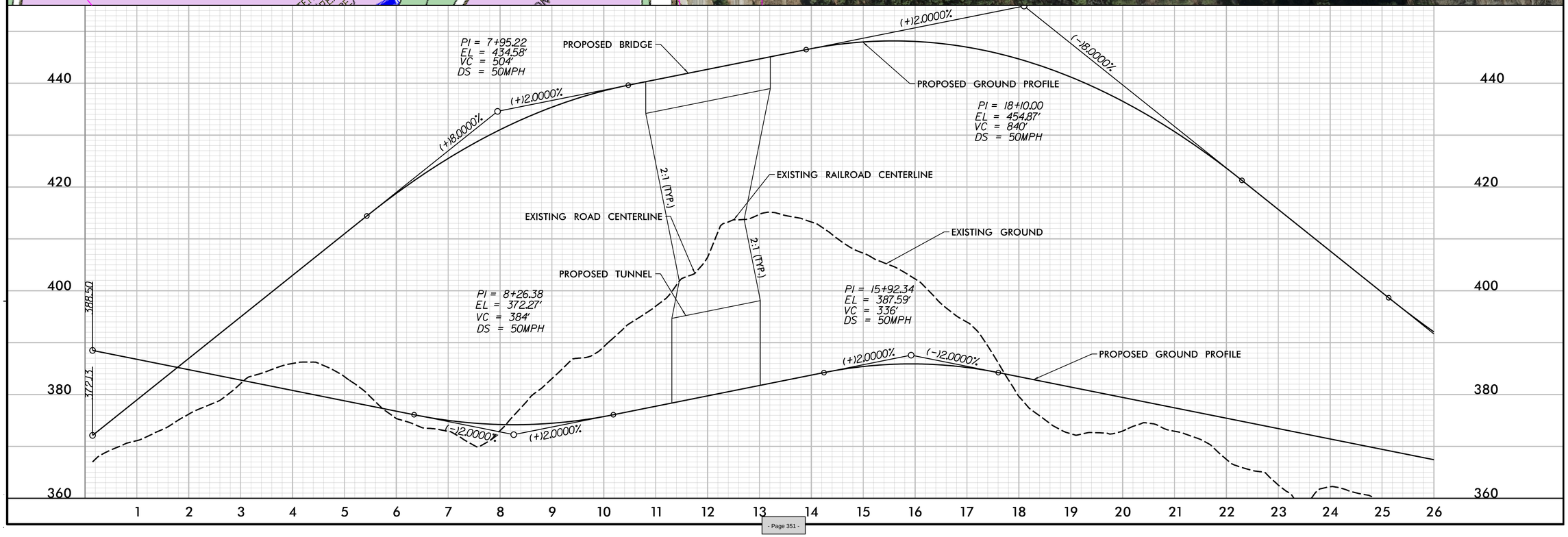
RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Faringdon Place, Suite 100
Raleigh, North Carolina 27609
Phone: 919-872-5115
www.rameykemp.com
NC License No. C-0910

S. SALEM STREET CROSSING CONCEPT APEX, NC

100′ 0′ 100′ 200′
50′

(ENGLISH)





PASSING WETLAND
15
OFFER

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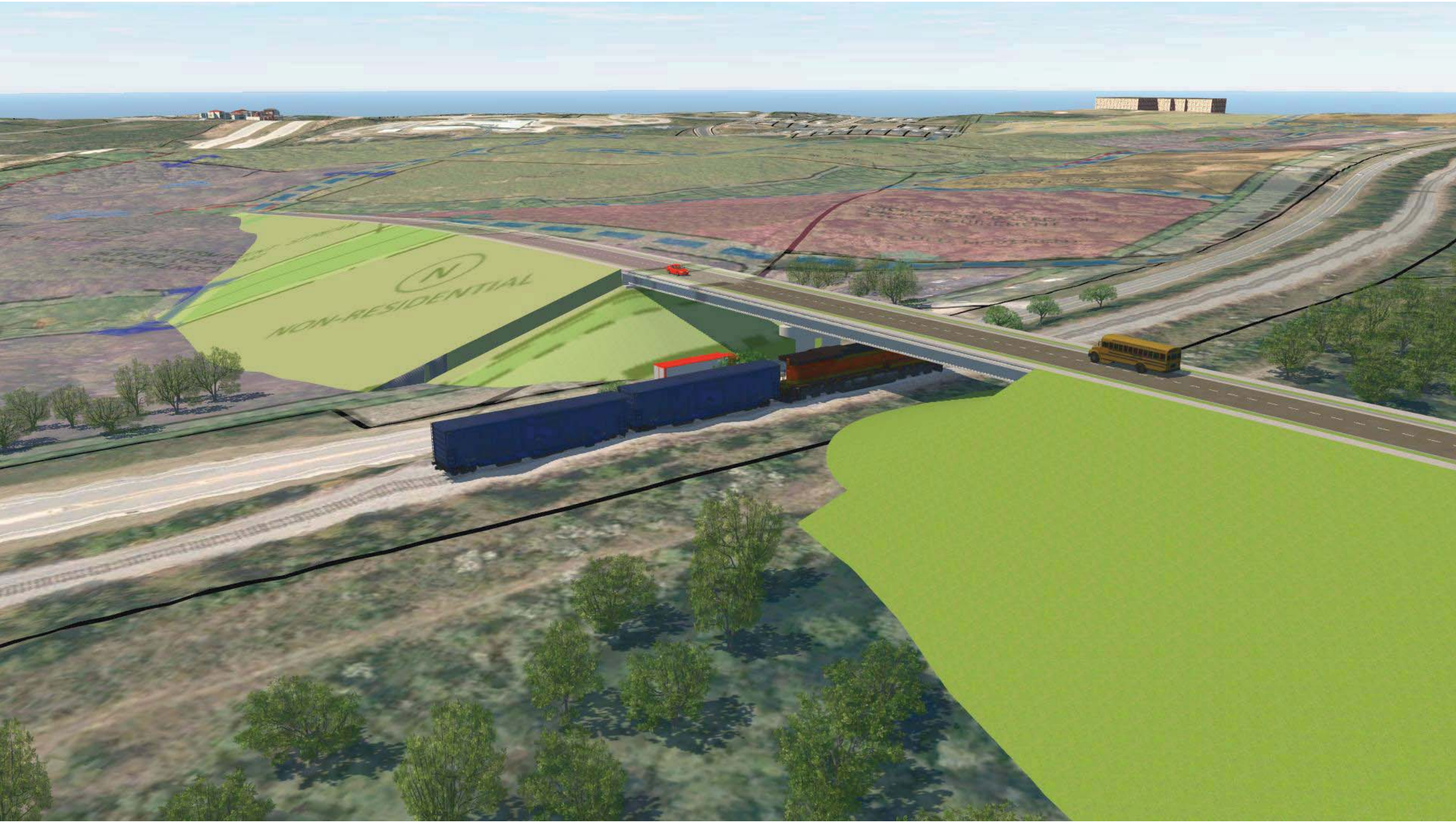
NON-RESIDENTIAL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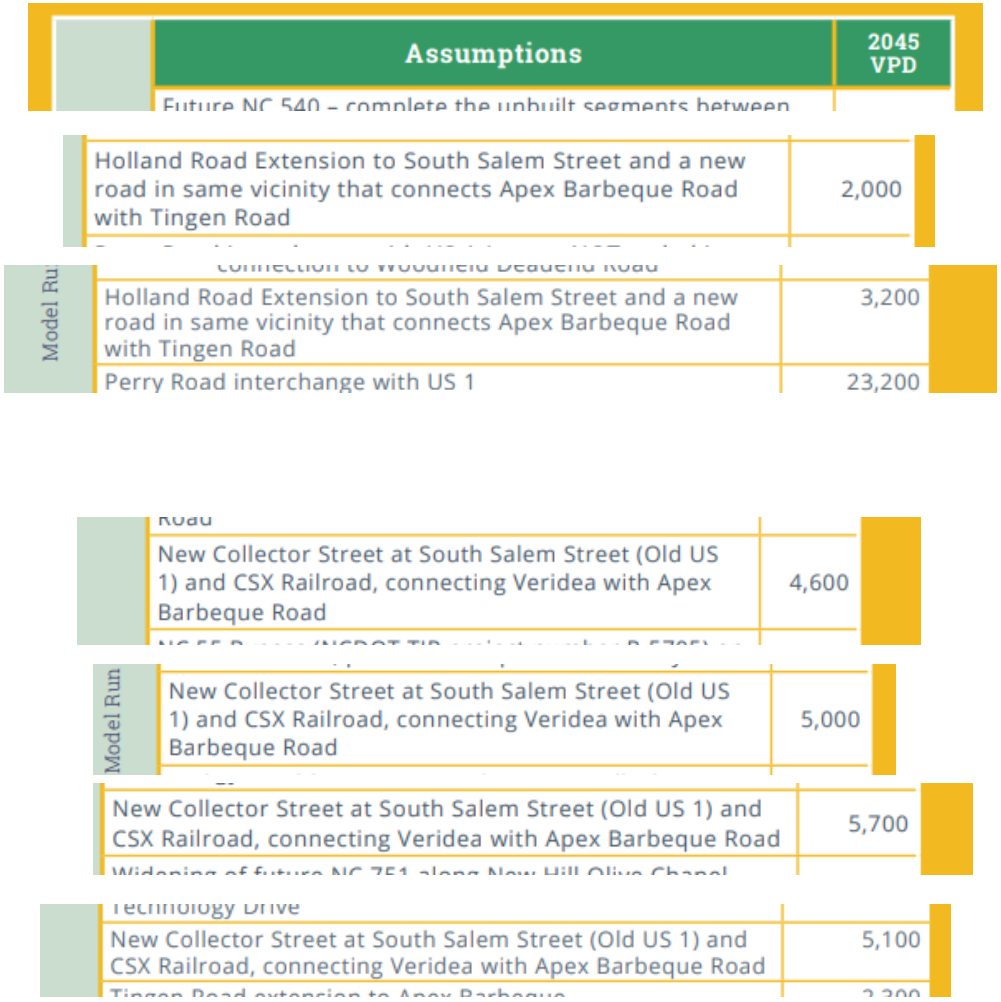
Excerpts From Southwest Area Plan



Assumptions	2045 VPD
Future NC 540 – complete the unbuilt segments between	
Holland Road Extension to South Salem Street and a new road in same vicinity that connects Apex Barbeque Road with Tingen Road	2,000
connection to Woodfield Deadend Road	
Holland Road Extension to South Salem Street and a new road in same vicinity that connects Apex Barbeque Road with Tingen Road	3,200
Perry Road interchange with US 1	23,200
Road	
New Collector Street at South Salem Street (Old US 1) and CSX Railroad, connecting Veridea with Apex Barbeque Road	4,600
New Collector Street at South Salem Street (Old US 1) and CSX Railroad, connecting Veridea with Apex Barbeque Road	5,000
New Collector Street at South Salem Street (Old US 1) and CSX Railroad, connecting Veridea with Apex Barbeque Road	5,700
Widening of future NC 751 along New Hill Olive Chapel	
Technology Drive	
New Collector Street at South Salem Street (Old US 1) and CSX Railroad, connecting Veridea with Apex Barbeque Road	5,100
Tingen Road extension to Apex Barbeque	2,300

Model Run	2045 Volume (VPD)
Holland Road Extension	
4	2,000
5	3,200
AVERAGE	**2,600**
S. Salem Street Grade Separation	
2	4,600
3	5,000
4	5,700
5	5,100
AVERAGE	**5,100**

Excerpts From Southwest Area Plan

SWAS 3	Add to MTP as 3 lanes	not in MTP	0	Holland Rd Extension	Kelly Rd	S. Salem St.	not in TRM model	2,000	Agree - add	Advance Apex: 80' ROW, 3-ln, sidewalk both sides	Apex

Excerpts From Southwest Area Plan

PI-7: HOLLAND ROAD AT NC 540 GRADE SEPARATION

VICINITY MAP

DESCRIPTION

PROJECT TYPE	Intersection
STREET	Holland Road
X-STREET	NC 540
CONTEXT AREA	Surban/Transit-Oriented Development
TIMEFRAME	Mid-Term
COST	$12,400,000

INTERSECTION DETAILS

IMPROVEMENT TYPE

[ ] Intersection Realignment

[ ] Roundabout

[X] Grade Separation

[ ] Interchange (new)

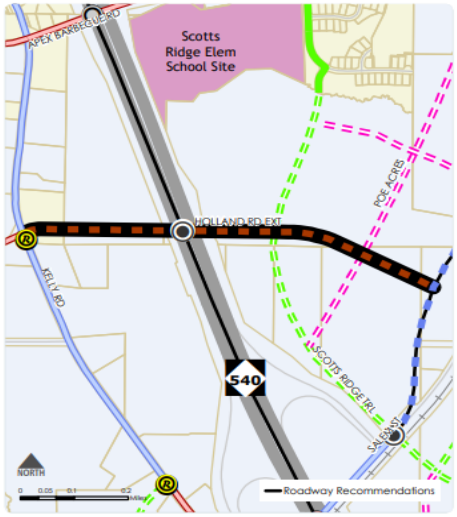
[ ] Interchange (improved)

GUIDING PRINCIPLES

Integrated Growth, Safety, Mobility and Connectivity

PC-14: HOLLAND ROAD EXTENSION NEW LOCATION

VICINITY MAP



GUIDING PRINCIPLES

Integrated Growth, Mobility and Connectivity

DESCRIPTION

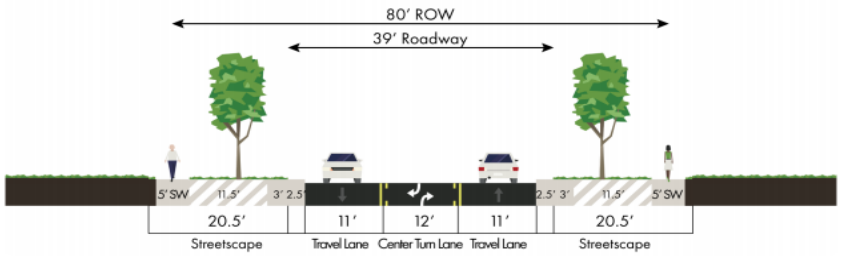
PROJECT TYPE	New Location
LENGTH	0.71 miles
FROM	Kelly Road
TO	S Salem Street
CONTEXT AREA	Suburban/Transit-Oriented Development
TIMEFRAME	Mid-Term
COST	$15,000,000

MULTIMODAL FACILITIES

EXISTING	PLANNED
[ ] Sidewalk	[X] Sidewalk
[ ] Side Path	[ ] Side Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

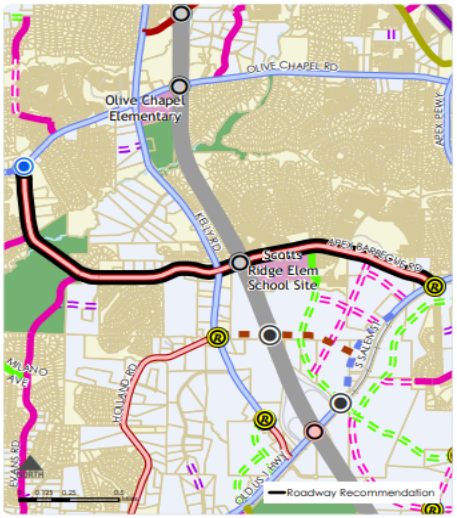
CHARACTERISTICS

EXISTING	PLANNED
Lanes: N/A	Lanes: 3
V/C Ratio: N/A	V/C Ratio: 0.35
Volume: N/A	Volume: 1,961



PC-1: APEX BARBECUE ROAD WIDENING

VICINITY MAP



GUIDING PRINCIPLES

Integrated Growth, Quality of Life, Safety, Mobility and Connectivity

DESCRIPTION

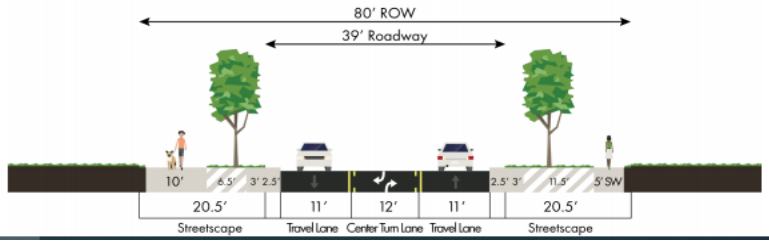
PROJECT TYPE	Widening
LENGTH	1.32 miles
FROM	Olive Chapel Road
TO	Old US 1
CONTEXT AREA	Suburban/Transit-Oriented Development
TIMEFRAME	Mid-term
COST	$8,700,000

MULTIMODAL FACILITIES

EXISTING	PLANNED
[ ] Sidewalk	[X] Sidewalk
[P] Side Path	[X] Side Path
[ ] Transit Route	[X] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

CHARACTERISTICS

EXISTING	PLANNED
Lanes: 2	Lanes: 3
V/C Ratio: 0.39	V/C Ratio: 0.34
Volume: 6,203	Volume: 5,344



Excerpts From Southwest Area Plan

	Total train movements: 6	
New Collector Street	**Crossing Geometry:** n/a **Speed:** Roadway: n/a Rail: n/a **Lanes / Tracks:** Traffic lanes crossing: n/a Number of tracks: 2 **Signal Control:** n/a **Volume:** Street: n/a Total train movements: n/a	Apex requested CAMPO assistance in planning for a grade separation at a new location 1.5 miles south of the existing crossing (measured along the CSX track). The recommended grade separation would bridge over CSX and Old US 1 with a 310 foot long bridge. No interchange is proposed with Old US 1. The corridor width is estimated to be 100 feet wide. The southern tie-in would occur at Tingen Road / Widger Lane. The northern tie-in would be in the Woodall subdivision currently under construction; at a stub-out street named Woodall Crest Drive near its intersection with Aspen River Lane. Apex Barbeque Road is located 1,000 feet north of this tie-in.

CSX Rail Corridor

Strategically important crossings of the CSX corridor were evaluated in this study. A grade separation of a road over the railroad is strongly preferred by CSX because they can maintain unaltered rail service during construction and long-term maintenance and ownership is not their responsibility. Grade separations can be costly and result in impacts to adjacent property due to a change in or loss of access, visual obstruction, and construction-related impacts. Railroad companies and the NCDOT prefer grade separations because of the safety benefits of avoiding cars and trucks traveling across active train tracks. The following locations were evaluated and grade separations are recommended:

- **Laura Duncan Road** – proposed in this study to go under CSX and North Salem Street. Topography at this locations lends itself to going under so that connections can be maintained to Laurel Park Elementary School on the south side and to the existing street network on both sides of the tracks. A temporary track could be built between the existing track and North Salem Street so that rail traffic can be maintained during construction.
- **Tingen Road Extension** – The southern end of Tingen Road would be extended to the northwest on new location with a grade separation over CSX and Old US 1, continuing north to Woodall Crest Drive and then to Apex Barbeque Road.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING
Meeting Date: July 21, 2020

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager
Department(s): Planning and Community Development

Requested Motion

Public Hearing and possible motion to approve an amendment to the 2045 Land Use Map and Rezoning Application #20CZ01 Depot 499 PUD. The applicant, Stephen Dorn, Lennar, seeks to amend the 2045 Land Use Map classification of approximately 5.41 acres, a portion of 0 Apex Barbecue Road (PIN 0731761944), from Office Employment to High Density Residential and to rezone approximately 200.8 acres located at 0 Kelly Road; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem Street; 0 and 6401 Apex Barbecue Road from Residential Agricultural (RA) and Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01) to Planned Unit Development-Conditional Zoning (PUD-CZ).

Approval Recommended?

The Planning and Community Development Department recommends approval of the 2045 Land Use Map amendment and denial of the rezoning as proposed by the applicant.

The Planning Board held a Public Hearing on July 13, 2020 and recommended denial of the 2045 Land Use Map amendment and rezoning by a vote 6-0.

Item Details

The following PINs are included in this rezoning: 0731459383, 0731554102, 0731564395, 0731641147, 0731645370, 0731646532, 0731657166, 0731676714, 0731750984, 0731761944, 0731766588, 0731873224

Attachments

- Staff Report
- Vicinity Map
- Application

All property owners and neighborhood associations within 300 feet of this rezoning have been notified per UDO Sec. 2.2.11 *Public Notification*.

BACKGROUND INFORMATION:

Location: 0 Kelly Rd; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem St; 0 and 6401 Apex Barbecue Rd

PINs: 0731459383, 0731554102, 0731564395, 0731641147, 0731645370, 0731646532, 0731657166, 0731676714, 0731750984, 0731761944, 0731766588, 0731873224

Applicant/Owners: Stephen Dorn, Lennar/Narendra Meka; Varya, LLC; Poe Acres Family Farm, LLC; Carey B Hunter; Paul M Szymkiewicz & Wei Jin; Pamela Utley; Daryl & Jeanne Poe; William Douglas & Jean S Poe; Regency International Investments, LLC

PROJECT DESCRIPTION:

Acreage: ±200.8

Current Zoning: Residential Agricultural (RA) & Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01)

Proposed Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ)

Current 2045 Land Use Map: Mixed Use: High Density Residential/Office Employment/Commercial Services; Medium/High Density Residential; Office Employment; Office Employment/ Commercial Services

Proposed 2045 Land Use Map: Amendment requested for a ±5.41 acre portion of PIN 0731761944 from Office Employment to High Density Residential

Town Limits: ETJ

Adjacent Zoning & Land Uses:

	Zoning	Land Use
North:	Residential Agricultural (RA); High Density Single-Family Residential-Conditional Zoning (HDSF-CZ #14CZ26); High Density Single-Family Residential-Conditional Use (HDSF-CU #97CU11); Medium Density Residential-Conditional Zoning (MD-CZ #07CZ14)	Scotts Ridge Elementary School; Single-Family Residential (Woodall Estates); Apex Barbecue Rd; St. Mary Magdalene Church & School; Vacant
South:	Rural Residential (RR); Residential Agricultural (RA)	NC 540 Hwy ramp; S. Salem St; Vacant
East:	Residential Agricultural (RA); Medium Density Residential (MD)	S. Salem St; Railroad; Vacant
West:	Residential Agricultural (RA); Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ33)	NC 540 Hwy; Vacant; Townhomes (West Village)

EXISTING CONDITIONS: Most of the subject properties are wooded. The remaining parcels contain single-family homes and accessory structures and farm land. Two streams bisect the property generally from east to west.

NEIGHBORHOOD MEETING: The applicant conducted neighborhood meetings on December 19, 2019 and January 29, 2020. The neighborhood meeting reports are attached.

WCPSS COORDINATION:
This rezoning was submitted prior to the agreement with the Wake County Public School System to provide a Letter of Impact for rezonings allowing residential development.

2045 LAND USE MAP:
The 2045 Land Use Map classifications for the properties subject to this rezoning are Mixed Use: High Density Residential/Office Employment/Commercial Services; Medium/High Density Residential; Office Employment; Office Employment/Commercial Services. Approximately 171.90 acres of the area to be rezoned is designated as Mixed Use of which 30% should be designated for non-residential uses. The PUD designates 51.57 acres (30%) of that area as non-residential. This rezoning is also located with the Transit-Oriented Development Context Area.

Requested amendment
The applicant is requesting an amendment for a ±5.41 acre portion of PIN 0731761944 from Office Employment to High Density Residential. This area is located near the northeast corner of the site. If the requested amendment is approved, the proposed PUD-CZ zoning district will be consistent with the 2045 Land Use Map.

PLANNED UNIT DEVELOPMENT PLAN:
The applicant has submitted a Planned Unit Development plan to regulate the uses, design, and other development features as follows:

Permitted Uses:
The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply. Pod locations are shown on Sheet C2.0 Preliminary Layout Plan.

P = Permitted Use * = Subject to limitations - see descriptions following chart.

	Residential Areas (Pods A-J & P)	Non-Residential Areas (Pods M-O & Q-T)	Mixed-Use Areas (Pods K & L)
Residential			
Single-Family	P (Pod G only)		
Accessory Apartment	P*		
Townhouse	P		
Multi-family or Apartment Units	P (Pods H, I, J, and east of proposed public road in Pod G only)		
Multi-family or Apartment Units (2nd story and above only)		P	P
Condominium (2nd story and above only)		P	P
Congregate living facility	P	P (Pods R, S, T only)	
Family care home	P		
Nursing or convalescent facility		P (Pods R, S, T only)	

	Residential Areas (Pods A-J & P)	Non-Residential Areas (Pods M-O & Q-T)	Mixed-Use Areas (Pods K & L)
Utilities			
Utility, minor	P	P	P
Recreational Uses			
Greenway	P	P	P
Park, Active	P	P	P
Park, Passive	P	P	P
Recreation Facility, private	P		
Entertainment, Indoor		P	P
Public and Civic Uses			
Ambulatory Health-care Facility with Emergency Dept.		P (Pods R, S, T only)	
Assembly Hall, non-profit/for-profit		P (Pods R, S, T only)	
Church or place of worship		P (Pods R, S, T only)	
Day Care Facility		P (Pods R, S, T only)	
Drop-in or short-term day care		P	P
Government Services		P (Pods R, S, T only)	
Hospital		P (Pods R, S, T only)	
Veterinary Clinic or Hospital		P (Pods R, S, T only)	
School, Public or Private		P (Pods R, S, T only)	
Transportation facility		P* (Pods R, S, T only)	
Vocational School		P (Pods R, S, T only)	
Food and Beverage Service			
Restaurant, general		P	P
Restaurant, drive-through		P*	P*
Bar, nightclub, wine bar, taproom		P*	P*
Office and Research			
Medical or dental clinic or office		P	P
Office, business or professional		P	P
Publishing Office		P	P
Public Accommodation			
Hotel or Motel		P	P*
Retail Sales and Services			
Artisan Studio		P	P
Barber and Beauty Shop		P	P
Book Store		P	P
Building supplies, retail		P*	
Convenience store, with gas sales		P (excluding Pod O)	
Convenience store, without gas sales		P	P
Dry cleaners and laundry service		P	P

	Residential Areas (Pods A-J & P)	Non-Residential Areas (Pods M-O & Q-T)	Mixed-Use Areas (Pods K & L)
Farmer's market		P	P
Financial Institution, with or without drive-through		P*	P*
Floral Shop		P	P
Funeral Home		P (Pods R, S, T only)	
Gas and fuel, retail			
Greenhouse or nursery, retail		P	
Grocery, general or specialty		P	P
Health/fitness center or spa		P	P
Newsstand or gift shop		P	P
Personal Service		P	P
Pharmacy, with or without drive-through		P*	P*
Printing and copying services, limited		P	P
Repair services, limited		P	P
Retail sales, general		P	P
Studio for art		P	P
Tailor shop		P	P
Theater		P	
Pet services		P	P
Production			
Microbrewery		P	P
Microdistillery		P	P

*Permitted Uses Subject to Limitations:

Accessory Apartment - Homeowner Association covenants shall not restrict the construction of accessory dwelling units.

Transportation facility - Such use shall only be allowed for vehicles serving the use "School, public or private", but is permitted as either a principal or accessory use on a lot.

Drive-through facilities - Any drive-through facility (e.g. restaurant, financial institution, pharmacy) must be located within a multi-tenant building; No free standing drive-through facilities shall be allowed.

Bar, nightclub, wine bar, taproom - Hours of operation Sunday through Thursday shall close by 12 AM and hours of operation Friday through Saturday shall close by 2 AM.

A hotel restaurant or bar with a patio or deck open to the street, shall qualify as vertical integration in mixed-use pods.

Building supplies, retail - The maximum square footage of a building supplies retail store shall be limited to 20,000 square feet.

SCHOOLS

While Land Use Option 1 on Sheet 2.0 Preliminary Layout Plan indicates that Pods R and S are to be Schools/Non-residential, there is no guarantee that a public or private school will be located on either parcel. The purpose of providing the two land use options is to show a different road network if a school is developed on Pod R and/or Pod S.

AFFORDABLE HOUSING

The applicant has proposed the following conditions related to affordable housing:

- Wake County Public School System has expressed an interest in pursuing affordable housing on surplus property should the School Alternative be pursued. The affordable housing use is permitted in any pod, and the community has expressed interest in pursuing these projects in Apex.
- If no such affordable housing project(s) containing at least 45 units has been approved by January 1, 2025, and the Town of Apex has a fund or other mechanism in place by January 1, 2025 to receive donations to construct, subsidize, or participate in the development of affordable housing units (the "Fund"), the developer will contribute $300,000 to this Fund. This contribution represents the approximate value of a 2.0 acre dedication at market value. In the event the Fund has not been established by the Town of Apex by January 1, 2025, the money will be conveyed to a non-profit organization participating in affordable housing. The developer will work with the Town of Apex to identify a mutually acceptable non-profit organization to receive these funds.
- Affordable housing units may be provided in any development pod within the project. Regardless of development pod, affordable housing area may be counted as non-residential for the purpose of calculating the 30% non-residential threshold within the mixed-use land designation. Affordable housing units shall only be required to comply with Residential Design Guidelines 1 and 12. For purposes of this condition, affordable housing is defined as housing that on average is affordable to a household with an annual income that is no greater than 60% of the Area Median Income for the respectively-sized household in the Raleigh, NC MSA, as determined by the United States Department of Housing and Urban Development (HUD).

Condition suggested by staff:

During the review of this rezoning, Planning staff requested that the applicant offer a condition that requires a certain number of units (townhome or apartment) to be reserved for affordable housing or that dedicates approximately two (2) acres to a non-profit affordable housing developer given that Peak Plan 2030 calls for affordable housing for older adults. The size of the dedication suggested is approximately equal to the size of a recent affordable housing development containing 42 units for seniors constructed in Cary. The applicant revised the conditions related to affordable housing after the Planning Board meeting. The revised wording now offered meets the suggestions made by staff.

PROPOSED DESIGN CONTROLS (Maximum Densities & Dimensional Regulations)

Total Project Area: 200.8 acres
Project area within Mixed-Use classification on 2045 Land Use Map: 171.9 acres

- Required 30% Non-residential land area: 51.57 acres
- Proposed Gross Non-residential land area: 51.57 acres

Mixed-Use Land Area (Pods K & L): ~1.88 acres

- Minimum Vertical Integration:
  - Residential – 24 units (over retail/office); or
  - Office – 10,000 sf (over retail)
- Maximum Residential: 120 units

- Building Height:
  - Minimum: 3 stories*
  - Maximum: 80 ft

  ***** Rooftop terraces that include a minimum of 1,500 sf of enclosed space for event, amenity, or other use such as a bar or restaurant shall qualify as a 3rd floor.
- Minimum Building Setbacks:
  - Front: 10 ft
  - Rear: 10 ft
  - Side: 10 ft
  - Corner: 15 ft

Non-residential Land Area (Pods M-O & Q-T); ~41.08 acres

- Maximum square feet: 650,000 sf
- Building Height:
  - Minimum: 1 story
  - Maximum: 100 ft
- Minimum Building Setbacks:
  - Front: 10 ft
  - Rear: 10 ft
  - Side: 10 ft
  - Corner: 15 ft

Residential Land Area (Pods A-J & P): ~93.99 acres

- Maximum number of apartments: 850
- Maximum number of townhomes/single-family: 650 (50 single-family max)
- Maximum number of units: 1,500

- Single-Family Design Controls:
  - Minimum Lot Size: 2,550 sf
  - Minimum Lot Width: 36 ft
  - Minimum Lot Depth: 85 ft
  - Maximum Building Height: 45 feet (In Pod G, the first row of lots immediately adjacent to the Woodall subdivision shall not exceed 2 stories unless buffer is increased to a 50' Type A buffer)
  - Minimum Building Setbacks:
    - Front: 20 ft to garage; 8 ft to building façade
    - Rear: 15 ft
    - Alley: 5 ft
    - Side: 5 ft
    - Corner: 8 ft

- Townhome Design Controls:
  - Minimum Lot Width: 16 ft (alley loaded); 18 ft (front loaded)
  - Minimum Lot Depth: 65 ft
  - Maximum Building Height: 45 feet (In Pod G, the first row of lots immediately adjacent to the Woodall subdivision shall not exceed 2 stories unless buffer is increased to a 50' Type A buffer)
  - Minimum Building Setbacks – Front Loaded:
    - Front: 20 ft to garage; 5 ft to building façade
    - Rear: 10 ft
    - Corner: 8 ft
    - Building Separation: 10 ft
  - Minimum Building Setbacks – Alley Loaded:
    - Front: 5 ft
    - Rear/Alley: 5 ft
    - Building Separation: 10 ft
    - Corner: 8 ft

- Apartment/Condominium Design Controls:
  - Minimum Building Height:
    - S. Salem Street: 4 stories; a maximum of 25% of buildings along this frontage may be 3 stories
    - Apex Barbecue Road: 4 stories; a maximum of 25% of buildings along this frontage may be 3 stories
  - Maximum Building Height:
    - S. Salem Street: 6 stories or 90 ft
    - Apex Barbecue Road: 6 stories or 90 ft; the first row of buildings along this frontage shall not exceed 4 stories
  - Minimum Building Setbacks:
    - Front: 10 ft
    - Building Separation: 30 ft
    - Rear: 10 ft
    - Corner: 10 ft

Buffers:
The table below shows the buffers proposed as shown on Sheet 2.0 Preliminary Layout Plan.

Location	Required by UDO	Proposed in PUD
S. Salem St	30' Type B	15' Streetscape Buffer
Apex Barbecue Rd	30' Type B	30' Streetscape Buffer
Northern boundary (adjacent to school and Woodall Estates)	15' Type A	100' Riparian Buffer
Western boundary (adjacent to Woodall Estates)	15' Type A (townhomes) or 10' Type B (single-family)	30' Type A
NC 540 Hwy	Residential: 100' Type A Non-residential: 100' Type A or 50' Type A	Pods C, D, & T: 100' Type A Pods R & S: 50' Type A
Along internal Major and Minor Collectors	10' Type A or D or 30' Type D (depends on proposed land use and land use across the street)	10' Type A or D or 30' Type D as required by UDO*

*The 10' Type D Streetfront Buffer shall not be required along minor or major collectors where street trees are provided at a rate equivalent to 1 tree per 1,000 sf of the area that would otherwise be provided as buffer.

Streetscape Buffer: The proposed Streetscape Buffer along S. Salem Street and Apex Barbecue Road will meet the standards provided for the pedestrian oriented streetscape buffer allowed by the UDO as follows:
"Pedestrian oriented streetscape buffers shall be allowed in lieu of standard landscaped thoroughfare buffers when such buffers are located inside the Apex Peakway. Pedestrian oriented streetscape buffer shall contain both hardscape elements (such as but not limited to sidewalks, decorative lighting, street furniture, and fountains) and street tree plantings which do not have to meet typical minimum island widths or sizes."

ARCHITECTURAL STANDARDS:

Residential Design Guidelines:

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. All single-family homes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 12 inches from average grade across the front of the house to the finished floor level at the front door.

3. All townhomes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 6 inches from average grade across the front of the house to the finished floor level at the front door.
4. Front-facing garage doors shall have windows, decorative details or carriage-style adornments on them.
5. The garage cannot protrude more than 1 foot out from the front façade or front porch, measured from roof of porch.
6. On single-family homes, the roof shall be pitched at 5:12 or greater (not to include porches, bay windows, etc.).
7. On townhomes, roof line cannot be a single mass; it must be broken up either horizontally and/or vertically between, at minimum, every other unit.
8. House entrances for units with front-facing single-car garages must have a covered porch/stoop area leading to the front door.
9. Rear and side elevations of units that have right-of-way frontage shall have trim around the windows.
10. Four of the following decorative elements shall be used on each building: decorative shake, board and batten siding, decorative porch rails and posts, shutters, decorative functional foundation and roof vents, recessed windows, decorative windows, decorative brick or stone, decorative gables, decorative cornices, or metal roofing.
11. A varied color palette shall be utilized on single family and townhome units throughout the subdivision and shall include siding, trim, shutter, and accent colors complementing the siding colors.
12. All apartment buildings along S. Salem Street shall have interior corridors.
13. Recesses and projections shall be provided for at least 50% of each façade on each apartment building.
14. A solar PV system shall be installed on at least 15% of the single-family homes within the development. All solar installation required by this condition shall be completed or under construction prior to 90% of the building permits being issued for the approved number of single-family lots. The lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended.
15. Solar conduit will be provided on all single-family homes to accommodate the future installation of solar panels.
16. Proposed Residential Materials
    Proposed materials will be of a similar palette to provide consistency of character along with visual interest. Exterior materials that may be incorporated into any of the residential building products include:
    a. Cementitious lap siding
    b. Board and batten siding
    c. Shake and shingle siding
    d. Wood siding
    e. Stone or synthetic stone
    f. Brick

    Additional building materials may be included with administrative staff approval. Substitute materials shall be allowed by staff as long as they are determined by the Planning Director to be substantially similar.

Non-Residential design guidelines:

1. Buildings shall be arranged to define, create and activate edges and public places. They shall be situated to address the street and provide massing that looks to define the street realm for pedestrians as well as automobiles.
2. Every effort shall be made to locate service and loading areas in the rear of structures. Where these features are located on the side of the building along a public road, they will be designed in such a

way that they do not distract from the character of the development and they will be screened in accordance with the UDO.

3. Elevations of buildings facing a street shall incorporate detailing in keeping with the character and style of the architectural features on adjacent buildings.
4. Elevations of corner buildings shall utilize design features such as variations in wall plane, variation in building mass and window placement to generate street interest.
5. Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials and ornamental details as well as landscaping shall be incorporated to add visual interest. Large expanses of blank walls, greater than 25' in length or height, shall be broken up with windows or other architectural features to reduce visual impacts.
6. Differences of roof height, pitch, ridgelines and materials shall be used to create visual interest and avoid repetition.
7. Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material.
8. Solar conduit shall be provided on every non-residential building that has a flat roof, not to include public or private schools.
9. Non-residential exteriors shall incorporate variation in materials. The primary (front) façade and other façades located along a public right-of-way may include:
    a. Brick and/or stone masonry
    b. Decorative concrete block (integral color or textured)
    c. Stone accents
    d. Aluminum storefronts with anodized or pre-finished colors
    e. EIFS cornices, and parapet trim
    f. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only 25% of each building façade
    g. Precast concrete
    h. Soffit and fascia materials to be considered include EIFS with crown trim elements
    i. Cementitious siding

    Non-residential buildings visible from public view shall be constructed with compatible materials to other uses in the PUD. Rear elevations of non-residential buildings facing opaque landscape buffers or not visible from vehicular use areas or public rights-of-way may incorporate decorative concrete masonry, metal coping, or EIFS trim.

Exterior materials not allowable as part of the residential or non-residential development are as follows:

1. Vinyl siding
2. Painted, smooth faced concrete block
3. Metal Walls

PUBLIC ART

Two (2) locations for public art are identified for public art on Sheet 2.0 Preliminary Layout Plan. A minimum of one (1) location will be implemented.

PARKING

As part of the review and approval of a Master Subdivision Plan or Site Plan, the Planning Director may approve a parking reduction per UDO Section 8.3.9 *or* a reduction up to fifteen (15) percent in the number of required parking spaces (excluding single-family and townhomes), whichever is greater. The latter may be approved if the reduced number of parking spaces will be sufficient to satisfy the demand for parking, based

on evidence provided by a licensed traffic engineer in the form of a parking study or other supporting evidence deemed appropriate by the Planning Director.

Guest parking shall be distributed so that there is at least one guest parking space within 200' of each townhome lot. On-street parallel parking stalls may be used to satisfy guest parking requirements.

SIGNAGE
All signage shall comply with UDO Sec. 8.7 *Signs.*

LANDSCAPING
All landscaping for this PUD shall comply with UDO Sec. 8.2 *Landscaping, Buffering, and Screening* except for the following provision regarding building landscaping requirements for townhomes (Sec. 8.2.4.A.3):

- Street trees located within street right-of-way shall count toward townhome landscaping requirements. Additionally, shrubs may be located either on the townhome lot or within HOA owned common areas to meet UDO requirements.

NATURAL RESOURCES AND ENVIRONMENTAL DATA

Resource Conservation Area (RCA):
The PUD proposes to provide the amount of RCA required per the UDO which is 20% of the gross project area (40.16 acres). The RCA will be comprised of preserved streams, ponds, wetlands, riparian buffer, perimeter and streetfront buffers, portions of stormwater control measures, and greenway trails.

Tree Canopy:
The PUD proposes to incorporate an urban street grid that contains canopy trees within public rights-of-way in addition to trees within perimeter buffers, pocket parks, community gathering spaces and other open space areas.

To further illustrate the project's commitment to preserving and re-establishing tree canopy in our region, at the time of first subdivision or site plan submittal, the developer will provide a donation of $10,000 to a local non-profit organization with a mission towards tree preservation and tree replacement. We estimate the project will retain or replace almost 70% of existing canopy on the residential portion, and preserve or replant an additional 27% on the non-residential portion of the development, bringing replacement amount close to 97%. As such, this donation represents an assigned per-tree value in substitute canopy for the remaining 3%. The developer will work with the Town of Apex to identify a mutually acceptable non-profit organization to receive these funds. Developer is responsible for providing documentation for qualifying organizations.

STORMWATER MANAGEMENT
This PUD shall meet all stormwater management requirements for quality and quantity treatment in accordance with UDO Sec. 6.1.7 such that:

- Post development peak runoff shall not exceed pre-development peak runoff conditions for the 1 year, 10 year, and 24-hour storm events.
- Treatment for the first 1 inch of runoff will provide 85% removal of total suspended solids.

Acceptable stormwater structures shall include detention ponds, constructed wetlands, bio-retention areas, or other approved devices consistent with the NCDEQ Stormwater Design Manual and the Town of Apex UDO.

PUBLIC FACILITIES

Water and Sanitary Sewer:
The project will be served by Town water and sewer service. The design will meet the current Town of Apex master plans for water and sewer.

Developer may seek a developer agreement with the Town for the oversized waterline sizing along the site frontage and waterline connection under 540 for reimbursement per the Town's Policy Regarding Town Participation in Utility Projects.

Transit:
At least two bus stops shall be provided at locations to be determined at the time of subdivision or site plan approval. In accordance with Apex standards, stops will provide a concrete landing pad between sidewalk and curb, an amenity pad behind the sidewalk to accommodate future shelter, lighting at bus stop location, and a sign post for a future sign.

Walkability:
The following facilities will be provided to contribute to a walkable community within and surrounding the Depot 499 development:

- Five-foot wide public sidewalks along both sides of all streets unless otherwise noted
- Six-foot wide private walking trails throughout the development
- A greenway connection to Scotts Ridge Elementary School (subject to WCPSS approval)
- Ten-foot wide sidepaths along South Salem Street frontage, Apex Barbecue Road frontage, and the main collector through the development as shown on Sheet C2.00.
- Construction or payment-in-lieu of approximately 910 linear feet of off-site sidewalks and side paths to complete missing pedestrian connections to the project from adjoining communities as shown on Sheet C2.00.
- Up to two high visibility crosswalks constructed along Apex Barbecue Road (subject to NCDOT and the Town of Apex approval)
- Bicycle and pedestrian facilities along existing road frontage along the boundaries of the PUD shall be installed as each pod is developed, and no later than the completion of Phase 2 as described in the zoning conditions related to traffic impacts.

Other Utilities and Facilities:
Electricity will be provided by Apex Electric. Phone, cable, and gas will provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Streetscape features may be used to help with establishing a framework for the proposed development. These features may include street trees within the public right-of-way, benches, trash receptacles, and street and/or pedestrian lights compatible with their context. Other features may include markers, bollards, and unique paving patterns.

General Roadway Infrastructure
All proposed roadway infrastructure and right-of-way dedications will be consistent with the Town of Apex UDO and Transportation Plan if the requested Transportation Plan amendments are approved.

The minor collector street extending from the major collector street at South Salem Street to Apex Barbecue Road will not be directly accessed by residential driveways.

The location of the major collector street connection to S. Salem Street is subject to change based on the ultimate layout and will be determined in coordination with staff during master subdivision plan review.

APEX TRANSPORTATION PLAN/ACCESS and CIRCULATION

The PUD as proposed is dependent upon the approval of several staff and applicant initiated amendments to the Thoroughfare and Collector Street Plan map and the Transit Plan map of the 2045 Comprehensive Transportation Plan.

The PUD proposes to extend the Major Collector currently stubbed to the northern portion of the site from the Woodall Estates subdivision. This Major Collector provides full-movement access to Apex Barbecue Road. A new full-movement access to Apex Barbecue Road is proposed to align with Town Side Drive. Along S. Salem Street, two (2) full-movement access points and two (2) right-in/right-out/left-over access points are proposed.

TRANSPORTATION IMPROVEMENTS

Staff would like to point out the following with regard to the TIA submittal:

1. The proposed zoning allows 50 single-family homes to be substituted for 50 townhomes and has added 25,000 SF of commercial square feet, resulting in a potential increase in trips compared to the TIA. The applicant has provided an updated trip generation comparison letter showing less than a 5% overall increase in trips during any peak hour period and commits in the zoning to a revised analysis at the request of staff should the subdivision and site plan submittals exceed the trip potential studied in the TIA.
2. The TIA analyzed Phase 1 as 650 multi-family/townhome units and a full build-out that adds 850 apartments, 375,000 SF office, and 250,000 SF shopping center. Discussion following the TIA review revealed a need to establish a mixed-use threshold for Phase 1 improvements as well as a threshold for additional improvements to be completed prior to build-out. The PUD reflects this modified phasing (Phase 1 and Phase 2) as thresholds for transportation improvements. Phase 1 represents improvements required prior to no more than 450 townhomes/single-family homes, and/or 400 apartments, and/or 150,000 SF of commercial space. Phase 2 represents improvements required prior to no more than 600 townhomes/single-family homes, and/or 600 apartments, and/or 300,000 SF of commercial space.
3. The TIA did not consider the impact of the potential school site on the PUD. However, should the school be added in Phase 1, the applicant commits in the zoning to an updated TIA to reevaluate the improvements which may result in modified and additional required improvements during that phase subject to approval by Apex and NCDOT.
4. Staff have provided an alternative for improvements along South Salem Street as accepted by the applicant: In lieu of adding a second southbound though lane extending across the NC 540 bridge in Phase 2 the developer would instead provide the second northbound through lane from the NC 540 bridge to Apex Barbecue Road to compliment the second southbound lane with the same limits, consistent with NCDOT recommendations for a four-lane section to be constructed on South Salem Street outside of the NC 540 bridge limits. The bridge would remain a concern for long term traffic congestion until widened by others, but the option avoids involvement of Depot 499 in widening the bridge while achieving improved operations along the site frontage.

The following zoning conditions represent the recommendations by Apex staff, with three (3) exceptions noted in bold, based on a review of the Traffic Impact Analysis (TIA) prepared for the Depot 499 development plan. Reported lane lengths represent storage length and do not include full width deceleration or taper length unless stated otherwise. While not all staff recommendations match what was recommended in the TIA or otherwise recommended by NCDOT, they represent the findings of Apex staff based on an interpretation of the requirements of the UDO to mitigate traffic impacts of the proposed development.

All recommendations are subject to consideration by Town Council, and on state-maintained roadways are ultimately subject to review and approval by NCDOT. NCDOT may reject and/or require alternative improvements compared to zoning conditions approved by Apex on state-maintained roadways. If offsite right of way or easements cannot be acquired by the developer through private negotiation, developer shall request legal assistance from the Town in the interest of obtaining such property for the purposes of satisfying the zoning conditions. If ROW is unable to be obtained, a fee-in-lieu may be accepted per UDO 7.1.7. During buildout, if the subdivision or site plan submittals exceed the trip generation potential that was studied in the original TIA, a revised analysis can be prepared, if requested by staff.

Phase 1 Improvements:
"Phase 1" in the following conditions represents improvements required prior to platting no more than 450 townhomes and/or single family homes, and/or certificate of occupancy for no more than 400 apartment dwelling units, and/or certificate of occupancy for no more than 150,000 square feet of commercial development. If a school is pursued on Pods R-T, the transportation commitments on PUD Plan Sheet C2.00 may be modified by the Town Council at site plan pursuant a modified TIA to adjust or reduce commensurate with reduced trip generation and/or modified movements. Addition of a school site in Phase 1 will require an updated TIA to reevaluate Phase 1 improvements which may result in modified and additional required improvements during that phase, subject to Apex and NCDOT approval.

Improvements to be constructed in Phase 1 as defined above:

- Apex Barbecue Road and Kelly Road
  - » Construct a 200 foot westbound left-turn lane on Apex Barbecue Road.
  - » Construct a 200 foot eastbound left-turn lane on Apex Barbecue Road.

Staff also recommends the following improvement:

- **Construct a 200-foot westbound right turn lane on Apex Barbecue Road.**

Phase 2 Improvements:
"Phase 2" in the following conditions represents improvements required prior to platting no more than 600 townhomes and/or single family homes, and/or certificate of occupancy for no more than 600 apartment dwelling units, and/or certificate of occupancy for no more than 300,000 square feet of commercial development.

Improvements to be constructed in Phase 2 as defined above:

- S. Salem Street and Southbound NC-540 Ramps (Signalized)
  - » Extend the southbound right turn lane on the ramp to provide 375 feet of storage and place it under signalized control rather than free-flow.
  - » Construct an additional westbound through lane on S. Salem Street prior to the interchange, extending through the intersection of NC-540 Northbound Ramps across the bridge and through the intersection of NC-540 Southbound Ramps in order to provide two contiguous westbound through lanes (see alternative below)*.

- S. Salem Street and Northbound NC-540 Ramps (Signalized)
  - » Construct two contiguous westbound through lanes carried from the site frontage across the bridge and through the intersection of Southbound NC-540 Ramps (see alternative below)*.
- *Alternative recommendations for NC 540 Interchange Ramps, Phase 2
  - » *Developer shall construct an additional westbound through lane on S. Salem Street at Southbound NC-540 Ramps starting immediately west of the bridge for a minimum of 200 feet and construct a 200-foot westbound right turn lane on S. Salem Street.
  - » *Developer shall construct an additional 150-foot southbound left turn lane on the Northbound NC-540 Exit Ramp, and begin an additional eastbound/northbound receiving through lane on S. Salem Street, carrying that additional (second) through lane across the development frontage and terminating in a left turn lane at Apex Barbecue Road.
  - » *Developer shall terminate the additional westbound/southbound through lane on S. Salem Street as a right turn lane at the NC 540 Northbound Ramps.
- S. Salem Street and Site Drive 7 (full movement access nearest NC 540)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
  - » Install a traffic signal once warranted and permitted by NCDOT. If not warranted, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirements to install a traffic signal.
- S. Salem Street and Site Drive 4 (between Site Drive 7 and Site Drive 1)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
- S. Salem Street and Site Drive 1 (main access for townhomes & commercial buildings)
  - » Construct an additional southbound through lane on S. Salem Street, converting the right turn lane to a through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
  - » Install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.
- S. Salem Street and Site Drive 3 (limited-movement access for commercial buildings north of Site Drive 1)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
- S. Salem Street and Site Drive 6 (right-in/right-out access nearest Apex Barbecue Road)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
- S. Salem Street and Apex Barbecue Road

» Convert the existing southbound right turn lane on S. Salem Street to a through lane in order to provide two southbound through lanes carried southward across the site frontage.
» Construct a 200-foot southbound right turn lane.
» Extend the northbound left turn lane on S. Salem Street to provide 300 feet of storage (*or for alternative NC 540 Interchange improvements, terminate the additional northbound through lane as a left turn lane).
» Extend the eastbound left turn lane on Apex Barbecue Road to provide 375 feet of storage.

• Apex Barbecue Road and Kelly Road
» Construct a second northbound through lane on Kelly Road that starts 800 feet south of the intersection and continues for approximately 1,000 feet north, dropping off with a 45:1 merge taper beyond the intersection of Grand Kelly Way.
» Widen the southbound approach of Kelly Road to provide a two-way left turn lane from Apex Barbecue Road to Karawind Lane.
» Construct a 200-foot southbound right turn lane on Kelly Road.

Staff also recommends the following improvement:

- **Construct a 200-foot eastbound right turn lane on Apex Barbecue Road.**

Staff also recommends adding the following improvements at Apex Barbecue Road and Town Side Drive:

- **Construct a 50-foot westbound right turn lane on Apex Barbecue Road.**
- **Install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.**

<u>Improvements required with construction of Site Drives:</u>

• S. Salem Street and Site Drive 7 (full movement access nearest NC 540)
» With construction of Site Drive 7, developer shall:
› Provide a 150-foot eastbound left turn lane on the driveway.
› Construct a 250-foot northbound left turn lane on S. Salem Street.
› Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 7 is constructed prior to Phase 2.

• S. Salem Street and Site Drive 4 (between Site Drive 7 and Site Drive 1)
» With construction of Site Drive 4, developer shall:
› Provide a minimum of 600 feet of separation between Site Drive 4 and both of the adjacent intersections, Site Drive 7 and Site Drive 1, in order to construct northbound left-over access with 150 feet of storage at Site Drive 4. Otherwise, Site Drive 4 shall be constructed as a right-in/right-out access.
› Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 4 is constructed prior to Phase 2.

• S. Salem Street and Site Drive 1 (main access for townhomes & commercial buildings)
» With construction of Site Drive 1, developer shall:
› Provide a 150-foot eastbound left turn lane on the driveway.
› Construct a 200-foot northbound left turn lane on S. Salem Street.
› Construct a 100-foot southbound right turn lane on S. Salem Street.

• S. Salem Street and Site Drive 3 (limited-movement access for commercial buildings north of Site Drive 1)
» With construction of Site Drive 3, developer shall:

› Construct Site Drive 3 as a right-in/right-out, left-over access.
› Construct a 150-foot northbound left turn lane on S. Salem Street.
› Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 3 is constructed prior to Phase 2.

- S. Salem Street and Site Drive 6 (right-in/right-out access nearest Apex Barbecue Road)
  - » With construction of Site Drive 6, developer shall:
    - › Provide right-in/right-out access with a minimum offset of 250 feet from Apex Barbecue Road.
    - › Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 6 is constructed prior to Phase 2.
- Apex Barbecue Road and Site Drive 5 (right-in/right-out access nearest S. Salem Street)
  - » With construction of Site Drive 5, developer shall:
    - › Provide right-in/right-out access with a minimum offset of 250 feet from S. Salem Street.
    - › Construct a 100-foot eastbound right turn lane on Apex Barbecue Road.
- Apex Barbecue Road and Site Drive 2 / St. Mary Magdalene
  - » With construction of Site Drive 2, developer shall:
    - › Provide a full movement intersection aligned with the St. Mary Magdalene driveway.
    - › Provide a 150-foot northbound left turn lane on the driveway.
    - › Construct a 100-foot westbound left turn lane on Apex Barbecue Road.
    - › Construct a 100-foot eastbound right turn lane on Apex Barbecue Road.
- Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive
  - » Upon opening access to Aspen River Lane, developer shall:
    - › Install a double yellow centerline and edge line pavement markings per the Town of Apex major collector street typical section along Aspen River Lane and Woodall Crest Drive to Apex Barbecue Road.
  - » Developer shall install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.

SCHOOL ALTERNATIVE

If a school use is pursued on Pods R-T on Land Use Option 1, an alternative transportation alignment is permitted as shown on the plan set. This alignment includes roundabouts to facilitate movements along the collector and out to S. Salem Street at site drive #7 to minimize mixing with school bus movements. School buses will access site drive #7 which Wake County Public School System requires to be an at-grade intersection. If a school use is not pursued on Pods R-T, the original collector alignment will be maintained as shown on Land Use Option 2. This intersection will also be at grade to provide needed access to the commercial and office uses on these high-visibility pods.

If a school is pursued on Pods R-T, the transportation commitments on PUD Plan Sheet C2.00 may be modified by the Town Council at site plan to adjust or reduce commensurate with reduced trip generation and/or modified movements. Traffic improvements may be modified based on a revised TIA with the inclusion of the school.

PHASING PLAN

This PUD will be completed in up to 10 phases. Location of phases will be determined at the time of Master Subdivision Plan.

PARKS, RECREATION, AND CULTURAL RESOURCES ADVISORY COMMISSION:
The Depot 499 PUD was reviewed by the PRCR Advisory Commission on February 26, 2020. A fee-in-lieu of dedication was recommended and unanimously approved. The project is not located within a land dedication area and there are no greenways shown within the property. The project is within close proximity to Pleasant Park.

Number of Units*	Housing Type	Fee Per Unit**	Total Fees
50	Single-Family	$3,446.98	$172,349.00
600	Townhomes	$2,321.54	$1,392,924.00
850	Apartments	$2,044.05	$1,737,442.50
Total	-	-	$3,302,715.50

*Final unit mix will be determined at the time of Master Subdivision Plan.
**Fees are based upon approval date and runs with project with exception of the increase in total unit count.

PLANNING STAFF RECOMMENDATION:
Planning staff recommends approval of the proposed 2045 Land Use Map amendment on 5.41 acres from Office Employment to High Density Residential and denial of the proposed rezoning from Residential Agriculture (RA) and Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01) PUD-CZ as proposed by the applicant.

Planning staff can only recommend approval of the rezoning if the following changes to the proposed PUD are made:

1. Transportation Plan amendments. Staff does not support the proposed amendments to eliminate the two grade separated crossings. If the Town Council approves the amendments to the Thoroughfare and Collector Street map to remove those two crossings or if the applicant agrees to amend the plan to include them, this reasoning for denial becomes moot.

2. Transportation Improvements. Transportation Engineering staff have suggested the following modified or additional road improvements that have not been included by the applicant:
   - Construct a 200-foot westbound right turn lane on Apex Barbecue Road.
   - Construct a 200-foot eastbound right turn lane on Apex Barbecue Road.
   - At Apex Barbecue Road and Town Side Drive:
     » Construct a 50-foot westbound right turn lane on Apex Barbecue Road.
     » Install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.

PLANNING BOARD RECOMMENDATION:
The Planning Board heard this item at their July 13, 2020 meeting and recommended denial of the 2045 Land Use Map amendment and rezoning as proposed by the applicant by a vote of 6-0.

ANALYSIS STATEMENT OF THE REASONABLENESS OF THE PROPOSED REZONING:
This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness, and effect on public interest:

Without approval of the 2045 Land Use Map amendment, the proposed rezoning is not fully consistent with the 2045 Land Use Plan and other adopted plans in that the 2045 Land Use Map classifies the subject properties as Mixed Use: High Density Residential/Office Employment/Commercial Services; Medium/High Density Residential; Office Employment; and Office Employment/Commercial Services. The PUD as proposed indicates the area shown on the Land Use Map as Office Employment being proposed a multi-family which is inconsistent with that land use classification.

The proposed rezoning is not reasonable and in the public interest due to the following:

1. Transportation Plan. The current Thoroughfare and Collector Street map of the Comprehensive Transportation Plan provides for grade separated crossings of NC 540 Hwy and S. Salem Street. The purpose of these crossings is to provide vehicular connectivity in an area where there is limited ability to cross NC 540 Hwy as well as S. Salem Street and the railroad.

2. Transportation Improvements. Transportation engineering staff has requested additional road improvements and modifications to road improvements in order to mitigate the impact of this development on the surrounding road network. The applicant has not provided all of the requested improvements and modifications.

PLANNED UNIT DEVELOPMENT DISTRICT AND CONDITIONAL ZONING STANDARDS:
Standards
In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments.

1) *Planned Unit Development (PUD-CZ) District*
In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:

a) *Development parameters*
(i) The uses proposed to be developed in the PD Plan for PUD-CZ are those uses permitted in Sec. 4.2.2 *Use Table.*

(ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.

(iii) The dimensional standards in Sec. 5.1.3 *Table of Intensity and Dimensional Standards, Planned Development Districts* may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.

(iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details*, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.

v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-de-sac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.

(vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.

(vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.

b) *Off-street parking and loading*. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.3 *Off-Street Parking and Loading*, except that variations from these standards may be permitted if a comprehensive parking and loading plan for the PUD-CZ is submitted as part of the PD Plan that is determined to be suitable for the PUD-CZ, and generally consistent with the intent and purpose of the off-street parking and loading standards.

c) *RCA.* The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 *Resource Conservation Area*, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than two percent (2%) provided that:

(i) The PD Plan for PUD-CZ includes a non-residential component; or

(ii) The PD Plan for PUD-CZ has an overall density of 6 residential units per acre or more.

d) *Landscaping*. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.2 *Landscaping, Buffering and Screening*, except that variations from these standards may be permitted where it is demonstrated that the proposed landscaping sufficiently buffers uses from

each other, ensures compatibility with land uses on surrounding properties, creates attractive streetscapes and parking areas and is consistent with the character of the area. In no case shall a buffer be less than one half of the width required by Sec. 8.2 or 10 feet in width, whichever is greater.

e) *Signs.* Signage in the PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.7 *Signs*, except that the standards can be varied if a master signage plan is submitted for review and approval concurrent with the PD plan and is determined by the Town Council to be suitable for the PUD-CZ and generally consistent with the intent and purpose of the sign standards of the UDO. The master signage plan shall have design standards that are exceptional and provide for higher quality signs than those in routine developments and shall comply with Sec. 8.7.2 *Prohibited Signs*.

f) *Public facilities.* The improvements standards and guarantees applicable to the public facilities that will serve the site shall comply with Article 7: *Subdivision and* Article 14: *Parks, Recreation, Greenways, and Open Space*.

(i) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site transportation circulation system. The on-site transportation circulation system shall be integrated with the off-site transportation circulation system of the Town. The PD Plan for PUD-CZ shall be consistent with the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details* and show required right-of-way widths and road sections. A Traffic Impact Analysis (TIA) shall be required per Sec. 13.19.

(ii) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site system of potable water and wastewater lines that can accommodate the proposed development, and are efficiently integrated into off-site potable water and wastewater public improvement plans. The PD Plan shall include a proposed water and wastewater plan.

(iii) Adequate off-site facilities for potable water supply, sewage disposal, solid waste disposal, electrical supply, fire protection and roads shall be planned and programmed for the development proposed in the PD Plan for PUD-CZ, and the development is conveniently located in relation to schools and police protection services.

(iv) The PD Plan shall demonstrate compliance with the parks and recreation requirements of Sec. Article 14: *Parks, Recreation, Greenways, and Open Space* and Sec. 7.3.1 *Privately-owned Play Lawns* if there is a residential component in the PUD-CZ.

g) *Natural resource and environmental protection.* The PD Plan for PUD-CZ demonstrates compliance with the current regulatory standards of this Ordinance related to natural resource and environmental protection in Sec. 6.1 *Watershed Protection Overlay District*, Sec. 6.2 *Flood Damage Prevention Overlay District*, and Sec. 8.1 *Resource Conservation*.

h) *Storm water management.* The PD Plan shall demonstrate that the post-development rate of on-site storm water discharge from the entire site shall not exceed pre-development levels in accordance with Sec. 6.1.7 of the UDO.

i) *Phasing.* The PD Plan for PUD-CZ shall include a phasing plan for the development. If development of the PUD-CZ is proposed to occur in more than one phase, then guarantees shall be provided that project improvements and amenities that are necessary and desirable for residents of the project, or that are of benefit to the Town, are constructed with the first phase of the project, or, if this is not possible, then as early in the project as is technically feasible.

j) *Consistency with 2045 Land Use Map.* The PD Plan for PUD-CZ demonstrates consistency with the goals and policies established in the Town's 2045 Land Use.

k) *Complies with the UDO.* The PD Plan for PUD-CZ demonstrates compliance with all other relevant portions of the UDO.

Legislative Considerations

The Town Council shall find the PUD-CZ and TF-CZ designations demonstrate compliance with the following standards. Sec. 2.3.3.F:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1) *Consistency with 2045 Land Use Map.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.

2) *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

3) *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 *Supplemental Standards,* if applicable.

4) *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

5) *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

6) *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

7) *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

February 20, 2020

Rynal G. Stephenson, P.E.
Ramey Kemp & and Associates, Inc.
5808 Faringdon Place
Raleigh, NC 27609

Subject: **Staff summary and comments for the Depot 499 TIA, 01/02/2020**

Mr. Stephenson:

Please review the following summary of my comments and recommendations. You may schedule a meeting with me and your client to discuss at your convenience.

Study Area

The TIA studied access to the proposed Depot 499 development at the following eight intersections:

- S. Salem Street and Site Drive 1
- Apex Barbecue Road and Site Drive 2
- S. Salem Street and Site Drive 3 (for full build-out only)
- S. Salem Street and Site Drive 4 (for full build-out only)
- Apex Barbecue Road and Site Drive 5 (for full build-out only)
- S. Salem Street and Site Drive 6 (for full build-out only)
- S. Salem Street and Site Drive 7 (for full build-out only)
- Apex Barbecue Road and Woodall Crest Drive / Scotts Ridge Trail

Additional intersections that were also studied in the TIA include:

- Kelly Road and Old US 1
- Southbound NC-540 Ramps and S. Salem Street
- Northbound NC-540 Ramps and S. Salem Street
- Apex Barbecue Road and S. Salem Street
- Apex Barbecue Road and Town Side Drive
- Apex Barbecue Road and Kelly Road

Trip Generation

The proposed development is anticipated to be built in two phases. Phase 1 of the development is anticipated to consist of 650 townhome units. Full build-out of the development is anticipated to add 850 apartment units, 250,000 square feet of shopping center, and 375,000 square feet of general office building. In Phase 1 the development is projected to generate approximately 65 new trips entering and 217 new trips exiting the site during the weekday A.M. peak hour and 197 new trips entering and 115 new trips exiting the site during the weekday P.M. peak hour. Phase 1 of the proposed development is projected to generate a total of 4,870 new trips on the adjacent roadway network. Full build-out of the development is projected to generate approximately 728 new trips entering and 598 new trips exiting the site during the weekday A.M. peak hour and 629 new trips entering and 811 new trips exiting the site during the weekday P.M. peak hour. Full build-out of the proposed development is projected to generate a total of 26,330 new trips on the adjacent roadway network. It should be noted that these "new trips" are after deductions for internal capture (trips exchanged between land uses within the development) and pass-by (background traffic accessing the development then exiting back onto the adjacent roadways) using approved rates and methodology from the ITE Trip Generation Manual.

Background traffic

Background traffic consists of 3% annual background traffic growth compounded to year 2025 for Phase 1 and 2028 for full build-out of the development. In addition to background traffic growth, the following adjacent developments were included as part of background traffic in the analysis:

- Buckhorn Preserve (20% built out – 80% of development traffic)
- Jordan Manors (40% built out – 60% of development traffic)
- Jordan Pointe (65% built out – 35% of development traffic)
- Woodbury (25% built out – 75% of development traffic)
- Friendship Station
- New Hill Assembly
- Olive Ridge
- Pleasant Park
- West Village

Trip Distribution and Assignment

The trip distribution to and from the development was assumed to be different for the residential and the commercial and office components of the development. Residential site trip distribution to and from the development was assumed to be as follows:

- 30% to/from the north via NC-540
- 30% to/from the south via NC-540
- 20% to/from the north via S. Salem Street
- 10% to/from the north via Kelly Road
- 10% to/from the west via Old US 1

Commercial and office related trip distribution to and from the development was assumed to be as follows:

- 25% to/from the north via S. Salem Street
- 15% to/from the north via Kelly Road
- 15% to/from the west via Apex Barbecue Road
- 15% to/from the west via Old US 1
- 10% to/from the north via NC-540
- 10% to/from the south via NC-540
- 5% to/from the north via Scotts Ridge Trail
- 5% to/from the north via Town Side Drive

Traffic Capacity Analysis and Recommendations

Level of Service (LOS) is a grade of A through F assigned to an intersection, approach, or movement to describe how well or how poorly it operates. LOS A through D is considered acceptable for peak hour operation. LOS E or F describes potentially unacceptable operation and developers may be required to mitigate their anticipated traffic impact to improve LOS based on the Apex Unified Development Ordinance (UDO).

Tables 1 through 14 describe the levels of service (LOS) for the scenarios analyzed in the TIA. "*NA"* is shown when the scenario does not apply. The scenarios are as follows:

- **Existing 2019 Conditions** - Existing year 2019 traffic.
- **Background 2025 Conditions** – Projected year (2025) with background growth, background development traffic and committed roadway improvements, where applicable.
- **Combined 2025 Conditions** – Projected year (2025) with background traffic, Phase 1 traffic with recommended improvements where applicable.
- **Background 2028 Conditions** – Projected year (2028) with background growth, background development traffic and committed roadway improvements, where applicable.
- **Combined 2028 Conditions with Improvements*** – Projected year (2028) with background traffic and development build-out traffic with recommended improvements where applicable.

*Note: The TIA analyzed a Combined 2028 scenario without recommended improvements that is not published in this summary but is available for review in the TIA.

All recommendations for storage on turn lanes do not include the appropriate deceleration length and taper per NCDOT guidance.

Kelly Road and Old US 1 (Unsignalized)

Table 1. A.M. / P.M. Unsignalized Peak Hour Levels of Service Kelly Road and Old US 1					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	NA	NA	NA	NA	NA
Eastbound (Old US 1)	*A / A*[1]	*NA*	*NA*	*NA*	*NA*
Westbound (Old US 1)	*NA*	*NA*	*NA*	*NA*	*NA*
Southbound (Kelly Road)	*E / C*[2]	*C / F*[2]	*C / F*[2]	*C / F*[2]	*C / F*[2]

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends no additional improvements at this intersection.

Apex staff recommendations:

- Apex staff concurs with the recommendation. The development is not anticipated to add more than 10% to overall intersection traffic or to any single movement or approach in the Combined 2025 or 2028 scenarios. Therefore, based on the UDO, additional improvements are not required as part of the proposed development plan.

- Staff recommends future consideration in longer term local plans for a channelized southbound right turn lane on Kelly Road with an acceleration lane on Old US 1 or a signalized dual right turn lane subject to review by NCDOT as funding becomes available to mitigate the long queues and delays on the southbound approach. The stop-controlled southbound approach is currently operating at LOS E and C in the A.M. and P.M. peak hours. The southbound approach is anticipated to be converted to right-in/right-out operations with the development of the West Village commercial phase. West Village has also committed to widening Old US 1 to provide a westbound right turn lane with 200 feet of storage and two westbound through lanes at the intersection. With these roadway improvements the eastbound and westbound approaches will operate in free-flow and the southbound intersection approach will operate at LOS C and F in the A.M. and P.M. peak hours for all future scenarios. Average vehicle delays and queues on the southbound approach are projected to increase with each traffic scenario due to increasing traffic volumes on Old US 1. For the P.M. peak hour, average delays are projected to increase from 115 seconds per vehicle in the Background 2025 Scenario to 203 seconds per vehicle in the Combined 2028 scenario. Likewise 95th percentile queues are projected to go up from 375 feet in the Background 2025 scenario to 500 feet in the Combined 2028 scenario on the southbound approach.

S. Salem Street and Southbound NC-540 Ramps (Signalized)

Table 2. A.M. / P.M. Signalized Peak Hour Levels of Service S. Salem Street and Southbound NC-540 Ramps					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	A / B	B / D	B / D	*B / E*	C / C
Eastbound (Old US 1/ S. Salem Street)	*A / A*	*B / D*	*B / D*	*B / D*	*C / C*
Westbound (Old US 1/S. Salem Street)	*B / B*	*C / E*	*C / E*	*B / F*	*A / C*
Southbound (Southbound NC-540 Ramp)	*B / C*	*A / B*	*A / C*	*A / B*	*E / E*

TIA recommendations:

- The TIA assumed the following intersection improvements committed by the West Village development to be constructed during Depot 499 Phase 1 by 2025:
    - Construction of a southbound free flow right turn lane on the ramp and an additional westbound receiving lane west of the intersection on Old US 1.
    - Traffic signal phasing modifications to account for new intersection geometry.

  In addition to the intersection improvements committed by the West Village development, the TIA recommends the following geometric and signal timing improvements in the Combined 2028 scenario:
    - Extend the southbound right turn lane to provide a minimum of 375 feet of storage, converting from free-flow as already committed by West Village back to signalized control.
    - Construct an additional westbound approach through lane with a minimum of 200 feet of storage tapering back down to a single westbound through lane at the bridge over NC-540 (subject to feasibility of constructability).
    - Provide signal modifications to account for the new lane configurations at the intersection, including signalization for the southbound right turn movement.

  Furthermore, the TIA recommends that these improvements be reevaluated in the future prior to issuance of a driveway permit for Site Drive 7 before the committed improvements by West Village are implemented. The TIA does not recommend any improvements as part of the Combined 2025 scenario.

Apex staff recommendations:

- Apex staff concurs with no additional improvements at the intersection for Phase 1 (Combined 2025). However, if the West Village committed improvements are not constructed by 2025 or completion of Depot 499 Phase 1, whichever comes first, Apex staff recommends that the Depot 499 development provide these improvements.

- For build-out (Combined 2028), staff concurs with the recommendation to extend the southbound right turn lane on the ramp to provide a minimum of 375 feet of storage and place it under signalized control rather than free-flow. Apex staff also recommends starting the additional westbound through lane on S. Salem Street prior to the interchange, extending through the intersection of NC-540 Northbound Ramps across the bridge and through the intersection of NC-540 Southbound Ramps in order to provide two contiguous westbound through lanes.

  The TIA shows that the S. Salem Street corridor from Apex Barbecue Road to Kelly Road will be operating at or close to capacity for Phase 1 (Combined 2025). Beyond 2025, traffic demand exceeds capacity of a two-lane road with turn lanes, showing failing or close to failing operations at multiple approaches along the corridor. At the intersection of NC-540 Southbound Ramps and S. Salem Street, the westbound approach is shown to experience LOS E with average vehicle delays of 75.9 seconds per vehicle, and 95th percentile queue of over 1,000 feet in the Combined 2025 scenario, which is close to operational failure. In the Combined 2028 scenario, the conditions on the westbound approach show operations to deteriorate to LOS F with average delays of 114.9 seconds per vehicle and 95th percentile queues beyond 1,200 feet. Likewise the southbound approach was analyzed to operate at LOS E with average delays of 74 seconds per vehicle, and southbound left turn queues of 490 feet. The signal modifications recommended in the TIA do an effective job of reducing queues and delays at the intersection (as shown in Table 2) by metering the volume of vehicles that can approach the intersection on S. Salem Street, but they do not resolve the larger capacity issues on the corridor. Rather, the capacity problems are exacerbated upstream at the intersection of the NC-540 Northbound Ramps. The TIA recommendation to construct a second, short, westbound through lane that tapers back to a single lane at the bridge, does not solve the capacity issue, nor can it be recommended per NCDOT design guidance. It does not provide adequate transition length for westbound right turning vehicles since they would have to weave across this additional short through lane before entering the right turn lane for the NC-540 Southbound on-ramp.

  For build-out (Combined 2028), traffic generated by the proposed development is projected to be more than 10% of the projected total A.M. and P.M. peak hour traffic. Therefore, per the UDO the additional improvements are justified to mitigate impacts of development traffic. With the construction of an additional contiguous westbound through lane as recommended by Apex staff, the intersection will have enough capacity to serve all approaches at LOS D or better while at the same time addressing the capacity issues on the corridor upstream.

S. Salem Street and Northbound NC-540 Ramps (Signalized)

Table 3. A.M. / P.M. Signalized Peak Hour Levels of Service S. Salem Street and Northbound NC-540 Ramps					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	B / A	D / B	D / C	*D / C*	D / D
Eastbound (S. Salem Street)	*A / A*	*D / B*	*F / B*	*E / B*	*D / C*
Westbound (S. Salem Street)	*B / B*	*B / C*	*C / C*	*C / C*	*E / D*
Southbound (Northbound NC-540 Ramp)	*B / B*	*C / C*	*C / D*	*C / D*	*E / D*

TIA recommendations:

- The TIA recommends signal timing modifications as well as implementation of a coordinated system plan for the S. Salem Street/ Old US 1 corridor for buildout (Combined 2028). The TIA recommends no improvements at the signalized intersection for Phase 1.

Apex staff recommendations:

- Apex staff concurs with the recommendation that no improvements are required at this intersection for Phase 1. Although, the operations of the eastbound approach were analyzed to deteriorate from LOS D to LOS F with average delays of 80.7 seconds per vehicle in the A.M peak hour, the development is projected to contribute less than 10% to the projected total A.M. and P.M. peak hour traffic in Phase 1 of the project. Therefore, per the UDO, no improvements are recommended.

- For build-out (Combined 2028), staff recommends the two contiguous westbound through lanes carried from the from the site frontage across the bridge and through the intersection of Southbound NC-540 Ramps as noted previously.

  The development is projected to contribute more than 20% to the projected total A.M. and P.M. peak hour traffic volume for build-out of the project in 2028. This additional volume contributes to increased delays and queues on the eastbound approach in the A.M. peak hour. The eastbound left turn reaches a 95th percentile queue length of 820 feet which exceeds the left turn storage capacity of 650 feet. Likewise vehicle delays for the left turn movement were analyzed to exceed 6 minutes per vehicle in the Combined 2028 scenario, indicating significant spillback onto the single eastbound through lane approach, causing queue backups on the NC-540 bridge. This poses a safety issue from an emergency response standpoint. The signal timing modifications recommended in the TIA mitigate queues and delays by metering the volume of vehicles that can enter the intersection (see Combined 2028 column in Table 3), however the signal timing

modifications do not resolve the capacity issues on the corridor. Rather, longer eastbound queues and delays are shifted to the upstream intersection of Southbound NC-540 Ramps, where the safety issue from an emergency response standpoint still remains. Likewise, in the P.M. peak hour, intersection volume to capacity ratios reach or exceed a value of 1.0 on the eastbound and westbound approaches in the Combined 2028 scenario. Per the *Highway Capacity Manual* section 18-6, a volume to capacity ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective.

The only solution to improve operations is to add capacity at this intersection. Widening S. Salem Street to provide two through lanes in the westbound direction, as recommended by Apex staff will allow more green-time to be reallocated to the congested eastbound left turn movement, reducing 95th percentile queues to 561 feet in the A.M. peak hour, and reducing volume to capacity ratios to be below the threshold for failure on all movements in both the A.M. and P.M. peak hours. With the improvements recommended by Apex staff, all approaches will operate at LOS D or better during both peak hours in the Combined 2028 scenario.

S. Salem Street and Site Drive 7

Table 4. A.M. / P.M. Peak Hour Levels of Service
S. Salem Street and Site Drive 7

	Combined 2028 Unsignalized	**Combined 2028 Signalized**
Overall	NA	C / C
Eastbound (Site Drive 7)	*F / F*[2]	*D / D*
Northbound (S. Salem Street)	*B / B*[1]	*B / B*
Southbound (S. Salem Street)	*NA*	*C / C*

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 7 as a full movement intersection with one lane of ingress and two lanes of egress (eastbound left turn lane with minimum 150 feet of storage, and a right turn lane with full length storage). The TIA recommends providing stop control on the minor-street eastbound approach as a temporary measure and installation of a traffic signal once warranted. On S. Salem Street the TIA recommends construction of an exclusive northbound left turn lane with 250 feet of storage, and an exclusive southbound right turn lane with 100 feet of storage.

Apex staff recommendations:

- Apex staff recommends two southbound through lanes on S. Salem Street with a shared through-right lane rather than the 100-foot right turn storage bay recommended in the TIA. A single through lane with signalization results in backups that extend beyond the proposed Site Drive 4.

- Staff concurs with the recommended northbound left turn lane on S. Salem Street with 250 feet of storage and the eastbound left turn lane with 150 feet of storage.

- Staff concurs with the TIA recommendation for signalization once warrants are met. When signalized the intersection will operate at LOS D or better during both peak hours. Analysis of the unsignalized intersection indicates a breakdown in operations on the minor street approach with LOS F and average vehicle delays of over 10 minutes per vehicle in both peak hours.

S. Salem Street and Site Drive 4 (unsignalized)

Table 5. A.M. / P.M. Unsignalized Peak Hour Levels of Service S. Salem Street and Site Drive 4	
	Combined 2028
Overall	NA
Eastbound (Site Drive 4)	*C / C*[2]
Northbound (S. Salem Street)	*B / B*[1]
Southbound (S. Salem Street)	*NA*

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 4 as a restricted access intersection with right-in/right-out access and a northbound left turn ("left-over") into the site for build-but (Combined 2028). The TIA recommends the minor street approach to be stop controlled with one lane of ingress and one lane of egress. Additionally the TIA recommends construction of a southbound right turn lane with minimum 100 feet of storage and a northbound left turn lane with 150 feet of storage on S. Salem Street.

Apex staff recommendations:

- Apex staff recommends restricting Site Drive 4 to right-in/right-out access only due its close proximity to Site Drive 7 (450 feet) to the south and recommends two southbound through lanes on S. Salem Street with a shared through-right lane rather than the 100-foot right turn storage bay.

S. Salem Street and Site Drive 1

Table 6. A.M. / P.M. Peak Hour Levels of Service S. Salem Street and Site Drive 1			
	Combined 2025 Unsignalized	**Combined 2028 Unsignalized**	**Combined 2028 Signalized**
Overall	NA	NA	B / C
Eastbound (Site Drive 1)	*C / D*[2]	*F / F*[2]	*D / D*
Northbound (S. Salem Street)	*A / B*[1]	*B / B*[1]	*B / B*
Southbound (S. Salem Street)	*NA*	*NA*	*C / C*

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 1 as a full movement intersection with one lane of ingress and two lanes of egress (eastbound left turn lane with minimum 100 feet of storage, and a right turn lane with full length storage) in Phase 1 (Combined 2025). On S. Salem Street the TIA also recommends construction of an exclusive northbound left turn lane with 200 feet of storage, and an exclusive southbound right turn lane with 100 feet of storage. The TIA recommends providing stop control on the minor-street eastbound approach in Phase 1 of the development, and monitoring and installing a signal when warranted for build-out (Combined 2028).

Apex staff recommendations:

- Staff recommends concurs with the recommendations for left and right turn storage lengths on S. Salem Street. Staff recommends extending the eastbound left turn lane in Phase 1 to provide 150 feet of storage with construction of Site Drive 1, to meet vehicle storage needs of the 95th percentile queue that also satisfy eventual 2028 conditions.

- For build-out (Combined 2028), Apex staff recommends extending an additional southbound through lane on S. Salem Street and removal of the exclusive right turn bay. Traffic analysis indicated that the eastbound approach will operate at LOS D or better in both peak hours under stop-controlled conditions in the Combined 2025 scenario. Analysis indicated that the eastbound approach will worsen to LOS F with average vehicle delays of over 5 minutes per vehicle in both peak hours under stop-controlled conditions in the Combined 2028 scenario. Signalization of the intersection will improve operations to LOS D or better on all approaches for 2028. The additional southbound through lane for build-out will ensure optimal utilization across the site frontage preventing queue blockages at the upstream and downstream intersections.

- Staff concurs with the recommendation to provide stop control on the minor street approach in Phase 1 (Combined 2025), monitor for signalization and install a traffic signal when warranted for build-out (Combined 2028).

S. Salem Street and Site Drive 3 (unsignalized)

Table 7. A.M. / P.M. Unsignalized Peak Hour Levels of Service S. Salem Street and Site Drive 3	
	Combined 2028 Unsignalized
Overall	NA
Eastbound (Site Drive 3)	*C / C*[2]
Northbound (S. Salem Street)	*NA*
Southbound (S. Salem Street)	*NA*

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 3 as a restricted access intersection with right-in/right-out access, and a left-over into the site for build-out (Combined 2028). The TIA recommends the minor street approach to be stop controlled with one lane of ingress and one lane of egress. Additionally the TIA recommends construction of a southbound right turn lane with minimum 100 feet of storage and a northbound left turn lane with 150 feet of storage on S. Salem Street. The TIA did not analyze the operations of the northbound left-over turning movement in the TIA, to be consistent with the Memorandum of Understanding (MOU), however for operations of the left-over, the TIA references Site Drive 4 where the left-over movement was analyzed.

Apex staff recommendations:

- Apex staff recommends two southbound through lanes on S. Salem Street with a shared through-right lane rather than the 100-foot right turn bay. The additional southbound through lane for build-out will ensure optimal utilization across the site frontage preventing queue blockages at the upstream and downstream intersections.

- Staff concurs with the recommendation to provide a left-over with 150 feet of storage at this location. All movements at the intersection are projected to operate at LOS C or better and 95th percentile queues for the left turn are not anticipated to exceed 50 feet.

S. Salem Street and Site Drive 6 (unsignalized)

Table 8. A.M. / P.M. Unsignalized Peak Hour Levels of Service S. Salem Street and Site Drive 6	
	Combined 2028 Unsignalized
Overall	NA
Eastbound (Site Drive 6)	*C / C*[2]
Northbound (S. Salem Street)	*NA*
Southbound (S. Salem Street)	*NA*

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 6 as a right-in/right-out restricted access intersection, for build-out (Combined 2028). The TIA recommends the minor street approach to be stop controlled with one lane of ingress and one lane of egress. Additionally the TIA recommends construction of a southbound right turn lane with minimum 100 feet of storage on S. Salem Street.

Apex staff recommendations:

- Apex staff recommends two southbound through lanes on S. Salem Street with a shared through-right lane rather than the 100-foot right turn storage bay. The additional southbound through lane for build-out will ensure optimal utilization across the site frontage preventing queue blockages at the upstream and downstream intersections. All movements at the intersection are projected to operate at LOS C or better.

S. Salem Street and Apex Barbecue Road (signalized)

Table 9. A.M. / P.M. Signalized Peak Hour Levels of Service S. Salem Street and Apex Barbecue Road					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	B / B	C / C	C / C	C / C	C / C
Eastbound (Apex Barbecue Road)	*B / B*	*C / C*	*C / C*	*C / C*	*D / D*
Northbound (S. Salem Street)	*A / A*	*B / B*	*B / B*	*B / B*	*C / C*
Southbound (S. Salem Street)	*B / B*	*C / C*	*C / C*	*C / C*	*C / C*

TIA recommendations:

- The TIA recommends no improvements to the intersection in Phase 1 (Combined 2025). For build-out (Combined 2028), the TIA recommends extension of the northbound left turn lane on S. Salem Street to provide a minimum of 300 feet of storage. The TIA also recommends extension of the eastbound left turn on Apex Barbecue Road to provide a minimum of 375 feet of storage.

Apex staff recommendations:

- Apex staff recommends signal timing modifications, reducing the cycle length to 90 seconds during Phase 1 subject to NCDOT review and approval. Shorter cycle lengths should reduce queueing in the left turn lanes to avoid spillback into the through lanes.

- For build-out (Combined 2028), staff recommends converting the existing southbound right turn lane to a through lane for two southbound through lanes, and widening for an exclusive southbound right turn lane with 200 feet of storage. The additional through lane should be carried southward across the proposed site frontage. The additional capacity in the southbound direction will allow more green time to be reallocated to the eastbound approach to serve the heavy left turn movement for both the A.M. and P.M. peak hours to prevent excessive queues and reduce delay.

- For build-out (Combined 2028), Apex staff concurs with the TIA recommendation to extend the northbound left turn lane to provide 300 feet of storage, and extending the eastbound left turn lane to provide 375 feet of storage.

  The proposed development is projected to contribute more than 15% to the projected total A.M. and P.M. intersection peak hour traffic volume for build-out (Combined 2028). Either one of the alternative improvement scenarios recommended by Apex staff will adequately address queuing on Apex Barbeque Road as required per UDO section 13.19.5.

It should be noted that the Advance Apex Transportation Plan identifies a future roundabout at the intersection of S. Salem Street and Apex Barbecue Road. After further analysis with The Highway Capacity Software (HCS 7), Apex traffic staff recommends against a single-lane roundabout. A dual lane roundabout will satisfy projected traffic demand at this location, but will require dual approaching and receiving lanes in the northbound and southbound direction as well as appropriate development of acceleration and deceleration lengths beyond the intersection to merge the traffic back onto S. Salem Street. The dual lane roundabout could be proposed as an alternative to turn lane improvements or it can be retained in long term plans. However, there are right-of-way constraints due to the proximity of the CSX railroad, so the required shift in existing S. Salem Street along with road widening and construction of such a large circle may be impractical.

Apex Barbecue Road and Site Drive 5 (unsignalized)

Table 10. A.M. / P.M. Unsignalized Peak Hour Levels of Service S. Salem Street and Site Drive 5	
	Combined 2028 Unsignalized
Overall	NA
Eastbound (Apex Barbecue Road)	*NA*
Westbound (Apex Barbecue Road)	*NA*
Northbound (Site Drive 5)	*B / B*[2]

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 5 as a right-in/right-out restricted access intersection for build-out (Combined 2028). The TIA recommends the minor street approach to be stop controlled with one lane of ingress and one lane of egress. Additionally the TIA recommends construction of an eastbound right turn lane with minimum 100 feet of storage on Apex Barbecue Road.

Apex staff recommendations:

- Apex staff concur with the recommendations in the TIA. The right-out movement is projected to operate at LOS B in both peak hours and 95th percentile queues are not anticipated to exceed 50 feet. Per the preliminary layout for the development, it appears that access to Site Drive 5 is located 250 feet west of the signalized intersection of Apex Barbecue Road and S. Salem Street. Site Drive 5 should be shifted further west of the S. Salem Street intersection on Apex Barbecue Road, up to 500 feet if possible to provide more offset from downstream intersection queueing.

Apex Barbecue Road and Site Drive 2 (unsignalized)

Table 11. A.M. / P.M. Unsignalized Peak Hour Levels of Service Apex Barbecue Road and Site Drive 2		
	Combined 2025	**Combined 2028**
Overall	NA	NA
Eastbound (Apex Barbecue Road)	*NA*	*NA*
Westbound (*Apex Barbecue Road*)	*A / A*[1]	*A / A*[1]
Northbound (Site Drive 2)	*B / B*[2]	*D / F*[2]

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA recommends construction of Site Drive 2 as a full movement stop-controlled intersection with one lane of ingress and two lanes of egress (northbound left turn lane with minimum 100 feet of storage, and a right turn lane with full length storage) in Phase 1. On Apex Barbecue Road, the TIA also recommends construction of an exclusive westbound left turn lane with 100 feet of storage, and an exclusive eastbound right turn lane with 100 feet of storage. The TIA does not recommend any additional improvements for build-out (Combined 2028).

Apex staff recommendations:

- Apex staff recommends Site Drive 2 to be shifted 200 feet to the west to align with Magdala Place (Saint Mary Magdalene school access). In addition, staff recommends a northbound left turn lane with 150 feet of storage with construction of Site Drive 2. The extra storage is recommended to accommodate the 95th percentile queue of 150 feet in the P.M. peak hour for the Combined 2028 scenario. Apex staff concurs with the turn lane storage recommendations on Apex Barbecue Road. Staff also recommends monitoring this intersection for signalization following substantial completion of Phase 1 and prior to build-out, then installing a signal when warranted and permitted by NCDOT.

Apex Barbecue Road and Town Side Drive (unsignalized)

Table 12. A.M. / P.M. Unsignalized Peak Hour Levels of Service Apex Barbecue Road and Town Side Drive					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	NA	NA	NA	NA	NA
Eastbound (Apex Barbecue Road)	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / B*[1]
Westbound (*Apex Barbecue Road*)	*NA*	*NA*	*NA*	*NA*	*NA*
Southbound (Town Side Drive)	*C / B*[2]	*C / C*[2]	*C / C*[2]	*D / C*[2]	*F / F*[2]

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA does not recommend any improvements at this intersection.

Apex staff recommendations:

- Apex staff recommends construction of a westbound right turn lane with 50 feet of storage per NCDOT Warrants for Left and Right Turns for the Combined 2028 scenario. Staff also recommends monitoring this intersection for signalization prior to build-out of the development and installing a signal when warranted and permitted by NCDOT. In the Build 2028 scenario, the development is projected to contribute more than 20% to the projected total A.M. and P.M. intersection peak hour traffic volume, causing level of service on the minor street approach to deteriorate to LOS F during both peak hours. Average vehicle delays are projected to be over 3 minutes per vehicle in the A.M. peak hour with a 95th percentile queue of 400 feet on Town Side Drive. Per the UDO, a traffic signal will improve operations on all approaches to LOS D or better during both peak hours.

Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive (unsignalized)

Table 13. A.M. / P.M. Unsignalized Peak Hour Levels of Service Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	NA	NA	NA	NA	NA
Eastbound (Apex Barbecue Road)	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / A*[1]
Westbound (*Apex Barbecue Road*)	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / A*[1]	*A / A*[1]
Northbound (Woodall Crest Drive)	*B / B*[2]	*C / C*[2]	*C / D*[2]	*C / C*[2]	*F / F*[2]
Southbound (Scotts Ridge Trail)	*C / C*[2]	*D / D*[2]	*D / D*[2]	*E / D*[2]	*F / F*[2]

1. Level of service for left turn movement on free-flowing approach.
2. Level of service for stop-controlled minor street approach.

TIA recommendations:

- The TIA does not recommend any improvements at this intersection.

Apex staff recommendations:

- Per the Advance Apex transportation plan, existing Woodall Crest Drive is a major collector road, running south for approximately 1,000 feet from Apex Barbecue Road to a major collector street stub (Aspen River Lane) at the southwest corner of the Woodall Estates development, with plans to be extended southward through the Depot 499 development to Old US 1. As such, Apex staff recommends the development stripe existing Aspen River Lane and Woodall Crest Drive with a double yellow centerline and edge line pavement markings per the Town of Apex major collector street typical section when the development extends Aspen River Lane for access.

- Also, staff recommends that this intersection be monitored for signalization prior to build-out and that a traffic signal be installed when warranted and permitted by NCDOT. In the Combined 2028 scenario, the development is projected to contribute more than 20% to the projected total A.M. and P.M. intersection peak hour traffic volume, causing level of service on the minor street approaches to deteriorate to LOS F during both peak hours. Average vehicle delays are projected to be over 2 minutes per vehicle on the southbound approach, and close to 60 seconds per vehicle on the northbound approach in both peak hours. Per the UDO, a traffic signal will improve operations on all approaches to LOS D or better during both peak hours.

Apex Barbecue Road and Kelly Road (signalized)

Table 14. A.M. / P.M. Signalized Peak Hour Levels of Service Apex Barbecue Road and Kelly Road					
	Existing 2019	**Back-ground 2025**	**Combined 2025**	**Back-ground 2028**	**Combined 2028**
Overall	C / B	D / D	D / E	D / E	D / D
Eastbound (Apex Barbecue Road)	*C / B*	*E / E*	*E / E*	*E / E*	*D / D*
Westbound (Apex Barbecue Road)	*B / B*	*D / E*	*D / E*	*D / F*	*D / E*
Northbound (Kelly Road)	*C / C*	*D / D*	*D / D*	*D / D*	*D / D*
Southbound (Kelly Road)	*B / B*	*D / D*	*D / D*	*D / E*	*E / D*

TIA recommendations:

- The West Village development is committed to constructing the following background intersection improvements with the first Phase of commercial development, or as otherwise determined during review and approval of site plans:
    - Construct an exclusive 400-foot eastbound left-turn lane on Apex Barbecue Road.
    - Construct an exclusive 350-foot westbound left-turn lane on Apex Barbecue Road.
    - Extend the northbound left-turn lane on Kelly Road to 350 feet.
    - Construct an exclusive 150-foot northbound right turn lane on Kelly Road.
    - Extend the southbound left-turn lane on Kelly Road to 350 feet.
    - Construct an exclusive 200-foot southbound right turn lane on Kelly Road.
    - Provide signal modifications to account for new lane configurations at the intersection.

  In addition to these background improvements, the TIA recommends construction of an exclusive westbound right turn lane on Apex Barbecue Road with a minimum of 200 feet of storage (subject to feasibility of right-of-way acquisition), as well as an exclusive eastbound right turn lane on Apex Barbecue Road with a minimum of 175 feet of storage (subject to feasibility of constructability and right-of-way acquisition) for build-out (Combined 2028). The TIA also recommends a signal plan update to account for the new lane configurations at the intersection.

Apex staff recommendations:

- Apex staff concur with the TIA that no additional improvements are recommended at the intersection for Phase 1 (Combined 2025), subject to West Village's committed

improvements being constructed by the year 2025. The intersection is projected to operate at LOS D and E in the A.M. and P.M. peak hours. The intersection is projected to operate with enough capacity to meet all traffic demand during both peak hours. Per the UDO, the Depot 499 development will not generate enough trips to trigger off-site improvements in Phase 1 of the project, even though the intersection is projected to operate at overall LOS E in the P.M. peak hour. If the West Village development stalls prior to substantial completion of Depot 499 Phase 1, Apex staff recommends re-evaluation of this intersection with a TIA update to continue development plans beyond Phase 1.

- For build-out (Combined 2028), staff concurs with the recommendations for a westbound right turn lane with a minimum of 200 feet of storage, as well as an exclusive eastbound right turn lane with a minimum of 175 feet of storage. In addition, Apex staff recommends the construction of a second northbound through lane on Kelly Road that starts 800 feet south of the intersection and continues for approximately 1,000 feet north, dropping off with a 45:1 merge taper beyond the intersection of Grand Kelly Way. Apex staff also recommends widening the southbound approach of Kelly Road to provide a two-way left turn (TWLT) lane from Apex Barbecue Road to Karawind Lane to allow more vehicle storage for the heavy southbound left turn movement. Additionally, signal timing should be adjusted to allow for permitted + protected phasing for the eastbound and westbound left turn movements.

  The development is projected to contribute more than 10% to the projected total A.M. and P.M. peak hour traffic volume for build-out (Combined 2028). Specifically the southbound left turn movement, the westbound through and right turn movements, and the eastbound through movement are each projected to have traffic volume increases of over 25% due to full build conditions. Synchro analysis indicated overall LOS D in both peak hours in the Build 2028 scenario, however storage bay capacities on multiple approaches were shown to operate over their capacity, leading to spillover and lane blockage of the through lanes. Per NCDOT Congestion Management guidelines, further analysis using SimTraffic simulation software showed that the westbound left turn movements and the southbound left turn movements were spilling over into the through lanes causing operational failure with queues of over 1,000 feet in the southbound direction and over 2,000 feet in the westbound direction when simulation was run for a 60 minute interval during the P.M. peak hour.

  Simulation also showed that modifying signal timing to allow for permitted + protected left turn operations on the eastbound and westbound approaches eliminated the spillover in the westbound direction. To mitigate queuing and spillover in the southbound direction, dual southbound left turn lanes and dual receiving lanes in the eastbound direction were considered. However, due to the physical constraints of widening Apex Barbecue Road and bridge over NC-540 for the dual receiving lanes, an alternative approach that increases capacity on Kelly Road was determined to be more viable and also consistent with long range plans. An additional through lane northbound in combination with widening on the north leg for the TWLT lane provides both additional green time and extra storage for the heavy southbound left turn movement. With the widening of Kelly Road, southbound left turn queues are projected to decrease to 500 feet in the peak hours, and all approaches are anticipated to operate at LOS D or better with no operational failures due to queue spillback.

Speed Limit Reduction Request – S. Salem Street.

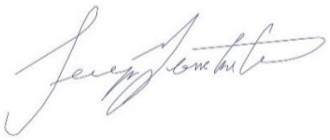
- The TIA recommends a speed limit reduction on South Salem Street/Old US 1 (SR 1011) between Grappenhall Drive and the NC-540 interchange, and from the NC-540 interchange south to Pleasant Plains Road. The TIA recommends a speed limit reduction from currently posted 55 mph to 45 mph. A request has been sent to NCDOT for consideration with the TIA.

Apex staff recommendations:

- Apex staff is in support of the speed limit reduction to 45 mph from Grappenhall Drive to Pleasant Plains Road subject to NCDOT review and approval.

Please coordinate with the NCDOT District Engineer's Office concerning recommended improvements. Town staff will be available for meetings with NCDOT staff to discuss improvements on state maintained roadways as needed. All recommendations are subject to review by Town Council prior to approval.

Sincerely,



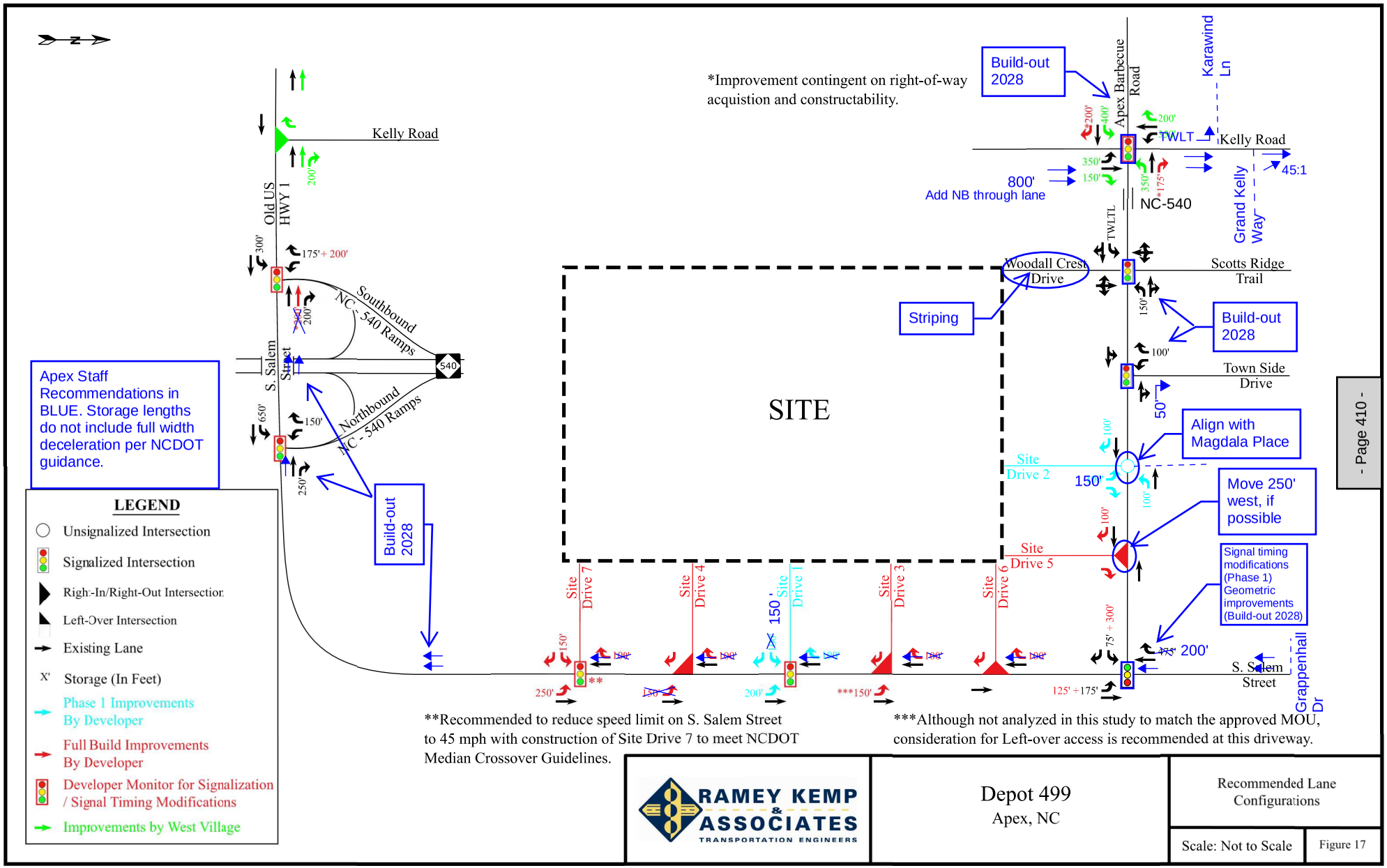
Serge Grebenschikov
Traffic Engineer
919-372-7448

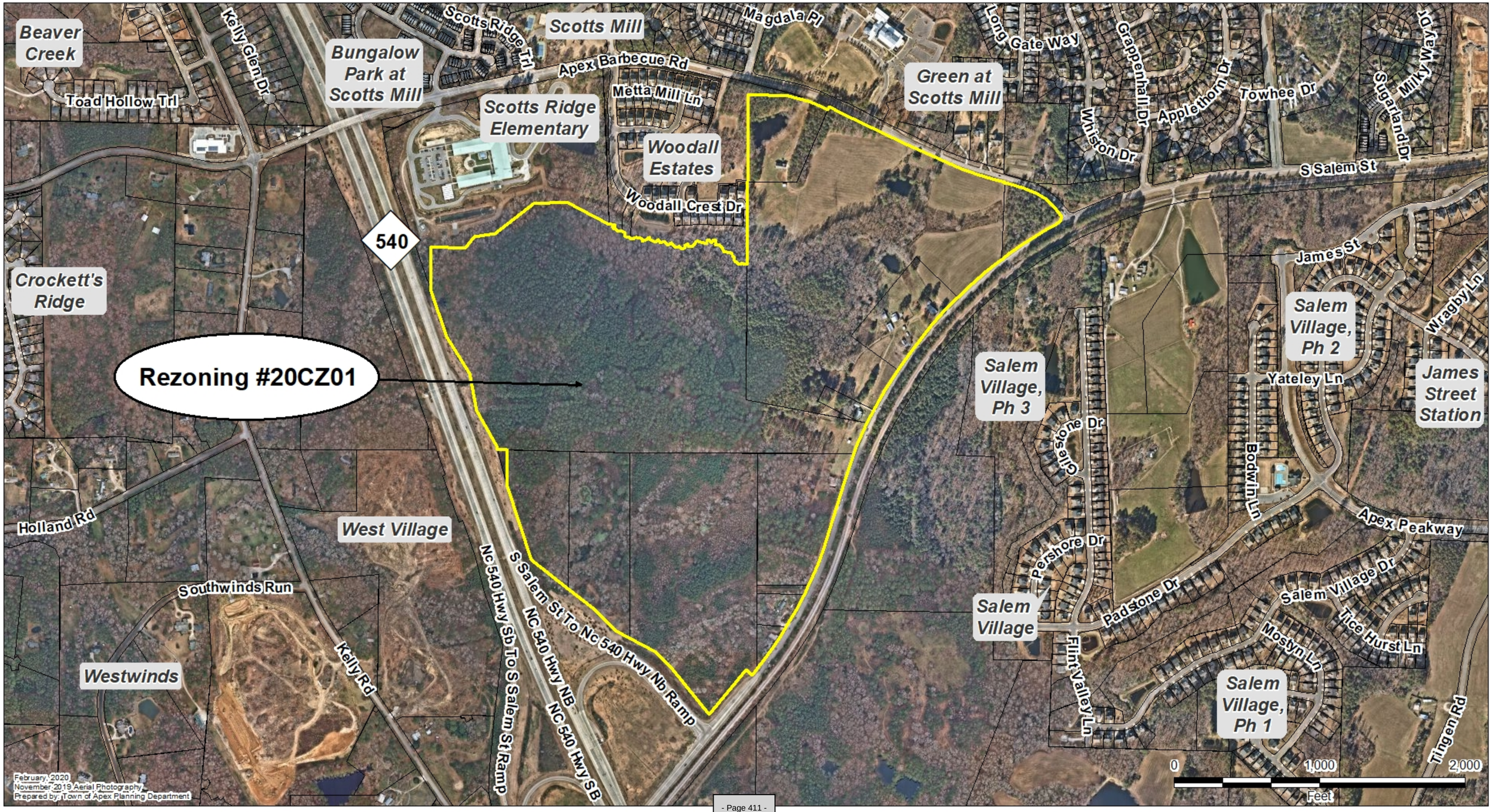
Corrections to the TIA

Page 73 of 77. Recommended Improvements by Developer – Full Buildout:

- Extend the southbound ~~**left-turn**~~ right turn lane to provide a minimum of 375 feet of storage and appropriate taper.

Explanation: Southbound approach only has a right turn lane. This is shown correctly on the sketch diagram on page 76 of 77.


Kelly Road
Old US HWY 1
S. Salem Street
Southbound NC-540 Ramps
Northbound NC-540 Ramps
540
175'+200'
300'
200'
150'
650'
250'
Build-out 2028
Apex Staff Recommendations in BLUE. Storage lengths do not include full width deceleration per NCDOT guidance.
LEGEND
Unsignalized Intersection
Signalized Intersection
Right-In/Right-Out Intersection
Left-Over Intersection
Existing Lane
X' Storage (In Feet)
Phase 1 Improvements By Developer
Full Build Improvements By Developer
Developer Monitor for Signalization / Signal Timing Modifications
Improvements by West Village
SITE
*Improvement contingent on right-of-way acquistion and constructability.
Build-out 2028
Apex Barbecue Road
Karawind Ln
Kelly Road
TWLT
800'
Add NB through lane
NC-540
TWLTL
Grand Kelly Way
45:1
Woodall Crest Drive
Striping
Scotts Ridge Trail
Build-out 2028
Town Side Drive
Align with Magdala Place
Site Drive 2
Move 250' west, if possible
Site Drive 5
Signal timing modifications (Phase 1) Geometric improvements (Build-out 2028)
Site Drive 7
Site Drive 4
Site Drive 1
Site Drive 3
Site Drive 6
150'
200'
S. Salem Street
Grappenhall Dr
**Recommended to reduce speed limit on S. Salem Street to 45 mph with construction of Site Drive 7 to meet NCDOT Median Crossover Guidelines.
***Although not analyzed in this study to match the approved MOU, consideration for Left-over access is recommended at this driveway.
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
Depot 499
Apex, NC
Recommended Lane Configurations
Scale: Not to Scale
Figure 17


Beaver Creek
Toad Hollow Trl
Kelly Glen Dr
Bungalow Park at Scotts Mill
Scotts Ridge Trl
Scotts Mill
Magdala Pl
Apex Barbecue Rd
Metta Mill Ln
Scotts Ridge Elementary
Woodall Estates
Woodall Crest Dr
Green at Scotts Mill
Long Gate Way
Grappenhall Dr
Whiston Dr
Applethorn Dr
Towhee Dr
Sugarland Dr
Milky Way Dr
S Salem St
James St
Wragby Ln
Salem Village, Ph 2
Yateley Ln
James Street Station
Salem Village, Ph 3
Gibsone Dr
Bodwin Ln
Apex Peakway
Pershore Dr
Padstone Dr
Salem Village Dr
Tice Hurst Ln
Mostyn Ln
Salem Village
Salem Village, Ph 1
Flint Valley Ln
Tingen Rd
540
Crockett's Ridge
Rezoning #20CZ01
Holland Rd
West Village
Southwinds Run
Kelly Rd
Westwinds
Nc 540 Hwy Sb To S Salem St Ramp
S Salem St To Nc 540 Hwy Nb Ramp
NC 540 Hwy NB
NC 540 Hwy SB
February, 2020
November 2019 Aerial Photography
Prepared by: Town of Apex Planning Department
0
1,000
2,000
Feet

PLANNED UNIT DEVELOPMENT APPLICATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 20CZ01 Submittal Date: 1/2/2020

Fee Paid $ 5208.00 Check # 114134

PETITION TO AMEND THE OFFICIAL ZONING DISTRICT MAP

Project Name: Depot 499

Address(es): See attached sheet on the following page for list of addresses

PIN(s) See attached sheet on the following page for list of PINs

Acreage: 200.80

Current Zoning: RA and B1-CZ Proposed Zoning: PUD-CZ

Current 2045 LUM Designation: High density residential, Medium/High Density Residential, Office Employment, Commercial Services

Requested 2045 LUM Designation: High density residential, Medium/High Density Residential, Office Employment, Commercial Services

See next page for LUM amendment

If any portion of the project is shown as mixed use (3 or more stripes on the 2045 Land Use Map) provide the following:

Area classified as mixed use: Acreage: 171.90 acres

Area proposed as non-residential development: Acreage: 51.57acres

Percent of mixed use area proposed as non-residential: Percent: 30%

Applicant Information

Name: Stephen Dorn - Lennar

Address: 1100 Perimeter Park Drive Suite 112

City: Morrisville State: NC Zip: 27560

Phone: 919-465-5925 E-mail: stephen.dorn@lennar.com

Owner Information

Name: See attached sheet on the following page for all owner information

Address:

City: State: Zip:

Phone: E-mail:

Agent Information

Name: Bob Zumwalt - McAdams Co

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-287-0789 E-mail: zumwalt@mcadamsco.com

Other contacts:

OWNER	ADDRESS	CITY	STATE	ZIP	PINs
MEKA, NARENDRA	0 KELLY RD	APEX	NC	27502	731459383
VARYA LLC	1604 S SALEM ST	APEX	NC	27502	731554102
POE ACRES FAMILY FARM LLC	0 APEX BARBECUE RD	APEX	NC	27502	731564395
HUNTER, CAREY B	1525 S SALEM ST	APEX	NC	27502	731641147
SZYMKIEWICZ, PAUL M JIN, WEI	1420 S SALEM ST	APEX	NC	27502	731645370
UTLEY, PAMELA	1420 S SALEM ST	APEX	NC	27502	731646532
POE ACRES FAMILY FARMS LLC	1330 S SALEM ST	APEX	NC	27502	731657166
POE, DARYL POE, JEANNE	6401 APEX BARBECUE RD	APEX	NC	27502	731676714
POE ACRES FAMILY FARMS LLC	1300 S SALEM ST	APEX	NC	27502	731750984
POE ACRES FAMILY FARMS LLC	0 APEX BARBECUE RD	APEX	NC	27502	731761944
POE, WILLIAM DOUGLAS POE, JEAN S	1216 S SALEM ST	APEX	NC	27502	731766588
REGENCY INTERNATIONAL INVESTMENTS LLC	0 APEX BARBECUE RD	APEX	NC	27502	731873224

PLANNED UNIT DEVELOPMENT APPLICATION

Application #: 20CZ01 Submittal Date: 1-2-2020

2045 LAND USE MAP AMENDMENT (if applicable)

The applicant does hereby respectfully request the Town Council amend the 2045 Land Use Map. In support of this request, the following facts are shown:

The area sought to be amended on the 2045 Land Use Map is located at:

Approximately 5.41 acres on the northeast corner of PIN 0731761944 located at 0 Apex Barbecue Road.

Current 2045 Land Use Classification: Office Employment

Proposed 2045 Land Use Classification: High Density Residential

What conditions justify the passage of the amendment to the 2045 Land Use Map? Discuss the existing use classifications of the subject area in addition to the adjacent land use classifications.

The Office Employment Land Use Map Classification allows O&I, TF, PUD, and MEC zoning and High Density Residential allows HDSF, PUD, and TND. Although both allow the desired PUD zoning, the proposed use in this area is multi-family and/or townhouses, and this request will allow the FLUM to match the intended use. High Density Residential will keep the land more consistent with the surrounding areas given the Medium/High Density Residential land directly west and the Medium Density Residential land directly north. High Density Residential is described in the Comprehensive Plan as "townhomes and apartments up to 20 units per acre. . . providing housing options in close proximity to major commercial areas and transportation corridors." An amendment to High Density Residential allows for a smoother transition from the Medium Density Residential land directly north into the Community Mixed Use designated area, which will provide close proximity to commercial uses. This amendment will also allow for smoother transitions between uses throughout the parcel of land, rather than interposing a small area of Office Employment land in a predominantly residential area.

CERTIFIED LIST OF NEIGHBORING PROPERTY OWNERS

Application #: 20CZ01 Submittal Date: 1-2-2020

Provide a certified list of property owners subject to this application and all property owners within 300' of the subject property and HOA Contacts.

	Owner's Name	PIN
1.	See the following sheets for complete list	
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

I, [signature], certify that this is an accurate listing of all property owners and property owners within 300' of the subject property.

Date: 12/31/19 By: Robert Zumwalt

COUNTY OF WAKE STATE OF NORTH CAROLINA

Sworn and subscribed before me, William D. Sparrow, a Notary Public for the above State and County, on this the 31 day of December, 2019.

SEAL

WILLIAM D. SPARROW NOTARY PUBLIC WAKE COUNTY, NC MY COMMISSION EXPIRES 9/8/21

[signature]
Notary Public

William D. Sparrow
Print Name

My Commission Expires: 9/8/21

Owner	PIN
SEARS, TONY C SEARS, JUDY T	731329405
MILLS, DOROTHY M MILLS, DAVID G TRUSTEE	731366481
APEX TOWN OF	731407544
MIUCCIO, ANTHONY J TRUSTEE MIUCCIO, MARTHA J TRUSTEE	731424892
NC DEPARTMENT OF TRANSPORTATION	731426540
NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY	731429605
RICHARDS, BARRETT	731433004
FAHEY FAMILY FARM LLC	731434504
FAHEY FAMILY FARM LLC	731434767
FAHEY FAMILY FARM LLC	731435707
KENNEDY, WAYNE V KENNEDY, GEORGIA T	731436017
SM RALEIGH LLC	731441619
NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY	731452647
NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY	731457553
NC DEPARTMENT OF TRANSPORTATION	731459383
WAKE COUNTY BOARD OF EDUCATION	731477630
ROSEWOOD 1322 LLC	731514493
LAMPE, JOHN H	731518904
ROSEWOOD 1322 LLC	731523064
VARYA LLC	731554102
POE ACRES FAMILY FARM LLC	731564395
WOODALL ESTATES OWNERS ASSOCIATION INC	731575313
DAVIS, KYLE DAVIS, KARYN	731577338
BRISSON, LEE C BRISSON, TRACI L	731578308
HOU, SHENGBO GAO, QIAN	731578358
WOODALL ESTATES OWNERS ASSOCIATION INC	731578622
WISE, PATRICK WISE, NOUNIVAN	731579252
SMITH, JONDAN SMITH, CRYSTAL	731579318
SINGAMSETTY, SRIKANTH KARADGE, UMA BABURAO	731579407
ISSLER, PHILIP FREDERICK JR ISSLER, LISA RENEE	731579553
WOODALL ESTATES OWNERS ASSOCIATION INC	731589212
NC TURNPIKE AUTHORITY	731617572
HUNTER, CAREY B	731641147
SZYMKIEWICZ, PAUL M JIN, WEI	731645370
UTLEY, PAMELA	731646532
POE ACRES FAMILY FARMS LLC	731657166
WOODALL ESTATES OWNERS ASSOCIATION INC	731670122
ZAI, YINGKAI LIU, XIAOXUE	731670212
RAJAGOPAL, RAJESH TRUSTEE VENKATACHALAM, PRIYA TRUSTEE	731670262
WANG, XIAOXI WU, YUANTAI	731670338
WOODALL ESTATES OWNERS ASSOCIATION INC	731670443
KEARNEY, PETER KEARNEY, MARY	731670507
WOODALL ESTATES OWNERS ASSOCIATION INC	731670804
SHRESTHA, BIVA OJHA, UNNATI	731670926
JONES, WILLIAM JONES, JENNIFER	731670994
RAJENDRAN, PRABU GOVARDHANAN, SHOBANA	731671222

SUNDARAM, RAMAKRISHNAN	731671282
SIFONTE, DANNY SIFONTE, BERNA	731671942
SAXENA, VIJAY SAXENA, PARUL VIJAY	731672242
HOGAN, JEFFREY A HOGAN, JEANNE M	731672368
WOODALL, ANN C	731672786
CHEN, CHEN MENG, MENG	731673202
POON, KENNETH RONG, MENGQI	731673262
STUNTZ, KIM O'BRIEN, MICHAEL	731673328
WOODALL ESTATES OWNERS ASSOCIATION INC	731673425
CEARA PETERSON, LAURA AMELIA	731673490
POE, DARYL POE, JEANNE	731676714
CAO, ALLEN JUN XU, LILI	731680113
ANTONY, PRAVEEN JACOB, LIJA PUNNAMOOTTIL	731680172
THORNTON, BRIAN GRANBERRY, WENDY	731681131
KOYTEK, ANTHONY J KOYTEK, ANTOINETTE M	731681190
DAVIDSON, STEPHEN REID DAVIDSON, KAYLA BROOK	731681325
LANE, DENTON JOHN LANE, LISA GABRIEL	731682304
LOVELACE, LESLEY ELIZABETH	731682363
MECKES, DOUGLAS R MECKES, GEORGIA S	731682459
PAEZ, MARGARET M	731683289
EMRE, NILAY YILMAZ YILMAZEMRE, ATA	731683321
TERRENTS, BRADY P TERRENTS, AMY C	731683407
BROWN, ARTHUR D III	731683465
YAKEL, JERREL L YAKEL, MELODY L	731684424
CJS APEX ASSEMBLAGE LLC	731731163
POE ACRES FAMILY FARMS LLC	731750984
POE ACRES FAMILY FARM LLC	731756252
POE ACRES FAMILY FARMS LLC	731761944
POE, WILLIAM DOUGLAS POE, JEAN S	731766588
POE, BOBBY W POE, ELIZABETH A	731776890
POE, BOBBY W POE, ELIZABETH A	731776915
CANTRELL, DONALD T CANTRELL, MARY E	731779802
ROMAN CATHOLIC DIOCESES OF RAL NC	731782553
MURPHY, MARK SEAN ANDERSON, DAWN EVE	731788078
MILLER, SAM D MILLER, SARAH C	731789048
CRAFT, SAMUEL CRAFT, MARA	731789098
SALEM VILLAGE OWNERS ASSOCIATION INC	731854079
CJS APEX ASSEMBLAGE LLC	731863120
CANTRELL, DARYL S CANTRELL, JESSICA	731870820
CANTRELL, DANIEL T CANTRELL, COURTNEY	731871830
REGENCY INTERNATIONAL INVESTMENTS LLC	731873224
BRITT, MARJORIE TINGEN	731873793
JON CAPUTO TRUST	731876587
KRUSE, ROBERT KRUSE, ABBEY	731876688
MCKINNISH, LORI	731877367
THOMAS, KIMBERLY H	731877563
SCHREIBER, COREY SCHREIBER, AMBER	731877743

DOYLE, ANDREW DOYLE, LAUREN	731877801
MILAM, MELINDA GAIL	731878546
WHITEHALL MANOR HOMEOWNERS ASSN	731879595
BOBBITT, FRANK C III BOBBITT, MARY L	731880048
PRINCE, MARION C FISH, NANCY P HEIRS	731961764

DEVELOPMENT NAME APPROVAL APPLICATION

Application #: 20CZ01 Submittal Date: 1-2-2020

Fee for Initial Submittal: No Charge Fee for Name Change after Approval: $500*

Purpose

To provide a consistent and clearly stated procedure for the naming of subdivisions and/or developments and entrance roadways (in conjunction with *Town of Apex Address Policy*) so as to allow developers to define and associate the theme or aesthetics of their project(s) while maintaining the Town's commitment to preserving the quality of life and safety for all residents of Apex proper and extraterritorial jurisdiction.

Guidelines

- ✓ The subdivision/development name shall not duplicate, resemble, or present confusion with an existing subdivision/development within Apex corporate limits or extraterritorial jurisdiction except for the extension of an existing subdivision/development of similar or same name that shares a continuous roadway.
- ✓ The subdivision/development name shall not resemble an existing street name within Apex corporate limits or extraterritorial jurisdiction unless the roadway is a part of the subdivision/development or provides access to the main entrance.
- ✓ The entrance roadway of a proposed subdivision/development shall contain the name of the subdivision/development where this name does not conflict with the Town of Apex *Road Name Approval Application* and *Town of Apex Address Policy* guidelines.
- ✓ The name "Apex" shall be excluded from any new subdivision/development name.
- ✓ Descriptive words that are commonly used by existing developments will be scrutinized more seriously in order to limit confusion and encourage distinctiveness. A list of commonly used descriptive words in Apex's jurisdiction is found below.
- ✓ The proposed subdivision/development name must be requested, reviewed and approved during preliminary review by the Town.
- ✓ A $500.00 fee will be assessed to the developer if a subdivision/development name change is requested after official submittal of the project to the Town.*

*The imposed fee offsets the cost of administrative changes required to alleviate any confusion for the applicant, Planning staff, other Town departments, decision-making bodies, concerned utility companies and other interested parties. There is no charge for the initial name submittal.

Existing Development Titles, Recurring

	Residential	Non-Residential
10 or more	Creek, Farm(s), Village(s),	Center/Centre
6 to 9	Crossing(s), Park, Ridge, Wood(s)	Commons, Park
3 to 5	Acres, Estates, Glen(s), Green•, Hills	Crossing(s), Plaza, Station, Village(s)

•excludes names with Green Level

DEVELOPMENT NAME APPROVAL APPLICATION

Application #: 20CZ01 Submittal Date: 1-2-2020

Proposed Subdivision/Development Information

Description of location: Southwest corner of S Salem Street and Apex Barbecue Road

Nearest intersecting roads: Apex Barbecue Road and S Salem Street

Wake County PIN(s): 731459383, 731554102, 731564395, 731641147, 731645370, 731646532, 731657166, 731676714, 731750984, 731761944, 731766588, 731873224

Township: Apex

Contact Information (as appropriate)

Contact person: Stephen Dorn

Phone number: 919-224-9922 Fax number:

Address: 1100 Perimeter Park Drive, Suite 112 Morrisville, NC 27560

E-mail address: stephen.dorn@lennar.com

Owner: See attached sheet on the following page for all owner information

Phone number: Fax number:

Address:

E-mail address:

Proposed Subdivision/Development Name

1st Choice: Depot 499

2nd Choice *(Optional)*:

Town of Apex Staff Approval:

Town of Apex Planning Department Staff Date

OWNER	ADDRESS	CITY	STATE	ZIP
MEKA, NARENDRA	0 KELLY RD	APEX	NC	27502
VARYA LLC	1604 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARM LLC	0 APEX BARBECUE RD	APEX	NC	27502
HUNTER, CAREY B	1525 S SALEM ST	APEX	NC	27502
SZYMKIEWICZ, PAUL M JIN, WEI	1420 S SALEM ST	APEX	NC	27502
UTLEY, PAMELA	1420 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1330 S SALEM ST	APEX	NC	27502
POE, DARYL POE, JEANNE	6401 APEX BARBECUE RD	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1300 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	0 APEX BARBECUE RD	APEX	NC	27502
POE, WILLIAM DOUGLAS POE, JEAN S	1216 S SALEM ST	APEX	NC	27502
REGENCY INTERNATIONAL INVESTMENTS LLC	0 APEX BARBECUE RD	APEX	NC	27502

STREET NAME APPROVAL APPLICATION

Application #: 20CZ01 Submittal Date: 1-2-2020

Wake County Approval Date: _____

Guidelines:

- No names duplicating or sounding similar to existing road names
- Avoid difficult to pronounce names
- No individuals' names
- Avoid proper names of a business, e.g. Hannaford Drive
- Limit names to 14 characters in length
- No directionals, e.g. North, South, East, West
- No punctuation marks, e.g. periods, hyphens, apostrophes, etc.
- Avoid using double suffixes, e.g. Deer Path Lane
- All names must have an acceptable suffix, e.g. Street, Court, Lane, Path, etc.
- Use only suffixes which are Town of Apex approved
- Town of Apex has the right to deny any street name that is determined to be inappropriate

Information:

Description of location: Southwest corner of S Salem Street and Apex Barbecue Road

Nearest intersecting roads: Apex Barbecue Road and S Salem Street

Wake County PIN(s): 731459383, 731554102, 731564395, 731641147, 731645370, 731646532, 731657166, 731676714, 731750984, 731761944, 731766588, 731873224

Township: Apex

Contact information (as appropriate)

Contact person: Stephen Dorn

Phone number: 919-224-9922 Fax number: _____

Address: 1100 Perimeter Park Drive, Suite 112 Morrisville, NC 27560

E-mail address: stephen.dorn@lennar.com

Owner: See attached sheet on the following page for all owner information

Phone number: _____ Fax number: _____

Address: _____

E-mail address: _____

OWNER	ADDRESS	CITY	STATE	ZIP
MEKA, NARENDRA	0 KELLY RD	APEX	NC	27502
VARYA LLC	1604 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARM LLC	0 APEX BARBECUE RD	APEX	NC	27502
HUNTER, CAREY B	1525 S SALEM ST	APEX	NC	27502
SZYMKIEWICZ, PAUL M JIN, WEI	1420 S SALEM ST	APEX	NC	27502
UTLEY, PAMELA	1420 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1330 S SALEM ST	APEX	NC	27502
POE, DARYL POE, JEANNE	6401 APEX BARBECUE RD	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1300 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	0 APEX BARBECUE RD	APEX	NC	27502
POE, WILLIAM DOUGLAS POE, JEAN S	1216 S SALEM ST	APEX	NC	27502
REGENCY INTERNATIONAL INVESTMENTS LLC	0 APEX BARBECUE RD	APEX	NC	27502

STREET NAME APPROVAL APPLICATION

Application #: 20CZ01 Submittal Date: 1-2-2020

# of roads to be named: _____

Please submit twice as many road names as needed, with preferred names listed first. Proposed road names should be written exactly as one would want them to appear. Town of Apex Planning Department staff will send all approved street names to the Wake County GIS Department for county approval. Please allow several weeks for approval. Upon approval Wake County GIS – Street Addressing will inform you of the approved street names.

Example: Road Name Suffix

Hunter Street

1	To be completed at time of master subdivision	11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

TOWN OF APEX STAFF APPROVAL

Town of Apex Staff Approval Date

WAKE COUNTY STAFF APPROVAL:

GIS certifies that _____ names indicated by checkmark ☑ are approved.
Please disregard all other names.

Comments:

Wake County GIS Staff Approval Date

TOWN OF APEX UTILITIES OFFER AND AGREEMENT

Application #: 20CZ01 Submittal Date: 1-2-2020

Town of Apex
73 Hunter Street
P.O. Box 250 Apex, NC 27502
919-249-3400

WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

_____

_____
(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer & Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

LENNAR CAROLINAS LLC, the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.

Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

ACCEPTED:

CUSTOMER: LENNAR CAROLINAS LLC

BY: _____
Authorized Agent

DATE: 12-31-2019

TOWN OF APEX

BY: _____
Authorized Agent

DATE: _____

NOT ORIGINAL

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Paul Szymkiewicz & Wei Jin is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1420 S Salem St, Apex, NC 27502, PIN#0731645370

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Paul Szymkiewicz Digitally signed by Paul Szymkiewicz Date: 2019.12.30 21:34:09 -05'00'

Paul Szymkiewicz 12/30/2019

Type or print name Date

Wei Jin Digitally signed by Wei Jin Date: 2019.12.30 21:35:57 -05'00'

Wei Jin 12/30/2019

Type or print name Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

NOT ORIGINAL

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Regency International Investments LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 0 Apex Barbeque Rd, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Ashley Ansara

Regency International Investment, LLC 12/19/2019

Type or print name Date

Type or print name Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Poe Acres Family Farm LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1330 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

William D. Poe, member/manager

William D. Poe — Type or print name

12-19-19 — Date

Type or print name

Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1/2/20

Carey B. Hunter is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1525 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 22713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Carey B Hunter

Carey B Hunter — 1-2-20

Type or print name — Date

Type or print name — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Poe Acres Family Farm LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1300 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

William D. Poe, member/manager

William D. Poe — 12-19-19

Type or print name — Date

Type or print name — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Poe Acres Family Farm LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other: _____

The property address is: 0 Apex Barbeque Rd, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

William D. Poe, Member/manager

William D. Poe — 12-19-19

Type or print name — Date

_____

_____ _____

Type or print name — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Poe Acres Family Farm LLC is the owner* of the property for which the attached application is being submitted:

- ☑ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 0 Apex Barbeque Rd, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

William D. Poe, member/manager

William D. Poe — Type or print name

12-19-19 — Date

_____ — Type or print name

_____ — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

William Douglas Poe and Jean S Poe is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1216 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Wm Doug Poe

Wm. Doug Poe — Type or print name — 12-19-19 — Date

Jean S Poe

Jean S Poe — Type or print name — 12-19-19 — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Varya LLC is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1604 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 22713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Narendra Mena

NARENDRA MENA — Type or print name

12/26/2019 — Date

Type or print name

Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Pamela Utley is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 1420 S Salem St, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 22713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Pamela Utley

Pamela Utley — Type or print name — 12-30-19 — Date

Pamela Utley

Pamela Utley — Type or print name — 12-30-19 — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: 1-2-2020

Daryl and Jeanne Poe is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other:

The property address is: 6401 Apex Barbeque Rd, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Daryl Poe

Daryl Poe — Type or print name — 12/19/19 — Date

Jeanne Poe

Jeanne Poe — Type or print name — 12/19/19 — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: 20CZ01 Submittal Date: _____

Narendra Meka is the owner* of the property for which the attached application is being submitted:

- ☐ Land Use Amendment
- ☑ Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- ☐ Site Plan
- ☐ Subdivision
- ☐ Variance
- ☐ Other: _____

The property address is: 0 Kelly Rd, Apex, NC 27502

The agent for this project is: McAdams Co

☐ I am the owner of the property and will be acting as my own agent

Agent Name: Bob Zumwalt

Address: 2905 Meridian Parkway, Durham, NC 27713

Telephone Number: 919-361-5000

E-Mail Address: zumwalt@mcadamsco.com

Signature(s) of Owner(s)*

Narendra Meka

NARENDRA MEKA — 3/27/2020

Type or print name — Date

_____

_____ _____

Type or print name — Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: 20CZ01 Submittal Date: _____

The undersigned, Robert Zummwalt (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at _____ and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").

2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.

3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated _____, and recorded in the Wake County Register of Deeds Office on _____, in Book _____ Page _____.

4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).

5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on _____, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on _____, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the 31 day of December, 2019.

_____ (seal)
Robert Zummwalt
Type or print name

STATE OF NORTH CAROLINA
COUNTY OF Durham

I, the undersigned, a Notary Public in and for the County of Wake, hereby certify that Robert Zummwalt, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's _____, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing affidavit.

[NOTARY SEAL] WILLIAM D. SPARROW NOTARY MY COMMISSION EXPIRES 9/8/21 PUBLIC WAKE COUNTY, NC

_____
Notary Public
State of North Carolina
My Commission Expires: 9/8/21

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: 20CZ01 Submittal Date:

Insert legal description below.

See attached sheet on the following page

BEGINNING AT AN EXISTING IRON PIPE IN THE SOUTHERN RIGHT OF WAY OF APEX BARBECUE ROAD(VARIABLE WIDTH PUBLIC RIGHT OF WAY) SAID PIPE BEING LOCATED SOUTH 34°04'17" WEST 11,877.46 FEET; FROM N.C. GEODETIC MONUMENT STALEY HAVING N.C. GRID COORDINATES OF NORTHING: 727,821.36; EASTING: 2,043,644.97; THENCE SOUTH 63°42'39" EAST 79.06 FEET TO A POINT; THENCE SOUTH 63°12'07" EAST 19.19 FEET TO A POINT; THENCE SOUTH 63°00'53" EAST 34.65 FEET TO A POINT; THENCE SOUTH 62°42'06" EAST 52.19 FEET TO A POINT; THENCE SOUTH 62°33'45" EAST 52.13 FEET TO A POINT; THENCE SOUTH 62°32'40" EAST 50.30 FEET TO A POINT; THENCE SOUTH 62°30'00" EAST 52.14 FEET TO A POINT; THENCE SOUTH 62°39'57" EAST 54.29 FEET TO A POINT; THENCE SOUTH 63°11'12" EAST 53.70 FEET TO A POINT; THENCE SOUTH 63°46'39" EAST 36.41 FEET TO A POINT; THENCE SOUTH 63°46'39" EAST 16.74 FEET TO A POINT; THENCE SOUTH 64°11'19" EAST 51.77 FEET TO A POINT; THENCE SOUTH 64°51'59" EAST 50.37 FEET TO A POINT; THENCE SOUTH 65°24'56" EAST 50.92 FEET TO A POINT; THENCE SOUTH 66°04'17" EAST 49.04 FEET TO A POINT; THENCE SOUTH 66°24'39" EAST 50.52 FEET TO A POINT; THENCE SOUTH 66°41'39" EAST 50.24 FEET TO A POINT; THENCE SOUTH 65°48'34" EAST 13.86 FEET TO AN IRON PIPE; THENCE SOUTH 66°32'39" EAST 82.52 FEET TO AN IRON PIPE; THENCE SOUTH 67°35'05" EAST 51.21 FEET TO AN IRON PIPE; THENCE SOUTH 69°12'49" EAST 51.50 FEET TO AN IRON PIPE; THENCE SOUTH 71°04'07" EAST 51.54 FEET TO AN IRON PIPE; THENCE SOUTH 73°20'50" EAST 101.55 FEET TO AN IRON PIPE; THENCE SOUTH 74°24'52" EAST 161.15 FEET TO AN IRON PIPE; THENCE SOUTH 02°10'02" WEST 7.75 FEET TO A POINT;THENCE SOUTH 88°43'28" EAST 27.86 FEET TO A POINT;THENCE SOUTH 72°42'27" EAST 113.73 FEET TO A POINT; THENCE SOUTH 68°36'15" EAST 83.47 FEET TO A POINT; THENCE SOUTH 58°59'14" EAST 72.35 FEET TO A POINT; THENCE SOUTH 47°32'47" EAST 78.45 FEET TO A POINT; THENCE SOUTH 39°07'25" EAST 73.73 FEET TO A POINT; THENCE SOUTH 33°40'07" EAST 2.16 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT WITH AN ARC LENGTH OF 13.47 FEET, WITH A RADIUS OF 3109.27 FEET, WITH A CHORD BEARING OF SOUTH 62°03'14" WEST, WITH A CHORD LENGTH OF 13.47 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT WITH AN ARC LENGTH OF 231.61 FEET, WITH A RADIUS OF 3099.28 FEET, WITH A CHORD BEARING OF SOUTH 59°42'22" WEST, WITH A CHORD LENGTH OF 231.55 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT WITH AN ARC LENGTH OF 227.89 FEET, WITH A RADIUS OF 2801.54 FEET, WITH A CHORD BEARING OF SOUTH 55°26'30" WEST, WITH A CHORD LENGTH OF 227.83 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT WITH AN ARC LENGTH OF 235.06 FEET, WITH A RADIUS OF 3224.08 FEET, WITH A CHORD BEARING OF SOUTH 51°04'54" WEST, WITH A CHORD LENGTH OF 235.00 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT WITH AN ARC LENGTH OF 111.80 FEET, WITH A RADIUS OF 4420.37 FEET, WITH A CHORD BEARING OF SOUTH 48°00'18" WEST, WITH A CHORD LENGTH OF 111.80 FEET TO A POINT; THENCE SOUTH 46°03'02" WEST 88.19 FEET TO A POINT; THENCE SOUTH 44°07'53" WEST 105.44 FEET TO A POINT; THENCE SOUTH 42°07'43" WEST 105.85 FEET TO A POINT; THENCE SOUTH 40°06'18" WEST 105.01 FEET TO A POINT; THENCE SOUTH 38°00'20" WEST 106.03 FEET TO A POINT; THENCE SOUTH 36°10'22" WEST 105.24 FEET TO A POINT; THENCE SOUTH 34°13'40" WEST 105.56 FEET TO A POINT; THENCE SOUTH 32°20'31" WEST 104.61 FEET TO A POINT; THENCE SOUTH 30°52'45" WEST 104.13 FEET TO A POINT; THENCE SOUTH 29°32'30" WEST 103.50 FEET TO A POINT; THENCE SOUTH 28°00'14" WEST 104.45 FEET TO A POINT; THENCE SOUTH 26°31'43" WEST 104.64 FEET TO A POINT; THENCE SOUTH 24°59'56" WEST 104.89 FEET TO A POINT; THENCE SOUTH 23°14'59" WEST 39.96 FEET TO A POINT; THENCE SOUTH 23°13'26" WEST 64.95 FEET TO A POINT; THENCE SOUTH 21°18'46" WEST 106.39 FEET TO A POINT; THENCE SOUTH 19°14'15" WEST 106.20 FEET TO A POINT; THENCE SOUTH 17°17'15" WEST 103.90 FEET TO A POINT; THENCE SOUTH 16°16'37" WEST 101.68 FEET TO A POINT; THENCE SOUTH 16°30'48" WEST 98.45 FEET TO A POINT; THENCE SOUTH 17°33'06" WEST 96.04 FEET TO A POINT; THENCE SOUTH 19°12'54" WEST 94.73 FEET TO A POINT; THENCE SOUTH 21°07'08" WEST 95.97 FEET TO A POINT; THENCE SOUTH 23°11'04" WEST 94.28 FEET TO A POINT; THENCE SOUTH 24°54'47" WEST 36.07 FEET TO A POINT; THENCE SOUTH 25°36'27" WEST 21.28 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT

WITH AN ARC LENGTH OF 75.27 FEET, WITH A RADIUS OF 4719.43 FEET, WITH A CHORD BEARING OF SOUTH 26°43'54" WEST, WITH A CHORD LENGTH OF 75.27 FEET TO A POINT; THENCE SOUTH 27°24'30" WEST 54.11 FEET TO A POINT; THENCE SOUTH 29°06'08" WEST 50.34 FEET TO A POINT; THENCE SOUTH 30°10'37" WEST 48.21 FEET TO A POINT; THENCE SOUTH 31°14'39" WEST 49.26 FEET TO A POINT; THENCE SOUTH 32°10'05" WEST 46.54 FEET TO A POINT; THENCE SOUTH 33°12'31" WEST 49.52 FEET TO A POINT; THENCE SOUTH 34°15'48" WEST 48.00 FEET TO A POINT; THENCE SOUTH 35°13'24" WEST 44.88 FEET TO A POINT; THENCE SOUTH 36°06'22" WEST 46.73 FEET TO A POINT; THENCE SOUTH 37°02'59" WEST 45.18 FEET TO A POINT; THENCE SOUTH 37°48'49" WEST 54.89 FEET TO A POINT; THENCE SOUTH 38°28'27" WEST 48.54 FEET TO A POINT; THENCE SOUTH 38°58'15" WEST 15.35 FEET TO A POINT; THENCE NORTH 50°51'23" WEST 1.07 FEET TO A POINT; THENCE SOUTH 39°37'29" WEST 397.38 FEET TO A POINT IN THE EASTERN RIGHT OF WAY OF NC HIGHWAY 540(VARIABLE WIDTH RIGHT OF WAY); THENCE WITH SAID RIGHT OF WAY NORTH 39°05'29" WEST 390.87 FEET TO A POINT; THENCE NORTH 44°55'16" WEST 172.15 FEET TO A POINT; THENCE NORTH 61°55'05" WEST 301.58 FEET TO A POINT; THENCE NORTH 45°07'57" WEST 238.80 FEET TO A POINT; THENCE NORTH 52°17'53" WEST 532.13 FEET TO A POINT; THENCE NORTH 18°23'28" WEST 529.06 FEET TO A POINT; THENCE NORTH 14°12'08" WEST 264.95 TO A REBAR; THENCE NORTH 14°10'11" WEST 25.98 FEET TO A CONCRETE MONUMENT; THENCE NORTH 29°27'03" WEST 279.28 FEET TO A CONCRETE MONUMENT; THENCE NORTH 10°30'20" WEST 258.11 FEET TO A CONCRETE MONUMENT; THENCE NORTH 31°49'46" WEST 302.09 FEET TO A CONCRETE MONUMENT; THENCE NORTH 19°25'27" WEST 348.05 FEET TO A REBAR; THENCE NORTH 01°06'22" EAST 289.07 FEET TO A POINT IN THE CENTERLINE OF FISH BRANCH; THENCE WITH THE CENTERLINE OF SAID BRANCH SOUTH 62°05'16" EAST 8.68 FEET TO A POINT; THENCE SOUTH 75°58'33" EAST 23.59 FEET TO A POINT; THENCE SOUTH 54°32'13" EAST 16.14 FEET TO A POINT; THENCE SOUTH 28°27'52" EAST 21.06 FEET TO A POINT; THENCE SOUTH 52°11'00" EAST 19.37 FEET TO A POINT; THENCE NORTH 80°16'49" EAST 16.94 FEET TO A POINT; THENCE NORTH 27°19'34" EAST 14.43 FEET TO A POINT; THENCE NORTH 74°27'19" EAST 9.44 FEET TO A POINT; THENCE SOUTH 50°24'04" EAST 7.19 FEET TO A POINT; THENCE SOUTH 36°21'02" EAST 23.88 FEET TO A POINT; THENCE NORTH 39°19'42" EAST 12.17 FEET TO A POINT; THENCE NORTH 05°51'07" WEST 17.89 FEET TO A POINT; THENCE NORTH 50°03'59" EAST 8.76 FEET TO A POINT; THENCE SOUTH 73°12'41" EAST 16.32 FEET TO A POINT; THENCE SOUTH 21°18'53" EAST 18.47 FEET TO A POINT; THENCE SOUTH 72°13'16" EAST 13.54 FEET TO A POINT; THENCE NORTH 61°51'46" EAST 21.65 FEET TO A POINT; THENCE NORTH 74°00'24" EAST 50.54 FEET TO A POINT; THENCE NORTH 19°57'12" EAST 44.74 FEET TO A POINT; THENCE NORTH 06°03'59" WEST 20.11 FEET TO A POINT; THENCE NORTH 35°44'44" EAST 23.04 FEET TO A POINT; THENCE NORTH 69°35'37" EAST 22.30 FEET TO A POINT; THENCE SOUTH 84°36'00" EAST 31.56 FEET TO A POINT; THENCE NORTH 68°46'46" EAST 23.80 FEET TO A POINT; THENCE NORTH 88°42'18" EAST 17.10 FEET TO A POINT; THENCE SOUTH 54°50'03" EAST 18.40 FEET TO A POINT; THENCE NORTH 80°46'03" EAST 40.56 FEET TO A POINT; THENCE NORTH 58°20'09" EAST 25.29 FEET TO A POINT; THENCE NORTH 44°32'26" EAST 24.34 FEET TO A POINT; THENCE NORTH 71°02'31" EAST 19.10 FEET TO A POINT; THENCE NORTH 47°24'16" EAST 37.55 FEET TO A POINT; THENCE NORTH 81°51'36" EAST 25.80 FEET TO A POINT; THENCE NORTH 36°15'39" EAST 27.41 FEET TO A POINT; THENCE NORTH 20°21'02" WEST 17.38 FEET TO A POINT; THENCE NORTH 11°59'13" EAST 2.08 FEET TO A POINT; THENCE NORTH 58°12'58" EAST 29.12 FEET TO A POINT; THENCE NORTH 82°43'32" EAST 21.16 FEET TO A POINT; THENCE NORTH 05°01'51" WEST 12.48 FEET TO A POINT; THENCE NORTH 77°16'23" WEST 12.42 FEET TO A POINT; THENCE NORTH 37°17'58" EAST 22.50 FEET TO A POINT; THENCE NORTH 73°27'07" EAST 34.86 FEET TO A POINT; THENCE NORTH 03°15'44" EAST 13.46 FEET TO A POINT; THENCE NORTH 45°09'32" WEST 11.24 FEET TO A POINT; THENCE NORTH 53°48'21" EAST 6.23 FEET TO A POINT; THENCE SOUTH 68°53'55" EAST 13.88 FEET TO A POINT; THENCE NORTH 60°34'12" EAST 52.94 FEET TO A POINT; THENCE NORTH 78°46'01" EAST 46.77 FEET TO A POINT; THENCE NORTH 67°46'44" EAST 48.56 FEET TO A POINT; THENCE NORTH 74°58'45" EAST 43.00 FEET TO A POINT; THENCE SOUTH

89°36'23" EAST 38.18 FEET TO A POINT; THENCE SOUTH 79°42'51" EAST 22.68 FEET TO A POINT; THENCE SOUTH 29°26'17" EAST 17.84 FEET TO A POINT; THENCE NORTH 69°48'36" EAST 16.45 FEET TO A POINT; THENCE SOUTH 68°17'51" EAST 51.96 FEET TO A POINT;THENCE NORTH 73°12'05" EAST 27.64 FEET TO A POINT; THENCE SOUTH 79°24'02" EAST 15.42 FEET TO A POINT; THENCE SOUTH 74°12'31" EAST 45.28 FEET TO A POINT; THENCE SOUTH 39°16'28" EAST 36.13 FEET TO A POINT; THENCE SOUTH 08°43'30" WEST 18.30 FEET TO A POINT; THENCE SOUTH 50°53'39" EAST 18.00 FEET TO A POINT; THENCE NORTH 88°17'02" EAST 36.36 FEET TO A POINT; THENCE SOUTH 13°58'03" EAST 21.80 FEET TO A POINT; THENCE SOUTH 81°03'00" EAST 42.96 FEET TO A POINT; THENCE SOUTH 30°57'25" EAST 26.88 FEET TO A POINT; THENCE SOUTH 75°54'58" EAST 40.54 FEET TO A POINT; THENCE SOUTH 70°25'00" EAST 15.28 FEET TO A POINT; THENCE NORTH 84°19'40" EAST 27.52 FEET TO A POINT; THENCE SOUTH 80°36'18" EAST 37.25 FEET TO A POINT; THENCE SOUTH 42°44'12" WEST 13.86 FEET TO A POINT; THENCE SOUTH 64°51'55" WEST 13.95 FEET TO A POINT; THENCE SOUTH 64°16'15" EAST 26.38 FEET TO A POINT; THENCE SOUTH 51°02'50" EAST 20.28 FEET TO A POINT; THENCE SOUTH 76°30'27" EAST 49.09 FEET TO A POINT; THENCE SOUTH 02°56'27" WEST 22.78 FEET TO A POINT; THENCE SOUTH 68°53'00" EAST 39.44 FEET TO A POINT; THENCE SOUTH 74°05'57" EAST 21.64 FEET TO A POINT; THENCE NORTH 54°46'33" EAST 12.67 FEET TO A POINT; THENCE SOUTH 78°44'03" EAST 50.69 FEET TO A POINT; THENCE SOUTH 17°24'42" EAST 10.77 FEET TO A POINT; THENCE NORTH 81°02'40" EAST 18.57 FEET TO A POINT; THENCE NORTH 57°30'16" EAST 25.96 FEET TO A POINT; THENCE SOUTH 49°12'49" EAST 22.49 FEET TO A POINT; THENCE SOUTH 75°13'50" EAST 36.68 FEET TO A POINT; THENCE NORTH 43°03'04" EAST 18.03 FEET TO A POINT; THENCE SOUTH 43°29'16" EAST 25.33 FEET TO A POINT; THENCE NORTH 84°54'55" EAST 33.14 FEET TO A POINT; THENCE SOUTH 49°52'36" EAST 29.02 FEET TO A POINT; THENCE NORTH 47°30'27" EAST 22.64 FEET TO A POINT; THENCE SOUTH 44°10'50" EAST 48.34 FEET TO A POINT; THENCE NORTH 77°35'58" EAST 27.83 FEET TO A POINT; THENCE SOUTH 44°55'44" EAST 20.62 FEET TO A POINT; THENCE NORTH 67°39'06" EAST 23.64 FEET TO A POINT; THENCE NORTH 09°17'48" WEST 14.71 FEET TO A POINT; THENCE NORTH 56°08'00" EAST 16.99 FEET TO A POINT; THENCE SOUTH 84°08'50" EAST 9.11 FEET TO A POINT; THENCE SOUTH 21°28'59" EAST 19.37 FEET TO A POINT; THENCE NORTH 77°01'03" EAST 25.20 FEET TO A POINT; THENCE NORTH 52°22'39" EAST 13.09 FEET TO A POINT; THENCE NORTH 34°19'37" EAST 31.41 FEET TO A POINT; THENCE SOUTH 83°30'24" EAST 9.86 FEET TO A POINT; THENCE SOUTH 73°18'34" EAST 60.44 FEET TO A POINT; THENCE NORTH 25°37'49" EAST 32.53 FEET TO A POINT; THENCE SOUTH 40°49'03" EAST 28.47 FEET TO A POINT; THENCE NORTH 36°58'17" EAST 21.69 FEET TO A POINT; THENCE SOUTH 76°44'46" EAST 21.44 FEET TO A POINT; THENCE SOUTH 14°26'49" WEST 27.21 FEET TO A POINT; THENCE SOUTH 86°41'52" EAST 6.78 FEET TO A POINT; THENCE NORTH 87°14'33" EAST 24.64 FEET TO A POINT; THENCE SOUTH 40°22'08" EAST 36.29 FEET TO A POINT; THENCE SOUTH 13°37'04" EAST 24.06 FEET TO A POINT; THENCE SOUTH 82°58'59" EAST 35.03 FEET TO A POINT; THENCE SOUTH 73°33'17" EAST 23.68 FEET TO A POINT; THENCE SOUTH 25°37'21" EAST 34.01 FEET TO A POINT; THENCE SOUTH 06°57'32" EAST 21.00 FEET TO A POINT; THENCE SOUTH 53°23'42" EAST 38.38 FEET TO A POINT; THENCE SOUTH 83°14'09" EAST 8.53 FEET TO A POINT; THENCE NORTH 33°23'35" EAST 11.26 FEET TO A POINT; THENCE SOUTH 68°50'30" EAST 18.96 FEET TO A POINT; THENCE NORTH 81°37'03" EAST 18.18 FEET TO A POINT; THENCE SOUTH 39°21'14" EAST 5.22 FEET TO A POINT; THENCE LEAVING SAID BRANCH NORTH 00°20'56" EAST 1168.68 FEET TO AN IRON PIPE; THENCE SOUTH 88°15'40" EAST 294.44 FEET TO A POINT;THENCE SOUTH 72°25'22" EAST 125.09 FEET TO AN IRON PIPE; THENCE SOUTH 70°34'38" EAST 47.93 FEET TO AN IRON PIPE; THENCE SOUTH 67°51'29" EAST 47.60 FEET TO AN IRON PIPE; THENCE SOUTH 65°15'32" EAST 50.49 FEET TO AN IRON PIPE; THENCE NORTH 22°59'56" EAST 19.98 FEET TO THE POINT AND PLACE OF BEGINNING CONTAINING 8746939 SQUARE FEET, 200.802 ACRES.

Instruction Packet and Affidavit for
Neighborhood Meetings

Town of Apex
Planning Department
PO Box 250
Apex, NC 27502

T: 919-249-3426
F: 919-249-3338

This packet consists of instructions and templates for conducting a required Neighborhood Meeting. Planning Department staff are available to advise you in the preparation of these materials. Call the Planning Department at (919) 249-3426 for more information.

WHAT IS THE PURPOSE OF A NEIGHBORHOOD MEETING?

A neighborhood meeting is a required form of community outreach to receive initial feedback regarding certain project types prior to submittal to the Planning Department per the standards found in UDO Sec. 2.2.7. The intention of the meeting is to initiate neighbor communication and identify issues and concerns early on and provide the applicant an opportunity to address neighbor concerns about the potential impacts of the project prior to submitting an application. A neighborhood meeting is valid for six (6) months prior to the submission of an application; a delay in submission requires a new neighborhood meeting.

WHEN IS A NEIGHBORHOOD MEETING REQUIRED?

- Rezonings (including Planned Unit Developments);
- Major Site Plans;
- Residential Master Subdivision Plans (excluding exempt subdivisions); or
- Special Use Permits

INSTRUCTIONS

Prior to submitting an application for a Rezoning, Major Site Plan, residential Master Subdivision Plan (excluding exempt subdivisions), or Special Use Permit, the applicant must conduct at least one (1) Neighborhood Meeting. The applicant shall submit all forms included in this packet with the initial application submittal.

The Neighborhood Meeting must be held in accordance with the following rules:

These groups and individuals must be invited to the meeting:

- The applicant is required to notify the Planning Department, all property owners within 300 feet of the subject property, and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the neighborhood meeting, not including the day of mailing. The applicant shall use <u>their own return address</u> on the envelopes as the meeting is a private meeting between the applicant and the neighbors.
- The applicant shall include with the meeting notice a vicinity map in addition to either the existing zoning map of the area or preliminary plans of the proposed development (see Handout requirements below).

The meeting must be held within specific timeframes and meet certain requirements:

- The meeting must be held for a minimum of two (2) hours, Monday through Thursday, during the 5:00 p.m. - 9:00 p.m. time period. The meeting cannot be held on a Town recognized holiday (which coincide with the State of North Carolina recognized holidays).
- The meeting shall be held at a place that is generally accessible to neighbors that reside in close proximity to the land subject to the application.
- A sign-in sheet must be used in order to verify attendance. Ensure each attendee signs in. Please note if any person(s) refuses to sign in. Note if no one attended.
- Handout requirements:
    - For rezonings (excluding rezonings to PUD-CZ, TND-CZ and MEC-CZ), a vicinity map and existing zoning map of the area must be provided to help facilitate discussion.
    - For rezonings to PUD-CZ, TND-CZ and MEC-CZ; Major Site Plans; residential Master Subdivision Plans; and Special Use Permits, preliminary plans of the proposed development must be available at the meeting to help facilitate discussion. Neighbors may request emailed/mailed copies of the maps or plans from the applicant by checking the "send plans" box on the sign-in sheet; applicant shall provide reduced copies upon request.
    - Printed copies must equal the number of notices required to be sent.
    - Contact information for the applicant's representative and Town Staff must be provided on the attached "Project Contact Information" form.
    - "Common Construction Issues & Who to Call" sheet (attached) must be included as part of the handout.
    - A copy of the handout must be included as part of the Neighborhood Meeting report.
- The agenda of the meeting shall include:
    - Explanation of all processes the meeting is being held for (rezoning, subdivision, etc.).
    - Explanation of future meetings (additional neighborhood meetings, Planning Board, Town Council, etc.).
    - Explanation of development proposal – uses and conditions for rezonings, layout for subdivision and site plans, and builder/end user if known/public knowledge.
- Questions or concerns by attendees, and responses by the applicant, if any, must be noted. Provide blank comment sheets or notecards for neighbors to submit written comments. The applicant shall also include any questions and concerns received via written correspondence (such as email) or phone call along with responses provided by the applicant.
- The applicant shall be responsible for notifying any neighbors who check the "Send Plans & Updates" box on the sign-in sheet of any additional neighborhood meetings and the actual submittal date to the Town with a link to the Town of Apex's Interactive Development Map.

For accountability purposes, please submit the following with your application:

- A copy of the letter mailed to neighbors and neighborhood organizations (use attached invitation template);
- A list of those persons and neighborhood organizations invited to the meeting;
- A copy of the sign-in sheet (use attached sign-in sheet template);
- A summary of the meeting and a list of any changes made to the project as a result of the neighborhood comments (use attached meeting summary template);
- The affidavit, signed, dated, and notarized (use attached affidavit template); and
- One reduced copy of the maps and/or plans presented to the neighbors at the Neighborhood Meeting.

NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

12/04/2019
Date

Dear Neighbor:
You are invited to a neighborhood meeting to review and discuss the development proposal at

See attached list of addresses
Address(es)

See attached list of PINs
PIN(s)

in accordance with the Town of Apex Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org.

A Neighborhood Meeting is required because this project includes (check all that apply):

	Application Type	Approving Authority
☑	Rezoning (including Planned Unit Development)	Town Council
☐	Major Site Plan	Town Council (QJPH*)
☐	Special Use Permit	Town Council (QJPH*)
☐	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):
The attached map illustrates the proposed rezoning of thirteen parcels of land from RA to PUD-CZ to allow for a mix of residential and nonresidential uses. The site will be adjacent to other PUD-CZ zoned properties.

Estimated submittal date: January 2, 2020

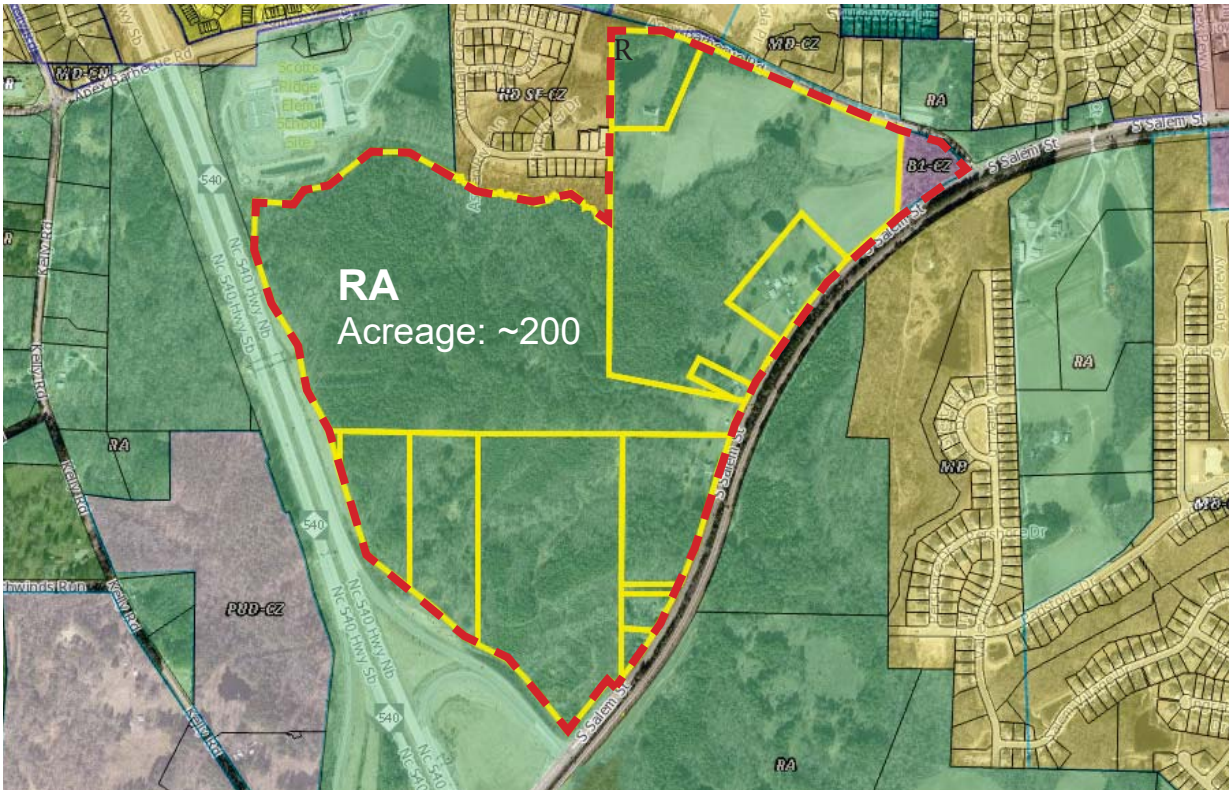
MEETING INFORMATION:

Property Owner(s) name(s):	See attached list of property owners
Applicant(s):	McAdams Co
Contact information (email/phone):	zumwalt@mcadamsco.com / 919-361-5000
Meeting Address:	53 Hunter Street, Apex, NC 27502 (Pinnacle and Zenith Room)
Date of meeting**:	12/19/2019
Time of meeting**:	6:30-8:30

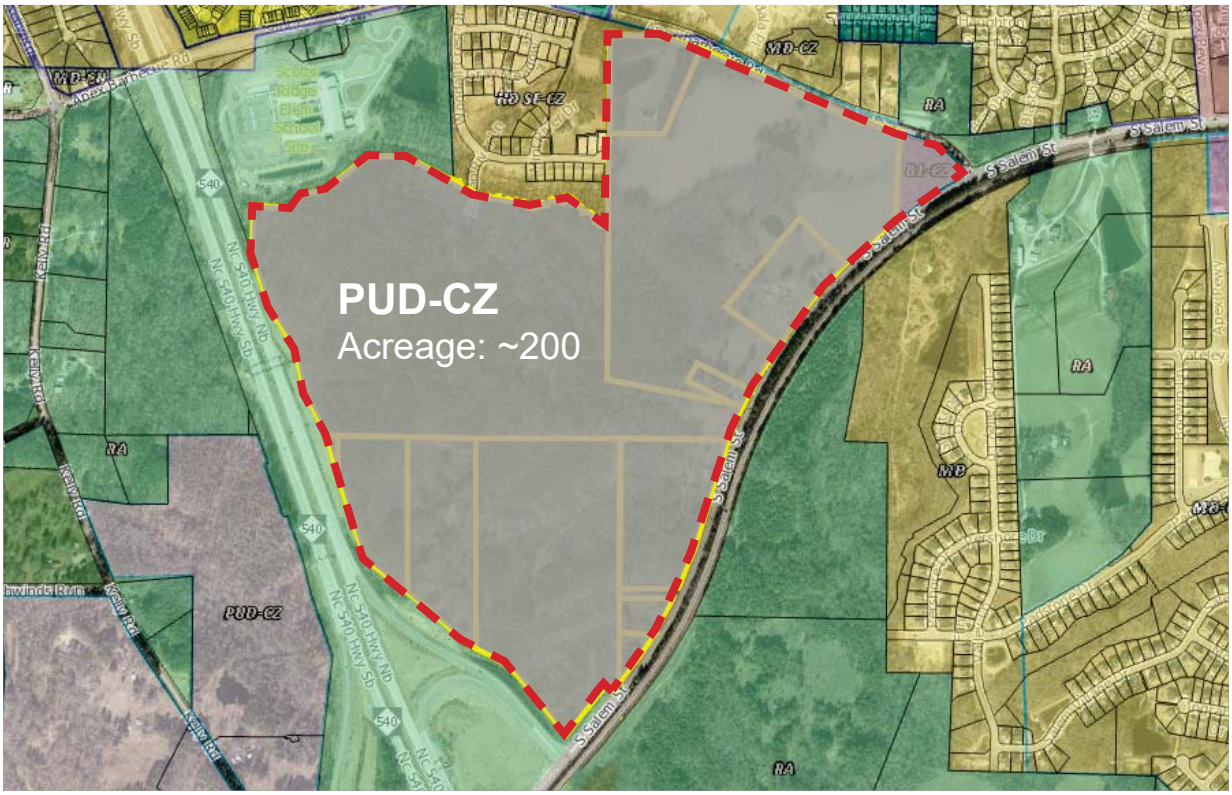
MEETING AGENDA TIMES:
Welcome: 6:30-6:35 Project Presentation: 6:35-6:50 Question & Answer: 6:50-8:30

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

SITE ADDRESSES	PINs	PROPERTY OWNERS
0 S SALEM ST	731457553	NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY
0 KELLY RD	731459383	NC DEPARTMENT OF TRANSPORTATION
1604 S SALEM ST	731554102	VARYA LLC
0 APEX BARBECUE RD	731564395	POE ACRES FAMILY FARM LLC
1525 S SALEM ST	731641147	HUNTER, CAREY B
1420 S SALEM ST	731645370	SZYMKIEWICZ, PAUL M JIN, WEI
1420 S SALEM ST	731646532	UTLEY, PAMELA
1330 S SALEM ST	731657166	POE ACRES FAMILY FARMS LLC
6401 APEX BARBECUE RD	731676714	POE, DARYL POE, JEANNE
1300 S SALEM ST	731750984	POE ACRES FAMILY FARMS LLC
0 APEX BARBECUE RD	731761944	POE ACRES FAMILY FARMS LLC
1216 S SALEM ST	731766588	POE, WILLIAM DOUGLAS POE, JEAN S
0 APEX BARBECUE RD	731873224	REGENCY INTERNATIONAL INVESTMENTS LLC



CURRENT ZONING



PROPOSED ZONING

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: Depot 499 Zoning: PUD-CZ

Location: Southwest corner of S Salem Street and Apex Barbecue Road

Property PIN(s): _____ Acreage/Square Feet: 200.80

Property Owner: See attached sheet on the following page for all owner information

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

Developer: Lennar

Address: 1100 Perimeter Park Drive Suite 112

City: Morrisville State: NC Zip: 27560

Phone: 919-465-5925 Fax: _____ Email: stephen.dorn@lennar.com

Engineer: McAdams

Address: 2905 Meridian Parkway

City: Durham State: NC Zip: 27713

Phone: 919-361-5000 Fax: _____ Email: zumwalt@mcadamsco.com

Builder (if known): _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts

Planning Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Senior Transportation Engineer	(919) 249-3358
Water Resources Department Mike Deaton, Stormwater & Utility Engineering Manager Stan Fortier, Senior Engineer (Sedimentation & Erosion Control)	 (919) 249-3413 (919) 249-1166
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

OWNER	ADDRESS	CITY	STATE	ZIP
NC DEPARTMENT OF TRANSPORTATION	0 KELLY RD	APEX	NC	27502
VARYA LLC	1604 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARM LLC	0 APEX BARBECUE RD	APEX	NC	27502
HUNTER, CAREY B	1525 S SALEM ST	APEX	NC	27502
SZYMKIEWICZ, PAUL M JIN, WEI	1420 S SALEM ST	APEX	NC	27502
UTLEY, PAMELA	1420 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1330 S SALEM ST	APEX	NC	27502
POE, DARYL POE, JEANNE	6401 APEX BARBECUE RD	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1300 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	0 APEX BARBECUE RD	APEX	NC	27502
POE, WILLIAM DOUGLAS POE, JEAN S	1216 S SALEM ST	APEX	NC	27502
REGENCY INTERNATIONAL INVESTMENTS LLC	0 APEX BARBECUE RD	APEX	NC	27502

Providing Input to Town Council:

Each Town Council meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Town Council meets on the 1st and 3rd Tuesdays of each month at 7:00 p.m. (except for holidays, see schedule of meetings at http://www.apexnc.org/838/Agendas-Minutes). You may also contact Town Council by e-mail at AllCouncil@apexnc.org.

Private Agreements and Easement Negotiation:

The Town of Apex cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Apex can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Town Council public hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the Town Council public hearing if the agreement is included in the conditions. If it is not, you may request that the Town Council not approve the rezoning without the agreement being included in the conditions (note that it is up to Town Council whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Interactive Development Map at: http://apexnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=fa9ba2017b784030b15ef4da27d9e795

Documentation:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

COMMON CONSTRUCTION ISSUES & WHO TO CALL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Noise & Hours of Construction: **Non-Emergency Police** **919-362-8661**

Noise from tree removal, grading, excavating, paving, and building structures is a routine part of the construction process. The Town generally limits construction hours from 7:00 a.m. to 8:30 p.m. so that there are quiet times even during the construction process. Note that construction outside of these hours is allowed with special permission from the Town when it makes more sense to have the construction occur at night, often to avoid traffic issues. In addition, the Town limits hours of blasting rock to Monday through Friday from 8:00 a.m. to 5:00 p.m. Report violations of construction hours and other noise complaints to the Non-Emergency Police phone number at 919-362-8661.

Construction Traffic: **James Misciagno** **919-372-7470**

Construction truck traffic will be heavy throughout the development process, including but not limited to removal of trees from site, loads of dirt coming in and/or out of the site, construction materials such as brick and wood brought to the site, asphalt and concrete trucks come in to pave, etc. The Town requires a construction entrance that is graveled to try to prevent as much dirt from leaving the site as possible. If dirt does get into the road, the Town can require they clean the street (see "Dirt in the Road" below).

Road Damage & Traffic Control: **Water Resources – Infrastructure Inspections** **919-362-8166**

There can be issues with roadway damage, roadway improvements, and traffic control. Potholes, rutting, inadequate lanes/signing/striping, poor traffic control, blocked sidewalks/paths are all common issues that should be reported to Water Resources – Infrastructure Inspections at 919-249-3427. The Town will get NCDOT involved if needed.

Parking Violations: **Non-Emergency Police** **919-362-8661**

Unless a neighbor gives permission, there should be no construction parking in neighbors' driveways or on their property. Note that parking in the right-of-way is allowed, but Town regulations prohibit parking within 15 feet of driveways so as not to block sight triangles. Trespassing and parking complaints should be reported to the Non-Emergency Police phone number at 919-362-8661.

Dirt in the Road: **James Misciagno** **919-372-7470**

Sediment (dirt) and mud gets into the existing roads due to rain events and/or vehicle traffic. These incidents should be reported to James Misciagno. He will coordinate the cleaning of the roadways with the developer.

Dirt on Properties or in Streams: **James Misciagno** **919-372-7470**
Danny Smith **Danny.Smith@ncdenr.gov**

Sediment (dirt) can leave the site and get onto adjacent properties or into streams and stream buffers; it is typically transported off-site by rain events. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the appropriate repairs with the developer. Impacts to the streams and stream buffers should also be reported to Danny Smith (danny.smith@ncdenr.gov) with the State.

Dust: **James Misciagno** **919-372-7470**

During dry weather dust often becomes a problem blowing into existing neighborhoods or roadways. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the use of water trucks onsite with the grading contractor to help control the dust.

Trash: **James Misciagno** **919-372-7470**

Excessive garbage and construction debris can blow around on a site or even off of the site. These incidents should be reported to James Misciagno at 919-372-7470. He will coordinate the cleanup and trash collection with the developer/home builder.

Temporary Sediment Basins: **James Misciagno** **919-372-7470**

Temporary sediment basins during construction (prior to the conversion to the final stormwater pond) are often quite unattractive. Concerns should be reported to James Misciagno at 919-372-7470 so that he can coordinate the cleaning and/or mowing of the slopes and bottom of the pond with the developer.

Stormwater Control Measures: **Mike Deaton** **919-249-3413**

Post-construction concerns related to Stormwater Control Measures (typically a stormwater pond) such as conversion and long-term maintenance should be reported to Mike Deaton at 919-249-3413.

Electric Utility Installation: **Rodney Smith** **919-249-3342**

Concerns with electric utility installation can be addressed by the Apex Electric Utilities Department. Contact Rodney Smith at 919-249-3342.

NEIGHBORHOOD MEETING SIGN-IN SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Address: 53 Hunter Street, Apex, NC 27502

Date of meeting: 12/19/19 Time of meeting: 6:30 pm - 8:30 pm

Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz, Pamela Utley, NCDOT, Varya LLC

Applicant(s): Lennar

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	Amanda Forsythe	603 Knightsbridge	(919)928-260	[redacted]	yes
2.	Jeanne Poe	6401 Apex Barbecue Rd	919-946-7419		yes
3.	Daryl Poe	6401 Apex Barbecue Rd	919-946-141		yes
4.	Lee Brisson	1910 Woodall Crest Dr.	919-291-3262		yes
5.	Doug a Jean Poe	1216 S. Salem St.	919-215-540		Yes
6.	Kyle Davis	1914 Woodall Crest Dr	984-229-7543		Yes
7.	James Galkowski	625 Magdala Place	9196339104		n Yes
8.	Dan Cantrell	6300 Apex Barbecue Rd	919600150		gmail.com/yes
9.	Patrick Wise	1901 WOODALL CREST DR	727.412.153		/es
10.	Ramakrishnan Sundaram	1885 woodall crest dr	201.981.454		n Yes
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

NEIGHBORHOOD MEETING SIGN-IN SHEET

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Applicant(s): Lennar

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	Matt Cowsa / WHM LLC	1401 Grapevine Dr.	919-636-4399	[redacted]	YES
2.	Pamela Howard	1420 S. Salem St. Apex	919-869-6181		Yes
3.	Mary Kearney	1680 Mint River Apex			Yes
4.	Tabitha Smith	1936 Gray Meadow Dr	5126038627		yes
5.	Terry Maloffy	109 Teresia Ct			yes
6.	Karyn Davis	1914 Woodall Crest Dr	678-591-6835		yes
7.	Toni Koyte K	1908 Melba Mill Ln	607-731-336		yes
8.	MIKE OBRIEN	1876 Woodall Crest Dr	919 256 3176		yes
9.	DARYL CANTRELL	6320 APEX BARBECUE	617-838-6891		yes
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

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Applicant(s): Lennar

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	RICHARD MOORE	301 RUSH, NC WAY WIND	919-362-751	[redacted]	✓
2.	Kelly Aguirrechu	306 Village Loop Dr.	305.753.583		✓
3.	DONALD CANTRELL	6340 Apex Barbecue Rd	805 205 3		✓
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz, Pamela Utley, NCDOT, Varya LLC

Applicant(s): Lennar

Contact information (email/phone): Stephen Dorn / stephen.dorn@lennar.com / 919-224-9922

Meeting Address: 53 Hunter Street, Apex, NC 27502

Date of meeting: 12/19/19 Time of meeting: 6:30 pm - 8:30 pm

Please summarize the questions/comments and your response from the Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

How will the cut-through from S. Salem St. to Apex Barbecue Rd. impact traffic in Woodall neighborhood and how will impacts be mitigated? (neighbors expressed concerns regarding Apex Barbecue traffic)

Applicant's Response:

The connection from S. Salem St. to Apex Barbecue Rd. shown in conceptual plans is part of the Town's Thoroughfare plan and will likely be required as part of the project. Our plan includes narrow lanes, on street parking, and tree-lined streets in this area which will encourage slower driving. The Town will review and approve the proposed streets and we will work with the Town to ensure safe streets are provided.

Question/Concern #2:

Are children walking to school included in the traffic study?

Applicant's Response:

It would not be included in the traffic study, but this is a concern for us to take to the Town to review and develop a solution.

Question/Concern #3:

Expressed concern over the increased density that will come. Expressed concerns that development of Poe site was not disclosed by Lennar when homes were purchased in Woodall. Follow-up question: Will there be apartments and what is the time frame of the project?

Applicant's Response:

Yes, there will be apartments in the development. The Future Land Use Map designates the area as mixed use with high-density residential, which includes apartments and townhomes. The build-out of the project is most likely around 10 years.

Question/Concern #4:

What is happening to existing homes on the site?

Applicant's Response:

They will be included in the rezoning.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz, Pamela Utley, NCDOT, Varya LLC

Applicant(s): Lennar

Contact information (email/phone): Stephen Dorn / stephen.dorn@lennar.com / 919-224-9922

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Question/Concern #5:

Are there height regulations on buildings?

Applicant's Response:

Yes, and those regulations will be outlined in the PUD document. At this time, we believe apartments will most likely be 4 stories and office buildings will be no more than 6 stories.

Question/Concern #6:

Why does the plan include high density residential at the corner of S Salem St and Apex Barbecue road? Traffic is difficult in that area and the speed limit jumps.

Applicant's Response:

Higher density residential is intended to serve as a transition from commercial uses to lower density residential uses. We want to propose a speed limit reduction from 55 mph to 45 mph, however, this will need to be approved by the Town of Apex.

Question/Concern #7:

Is there coordination of the development with the construction of the new Peakway Bridge?

Applicant's Response:

We will coordinate our development with Apex Transportation staff and NCDOT. We do not know the status of the development of the Peakway bridge. However, construction of the bridge should be complete well before this project breaks ground.

Question/Concern #8:

With the plan for greenways throughout the development, how easy will it be for my family to bike over from other neighborhoods with traffic considered? Are there plans to connect the greenways to other areas?

Applicant's Response:

Sidewalks will be installed within the proposed development. We will look for missing pieces of the pedestrian network and may be able to fill in some of the existing gaps. Any off-site sidewalk improvements will require approval by the Town of Apex.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Applicant(s): Lennar

Contact information (email/phone): Stephen Dorn / stephen.dorn@lennar.com / 919-224-9922

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Question/Concern #9:

What is the plan for Apex Barbecue Road?

Applicant's Response:

It will be a 3-lane road with bike lanes. If NCDOT signal warrants are met, a traffic signal may be required at Apex Barbecue Road.

Question/Concern #10:

Is there a plan to talk to State DOT about widening Apex Barbecue Road?

Applicant's Response:

It is a part of our traffic study done by Ramey Kemp & Associates. The traffic study is currently in the works; all counts have already been taken.

Question/Concern #11:

Neighbor concerned over their property backing up to the woods of the development. Will there be any sort of buffer?

Applicant's Response:

Yes, in fact because of the stream on the northern end of the property, there will be a dense riparian buffer of 200 feet (100 feet on either side of the stream) separating your property from the development.

Question/Concern #12:

How long has this project been in the works?

Applicant's Response:

The Town's plans for the site have been in place since 2003. Lennar's involvement began within the last year.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz, Pamela Utley, NCDOT, Varya LLC

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Question/Concern #13:

Is it possible to eliminate some of the access points to the development? Is the street connection to Apex Barbecue Road near Woodall that is shown on the plans required?

Applicant's Response:

The Town will comment and provide their input on this concern upon our submittal, but it is our understanding that we will be required to connect to all streets that are stubbed to the boundaries of the proposed development.

Question/Concern #14:

Will office buildings be constructed without any tenants in place?

Applicant's Response:

No. The current process is rezoning the land to PUD-CZ to allow for a variety of uses. There are no specific businesses or tenants. The non-residential portions of the proposed development will likely be developed for specific tenants at later stages when there are sufficient retail and residential uses in place to attract office tenants. Speculative construction is not likely in this development.

Question/Concern #15:

How will runoff be dealt with for the site? What is the stormwater plan?

Applicant's Response:

It will be outlined in our PUD document to meet or exceed the stormwater management regulations of the Town. Specifics of the stormwater management plan will develop later in the design and engineering process.

Question/Concern #16:

Will the PUD plans be made public?

Applicant's Response:

Yes, they will be made public upon filing with the Town.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Question/Concern #17:

Will other neighborhoods have access to the amenities of the development?

Applicant's Response:

That is a question to be discussed later and would involve decisions by the HOA.

Question/Concern #18:

Who should I talk to about getting speed bumps in my neighborhood?

Applicant's Response:

There is a petition process, and you would most likely need to speak with the Town Traffic Engineer.

Question/Concern #19:

What is the maximum resident number for the development?

Applicant's Response:

The maximum number of units is 1,350. This includes apartments, townhouses, and single-family homes. We can't provide an exact number for how many people will occupy each unit.

Question/Concern #20:

How will the school system deal with the new students that will come as part of this development?

Applicant's Response:

Wake County Public Schools will be notified of the development as part of the rezoning application. They will use that information as part of their planning for future schools and facilities.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz, Pamela Utley, NCDOT, Varya LLC

Applicant(s): Lennar

Contact information (email/phone): Stephen Dorn / stephen.dorn@lennar.com / 919-224-9922

Meeting Address: 53 Hunter Street, Apex, NC 27502

Date of meeting: 12/19/19 Time of meeting: 6:30 pm - 8:30 pm

Please summarize the questions/comments and your response from the Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #21:

What type of buffer is being proposed on Apex Barbecue Road?

Applicant's Response:

A 30' Type Buffer that will include a multi-use trail.

Question/Concern #22:

Applicant's Response:

Question/Concern #23:

Applicant's Response:

Question/Concern #24:

Applicant's Response:

AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Bob Zumwalt, do hereby declare as follows:
Print Name

1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.

2. The meeting invitations were mailed to the Apex Planning Department, all property owners within 300 feet of the subject property and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the Neighborhood Meeting.

3. The meeting was conducted at 53 Hunter Street, Apex, NC 27502 (location/address) on 12/19/19 (date) from 6:30 pm (start time) to 8:30 pm (end time).

4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.

5. I have prepared these materials in good faith and to the best of my ability.

12/31/19
Date

By: _____

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, William D. Sparrow, a Notary Public for the above State and County, on this the 31 day of December, 2019.

SEAL

WILLIAM D. SPARROW NOTARY PUBLIC WAKE COUNTY, NC MY COMMISSION EXPIRES 9/8/21

Wm. D. Sparrow
Notary Public

William D. Sparrow
Print Name

My Commission Expires: 9/8/21

NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

01/13/2020
Date

Dear Neighbor:

You are invited to a neighborhood meeting to review and discuss the development proposal at

See attached list of addresses
Address(es)

See attached list of PINs
PIN(s)

in accordance with the Town of Apex Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org.

A Neighborhood Meeting is required because this project includes (check all that apply):

	Application Type	Approving Authority
☑	Rezoning (including Planned Unit Development)	Town Council
☐	Major Site Plan	Town Council (QJPH*)
☐	Special Use Permit	Town Council (QJPH*)
☐	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):

Due to the holidays, we are having another neighborhood meeting to be sure everyone had a chance to attend. Content will generally be the same as our first meeting held on December 19. The attached map illustrates the proposed rezoning of twelve parcels of land from RA AND B1-CZ to PUD-CZ to allow for a mix of residential and non-residential uses.

Estimated submittal date: February 8, 2020

MEETING INFORMATION:

Property Owner(s) name(s): See attached list of property owners

Applicant(s): McAdams

Contact information (email/phone): zumwalt@mcadamsco.com / 919-361-5000

Meeting Address: Halle Cultural Arts Center Auditorium- 237 N Salem St, Apex, NC 27502

Date of meeting**: 01/29/2020

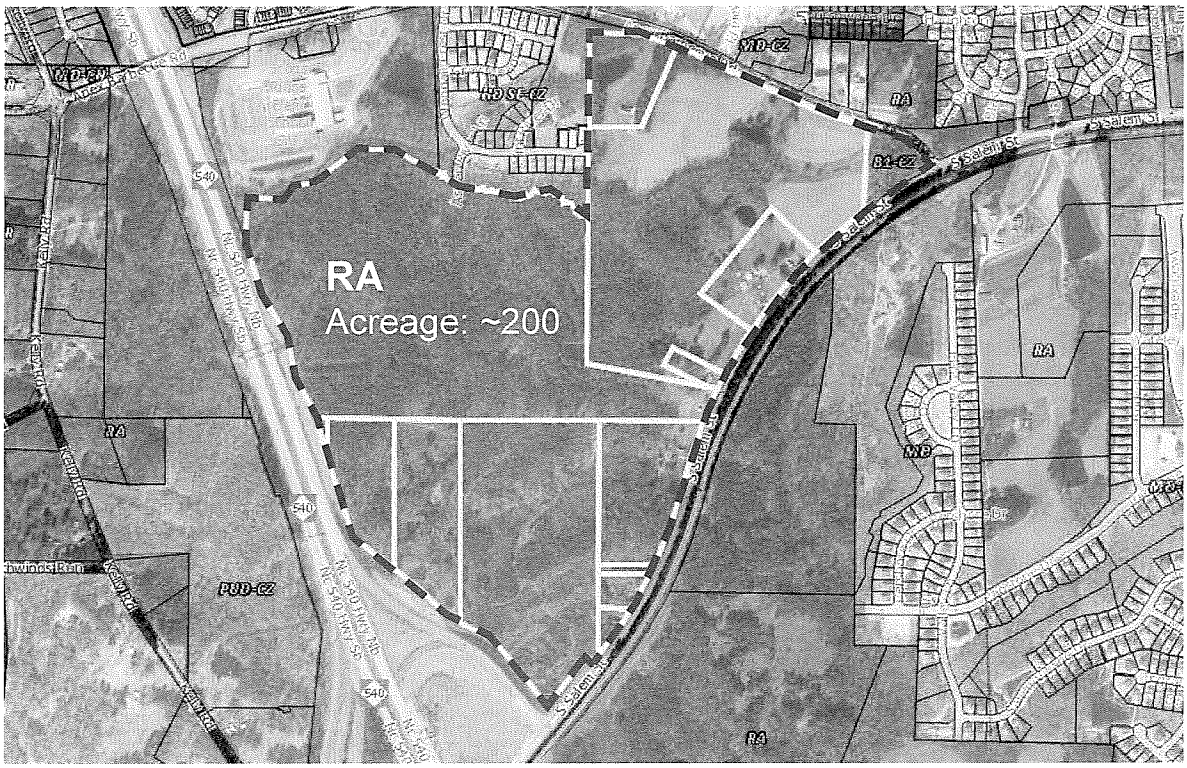
Time of meeting**: 6:30-8:30

MEETING AGENDA TIMES:

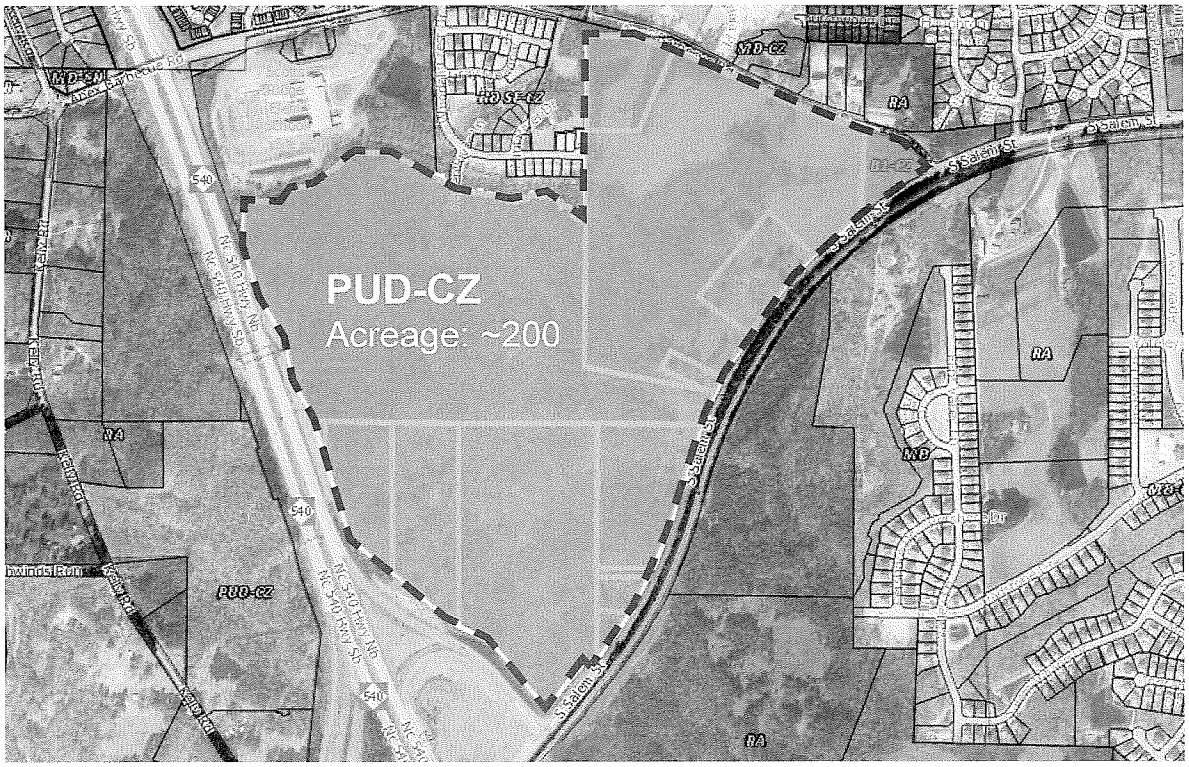
Welcome: 6:30-6:35 Project Presentation: 6:35-6:50 Question & Answer: 6:50-8:30

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

OWNER	ADDRESS	CITY	STATE	ZIP
NC DEPARTMENT OF TRANSPORTATION	0 KELLY RD	APEX	NC	27502
VARYA LLC	1604 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARM LLC	0 APEX BARBECUE RD	APEX	NC	27502
HUNTER, CAREY B	1525 S SALEM ST	APEX	NC	27502
SZYMKIEWICZ, PAUL M JIN, WEI	1420 S SALEM ST	APEX	NC	27502
UTLEY, PAMELA	1420 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1330 S SALEM ST	APEX	NC	27502
POE, DARYL POE, JEANNE	6401 APEX BARBECUE RD	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	1300 S SALEM ST	APEX	NC	27502
POE ACRES FAMILY FARMS LLC	0 APEX BARBECUE RD	APEX	NC	27502
POE, WILLIAM DOUGLAS POE, JEAN S	1216 S SALEM ST	APEX	NC	27502
REGENCY INTERNATIONAL INVESTMENTS LLC	0 APEX BARBECUE RD	APEX	NC	27502



CURRENT ZONING



PROPOSED ZONING

NEIGHBORHOOD MEETING SIGN-IN SHEET

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Meeting Address: Halle Cultural Arts Center Auditorium - 237 N Salem Street Apex, NC 27502

Date of meeting: January 29, 2020 Time of meeting: 6:30-8:30

Property Owner(s) name(s): Poe Acres Family Farm LLC, Daryl and Jeanne Poe, William and Jean Poe, Regency International Investments, Carey Hunter, Paul Szymkiewicz Pamela Utley, NCDOT, Varya LLC

Applicant(s): Lennar

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	Melissa Baker	106 Oak Pine Dr Apex, NC 27502	804-536-4515	[redacted]	✓
2.	Dawn Glover	Kings View Trail	919-631-1624		✓
3.	~~BRIAN~~ GRIFFITH	2524 KELLY RD	919-387-8775		✓
4.	RD Meckes	1765 Town Home	9196860644		✓
5.	G&Meckes	Drive Apex, NC			
6.	Sowmya Narayanan	1885 Woodall Crest			✓
7.	Rajesh Rajagopal	1893 Woodall Crest			✓
8.	PRABHU RASENDRAN	1889 Woodall Crest			✓
9.	Ashutosh Bahadure	1941 Metta Mill Ln			✓
10.	Stephen Weiss	1949 Metta Mill Ln			✓
11.	Pamela Utley	1420 S. Salem St	919-869-6187		✓
12.	Ann Woodall	4515 Apex Barbecue Rd	919-387-3300		
13.					
14.					

Use additional sheets, if necessary.

NEIGHBORHOOD MEETING SIGN-IN SHEET

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	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	Karyn Davis	1914 Woodall Crest Dr Apex	678-591	[redacted]	yes
2.	Tanya Jeter	1932 Gray Meadow	919 9988257		yes
3.	Brett Gantt	1806 Cuddington Ct	919-600-9083		yes
4.	JONDAN SMITH	1902 WEDGEWOOD DR	614 5715599		yes
5.	Vincent Hon	1906 Woodall Crest Dr	919 9031534		Yes
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Applicant(s): Lennar

Contact information (email/phone): Stephen Dorn / stephen.dorn@lennar.com / 919-224-9922

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Please summarize the questions/comments and your response from the Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

Concern over two connections into the Woodall neighborhood. Who can I speak to with the town.

Applicant's Response:

Apex requires us to have those connections. The best person to speak to would be the planning director, Dianne Khin.

Question/Concern #2:

What is the buffer along Woodall Crest?

Applicant's Response:

There will be a 200 foot buffer because of the stream.

Question/Concern #3:

Will runoff drain offsite?

Applicant's Response:

No, we will have our own stormwater control measures onsite to meet or exceed the standards.

Question/Concern #4:

Will Woodall have access to the amenities proposed for the property?

Applicant's Response:

Lennar will be able to address this at a later date.

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Question/Concern #5:

When would traffic lights be implemented?

Applicant's Response:

We will know more at a later date when we get more information from our traffic study

Question/Concern #6:

Where will construction trucks be entering the site?

Applicant's Response:

Trucks will definitely not enter on Woodall Crest. We are unsure of the exact location now, however, this will be outlined in the development plan.

Question/Concern #7:

What is the volume of traffic through Woodall?

Applicant's Response:

We will get this information from traffic study once it is completed

Question/Concern #8:

Will S Salem Street be wide enough?

Applicant's Response:

We are dedicating 50 feet for a 4 lane divided road

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

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Question/Concern #9:

How are you going about making this an environmentally sustainable project?

Applicant's Response:

Twenty percent of the site will be Resource Conservation Area. We will replant trees and incorporate green spaces throughout the development. We will use the proper stormwater management practices.

Question/Concern #10:

Is there a trail that leads to the elementary school?

Applicant's Response:

This is something we would have to look into and discuss with the elementary school. They may not want a trail connecting to the neighborhood.

Question/Concern #11:

Will new schools be built for this project?

Applicant's Response:

Part of our application is to submit a detailed form to Wake County Public Schools informing them of the size of the development and phasing estimates.

Question/Concern #12:

What does this planning process look like?

Applicant's Response:

So far we have submitted once and received comments from the TRC. We will resubmit and receive further comments and continue back and fourth until the plan is ready to go to Planning Board and then Town Council public hearings. You should receive a notification from the Town of these hearings.

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Question/Concern #13:

Will stoplights or stop signs be implemented on the main road running through the site so that people don't speed or cut through?

Applicant's Response:

This is something we still need to address. We are considering a potential roundabout and other strategies such as on street parking to slow traffic.

Question/Concern #14:

What will the commercial area look like?

Applicant's Response:

There isn't anything set in stone yet for the commercial areas, but Columbia plans to implement something similar to Fenton. This could include chef driven restaurants, a small boutique theater, and rooftop dining areas for example.

Question/Concern #15:

Will this development affect property values?

Applicant's Response:

We expect that this will increase property values in the surrounding communities.

Question/Concern #16:

Applicant's Response:

DEPOT 499
PLANNED UNIT DEVELOPMENT

South Salem Street and Apex Barbecue Road
Apex, North Carolina | PD PLAN
Case # 20CZ01

LAND PLANNING,
LANDSCAPE ARCHITECTURE +
CIVIL ENGINEER

MCADAMS

DEVELOPER

LENNAR

DEPOT 499

Planned Unit Development
Prepared for The Town of Apex, North Carolina

Submittal Dates

First Submittal:	January 2, 2020
Second Submittal:	February 14, 2020
Third Submittal:	March 13, 2020
Fourth Submittal:	May 14, 2020
Fifth Submittal:	June 5, 2020
Sixth Submittal:	June 29, 2020
Seventh Submittal:	July 15, 2020

Developer
Lennar Corporation
1100 Perimeter Park Drive Suite 112
Morrisville NC 27560

Planner, Engineer, Landscape Architect
McAdams
2905 Meridian Parkway
Durham NC 27113

Traffic Engineer
Ramey Kemp & Associates
5808 Faringdon Place, #100
Raleigh NC 27609

MCADAMS

LENNAR

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9. SIGNAGE
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11. NATURAL RESOURCE AND ENVIRONMENTAL DATA
12. STORMWATER MANAGEMENT
13. PARKS AND RECREATION
14. PUBLIC FACILITIES
15. PHASING PLAN
16. CONSISTENCY WITH LAND USE PLAN
17. COMPLIANCE WITH UDO
18. SCHOOL ALTERNATIVE
19. TRANSPORTATION IMPROVEMENTS

VICINITY MAP

PROJECT DATA

Name of Project:	Depot 499
Applicant Owner/Developer:	Lennar 1100 Perimeter Park Drive, Suite 112 Morrisville, NC 27560 919-337-9420
Prepared By:	McAdams 2905 Meridian Parkway Durham, NC 27713 919-361-5000
Current Zoning Designation:	RA and B1-CZ (#09CZ01)
Proposed Zoning Designation:	PUD-CZ
Current 2045 Land Use Map Designation:	Community Mixed Use (High Density Residential/ Commercial Services/ Office Employment); Medium/High Density Residential, Office Employment; and Office Employment/ Commercial Services
Proposed 2045 Land Use Map Designation:	A change is requested for approximately 5.41 acres of land in the northeast corner of PIN 0731761944 from Office Employment to High Density Residential.
Proposed Use:	Mixed-used development with office/institutional, retail, restaurant single-family, townhomes, and multi-family units
Size of Project:	200.80 acres
Area Designated as Mixed Use on 2045 LUM:	171.90 acres
Area of Mixed Use Proposed as Non-residential:	51.57 acres (30% of mixed-used area)
Property Identification Numbers:	731459383, 731554102, 731564395, 731641147, 731645370, 731646532, 731657166, 731676714, [illegible]0984, 731761944, 731766588, 731873224

PURPOSE STATEMENT

The Depot 499 PUD will consist of residential and nonresidential uses including multi-family units, townhomes, single-family homes, retail, restaurant, and office/institutional space. The proposed development will set aside required resource conservation areas throughout the 200-acre property. Depot 499's concept is consistent with the Town's stated PUD goal to provide site specific, high quality neighborhoods that exhibit natural feature preservation as well as compatibility with, and connectivity to, surrounding land uses. The concept is also consistent with the concepts and recommendations of the South Salem Street Small Area Plan. This development will comply with the PUD Development Parameters outlined in §2.3.4.F.1.a.i-vii of the Town of Apex Unified Development Ordinance. The Depot 499 PUD is in accordance with the Development Parameters as follows:

- *The uses to be developed in the PD Plan for the PUD-CZ are those uses permitted in Section 4.2.2, Use Table.*

  » The uses permitted within the Depot 499 PUD are permitted per §4.2.2 of the Town of Apex UDO.

- *The uses proposed in the PD Plan for the PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of the non-residential land area is included in certain mixed-use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown on the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.*

  » Depot 499 is a mixed-used development containing a maximum of:
  - 850 apartment units
  - 650 townhomes / single-family homes (50 single-family maximum)
  - 650,000 square feet of non-residential floor area, including retail, restaurant, civic, and office space

  This mix of uses provides a minimum of 30% non-residential land uses measured by ground floor and supporting parking or infrastructure consistent with Town policy.

- *The dimensional standards in §5.1.3 Table of Intensity and Dimensional Standards, Planned Development Districts, may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.*

  » The proposed dimensional standards are in compliance with the Town of Apex UDO. Development of the parcel will be in compliance with all other requirements of the UDO, North Carolina Building Code, and North Carolina Fire Code.

- *The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways, and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the Town of Apex Standard Specifications and Details, and greenway improvements as required by the Town of Apex Parks, Recreation, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.*

» Public sidewalks will be constructed along the both sides of all streets, going above the Town of Apex UDO standards. To encourage a healthy lifestyle and establish a walkable community, pedestrian greenways will also be incorporated throughout the development connecting all uses and open space amenities. Additionally, the provision of sidepaths along South Salem Street frontage, Apex Barbecue Road frontage, and the main collector through the development will benefit the residents of the neighborhood and surrounding areas by creating complete pedestrian connections along major corridors to the north, east, and west of the property. See conditions 12 and 13 on C2.00.

- *The design of development in the PD Plan for the PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing proposed or proposed street system in the surrounding area indicated that a through street is not essential in the location of the proposed cul-de-sacs, or where sensitive environmental features such as streams, floodplains, or wetlands would be substantially disturbed by making road connections.*

» Depot 499 will create a walkable urban grid of residential and non-residential uses connected by sidewalks, tree-lined streets, and greenways. Cul-de-sacs will be avoided to enhance the connectivity of the development.

- *The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.*

» Depot 499 PUD-CZ is consistent with The Town of Apex's Future Land Use Map and compatible with the surrounding land uses. Current zoning surrounding the development includes varying residential densities of HDSF-CZ, MD, and RA as well as PUD-CZ zoning. The Future Land Use Map designates the property as well as its immediate surroundings as Community Mixed Use and Medium/High Density Residential. The 5.41 acres of land designated as Office Employment is requested to change to High Density Residential (see ***Consistency with Land Use Plan).***

- *The development proposed in the PD Plan for the PUD-CZ has architectural and design standards that are exceptional and provide a higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.*

» All multi-family buildings, townhomes, single-family homes, and commercial buildings will be of a higher quality construction than the typical residential or commercial development. Architectural controls for non-residential uses as well as sample elevations illustrating the high-quality appearance of the multi-family units, townhomes, and single-family homes are included with the PUD-CZ application.

All site-specific standards and conditions of this PD Plan shall be consistent with all Conditional Zoning (CZ) District standards set forth in the UDO Section 2.3.3, Conditional Zoning Districts. The proposed PUD will provide a development density consistent with the 2045 Land Use Plan designation of High Density Residential, Medium/High Density Residential, Office Employment, and Commercial Services in their respective areas. The Advance Apex Plan describes high density residential as “townhomes, triplexes, quadplexes, and apartments no less than 14 dwelling units per acre…located in close proximity to major commercial areas and transportation corridors” and describes medium/high residential use as "single family homes, duplexes, triplexes, quadplexes, townhomes, and apartments no less than 7 and no more than 14 units per acre...providing a variety of housing options located in close proximity to major transportation corridors." Proposed densities are listed in the Design Controls section of this document.

The proposed development incorporates a village commercial core surrounded by high-density residential living. Multi-family units transition to townhomes and single-family homes adjacent to Scott's Ridge Elementary School and the existing single-family development to its east. Retail, restaurant, civic, and office space exist at the southwestern portion of the property along NC 540 providing separation of residential areas from the highway. Riparian buffers and forested land encompass the residential areas to the north and west, and green spaces are incorporated throughout.

PERMITTED USES

The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

P = Permitted Use

* = Subject to limitations - see descriptions following chart.

Permitted Residential Area uses are allowed in Pods A-J and Pod P on PUD Plan Sheet C2.00

Permitted Non-Residential Area uses are allowed in Pods M-O and Q-T on PUD Plan Sheet C2.00

Permitted Mixed-Use Area uses are allowed in Pods K and L on PUD Plan Sheet C2.00

	Residential Areas	Non-Residential Areas	Mixed-Use Areas
Residential			
Single-Family	P (pod G only)		
Accessory Apartment	P*		
Townhouse	P		
Multi-family or Apartment Units	P (Pods H, I, J, and east of proposed public road in Pod G only)		
Multi-family or Apartment Units (2nd story and above only)		P	P
Condominium (2nd story and above only)		P	P
Congregate living facility	P	P (Pods R, S, T only)	
Family care home	P		
Nursing or convalescent facility		P (Pods R, S, T only)	
Utilities			
Utility, minor	P	P	P
Recreational Uses			
Greenway	P	P	P
Park, Active	P	P	P
Park, Passive	P	P	P
Recreation Facility, private	P		
Entertainment, Indoor		P	P

	Residential Areas	Non-Residential Areas	Mixed-Use Areas
Public and Civic Uses			
Ambulatory Health-care Facility with Emergency Dept.		P (Pods R, S, T only)	
Assembly Hall, non-profit/for-profit		P (Pods R, S, T only)	
Church or place of worship		P (Pods R, S, T only)	
Day Care Facility		P (Pods R, S, T only)	
Drop-in or short-term day care		P	P
Government Services		P (Pods R, S, T only)	
Hospital		P (Pods R, S, T only)	
Veterinary Clinic or Hospital		P (Pods R, S, T only)	
School, Public or Private		P (Pods R, S, T only)	
Transportation facility		P* (Pods R, S, T only)	
Vocational School		P (Pods R, S, T only)	
Food and Beverage Service			
Restaurant, general		P	P
Restaurant, drive-through		P*	P*
Bar, nightclub, wine bar, taproom		P*	P*

Office and Research			
Medical or dental clinic or office		P	P
Office, business or professional		P	P
Publishing Office		P	P
Public Accommodation			
Hotel or Motel		P	P*

Retail Sales and Services			
Artisan Studio		P	P
Barber and Beauty Shop		P	P
Book Store		P	P
Building supplies, retail		P*	
Convenience store, with gas sales		P (excluding Pod 0)	
Convenience store, without gas sales		P	P
Dry cleaners and laundry service		P	P
Farmer's market		P	P
Financial Institution, with or without drive-through		P*	P*
Floral Shop		P	P

	Residential Areas	Non-Residential Areas	Mixed-Use Areas
Retail Sales and Services (continued)			
Funeral Home		P (Pods R, S, T only)	
Gas and fuel, retail			
Greenhouse or nursery, retail		P	
Grocery, general or specialty		P	P
Health/fitness center or spa		P	P
Newsstand or gift shop		P	P
Personal Service		P	P
Pharmacy, with or without drive-through		P*	P*
Printing and copying services, limited		P	P
Repair services, limited		P	P
Retail sales, general		P	P
Studio for art		P	P
Tailor shop		P	P
Theater		P	
Pet services		P	P
Production			
Microbrewery		P	P
Microdistillery		P	P

*Permitted Uses Subject to Limitations:

Accessory Apartment - Homeowner Association covenants shall not restrict the construction of accessory dwelling units.

Transportation facility - Such use shall only be allowed for vehicles serving the use "School, public or private", but is permitted as either a principal or accessory use on a lot.

Drive-through facilities - Any drive-through facility (e.g. restaurant, financial institution, pharmacy) must be located within a multi-tenant building; No free standing drive-through facilities shall be allowed.

Bar, nightclub, wine bar, taproom - Hours of operation Sunday through Thursday shall close by 12 AM and hours of operation Friday through Saturday shall close by 2 AM.

A hotel restaurant or bar with a patio or deck open to the street, shall qualify as vertical integration in mixed-use pods.

Building supplies, retail - The maximum square footage of a building supplies retail store shall be limited to 20,000 square feet.

AFFORDABLE HOUSING

Wake County Public School System has expressed an interest in pursuing affordable housing on surplus property should the School Alternative be pursued. The affordable housing use is permitted in any pod, and the community has expressed interest in pursuing these projects in Apex.

If no such affordable housing project(s) containing at least 45 units has been approved by January 1, 2025, and the Town of Apex has a fund or other mechanism in place by January 1, 2025 to receive donations to construct, subsidize, or participate in the development of affordable housing units (the "Fund"), the developer will contribute $300,000 to this Fund. This contribution represents the approximate value of a 2.0 acre dedication at market value. In the event the Fund has not been established by the Town of Apex by January 1, 2025, the money will be conveyed to a non-profit organization participating in affordable housing. The developer will work with the Town of Apex to identify a mutually acceptable non-profit organization to receive these funds.

Affordable housing units may be provided in any development pod within the project. Regardless of development pod, affordable housing area may be counted as non-residential for the purpose of calculating the 30% non-residential threshold within the mixed-use land designation. Affordable housing units shall only be required to comply with Residential Design Guidelines 1 and 12. For purposes of this condition, affordable housing is defined as housing that on average is affordable to a household with an annual income that is no greater than 60% of the Area Median Income for the respectively-sized household in the Raleigh, NC MSA, as determined by the United States Department of Housing and Urban Development (HUD).

DESIGN CONTROLS

Total Project Area: 200.80 acres

Apex 2045 Land Use Plan - Community Mixed-Use Calculation

- Total Project Area within Community Mixed-Use Designation: 171.90 acres
  - » Required Non-Residential Land Area: 51.57 acres (30%)
  - » Proposed Gross Non-Residential Land Area: 51.57 acres (30%)

Overall Density Limitations (across 200.80-acre site)

- Maximum number of apartments: 850
- Maximum number of Townhomes/Single-family: 650 (50 Single-Family Maximum)
- Maximum Non-Residential Floor Area: 650,000 SF

Overall Land Use Breakdown

• Mixed-Use PODS	~1.88 acres
• Non-Residential PODS	~41.08 acres
• Residential PODS	~93.99 acres
• Area within RCA/Buffers/Right-of-Way	~63.85 acres
• **Total**	**200.8 acres**

Mixed-Use Land Area (PODs K/L)

- Proposed Land Area ~1.88 acres
- Minimum Vertical Integration:
  - » Residential - 24 units (over retail/office) or;
  - » Office - 10,000 SF (over retail)
  - » Maximum Residential Density 120 units

Non-Residential Land Area (PODs M/N/O/Q/R/S/T)

- Proposed Land Area ~ 41.08 acres
- Maximum SF 650,000 SF

Residential Land Area (PODs A-J/P)

- Proposed Land Area ~93.99 acres
- Maximum Density 1,500 units

Note: Acreage and configuration of PODS is approximate. Final size and configuration will be determined at the time of Master Subdivision Plan or Site Plan based on actual field survey and final design.

Residential Design Controls

Single-Family

- Minimum Lot Size: 2,550 square feet
- Minimum Lot Width: 36 feet
- Minimum Lot Depth: 85 feet
- Maximum Building Height: 45 feet (In Pod G, the first row of lots immediately adjacent to the Woodall subdivision shall not exceed 2 stories unless buffer is increased to a 50' Type A buffer)
- Building Setbacks
  - » Front: 20 feet to garage; 8 feet to building façade
  - » Side: 5 feet
  - » Rear: 15 feet
  - » Alley: 5 feet
  - » Corner: 8 feet

Townhomes

- Minimum Lot Width: 16 feet (alley loaded); 18 feet (front loaded)
- Minimum Lot Depth: 65 feet
- Maximum Building Height: 45 feet (In Pod G, the first row of lots immediately adjacent to the Woodall subdivision shall not exceed 2 stories, unless buffer is increased to a 50' Type A buffer)
- Minimum Building Setbacks - Front Loaded
  - » Front: 5 feet from building façade, 20 feet from garage
  - » Rear: 10 feet
  - » Corner: 8 feet
  - » Building separation: 10 feet
- Minimum Building Setbacks - Alley Loaded
  - » Front: 5 feet
  - » Rear: 5 feet
  - » Corner: 8 feet
  - » Alley: 5 feet
  - » Building separation: 10 feet

Apartments/Condominiums

- Maximum Building Height: South Salem Street – 6 stories or 90 ft

  Apex Barbecue Road – 6 stories or 90 ft; The first row of buildings along this frontage shall not exceed 4 stories.
- Minimum Building Height: South Salem Street – 4 stories; a maximum of 25% of buildings along this frontage may be 3 stories

  Apex Barbecue Road – 4 stories; a maximum of 25% of buildings along this frontage may be 3 stories
- Minimum Building Setbacks
  - » Front: 10 feet
  - » Rear: 10 feet
  - » Corner: 10 feet
  - » Building separation: 30 feet

Non-Residential Design Controls

- Maximum Building Height: 100 feet
- Minimum Building Height: 1 story
- Minimum Building Setbacks:
  - » Front: 10 feet
  - » Side: 10 feet
  - » Rear: 10 feet
  - » Corner: 15 feet

Mixed-Use Design Controls

- Minimum Building Height: 3 stories (Rooftop terraces that include a minimum of 1,500 sf of enclosed space for event, amenity, or other use such as a bar or restaurant shall qualify as a 3rd floor)
- Maximum Building Height: 80 feet
- Minimum Building Setbacks:
  - » Front: 10 feet
  - » Side: 10 feet
  - » Rear: 10 feet
  - » Corner: 15 feet

Landscaping, Buffering, and Screening

Refer to PUD Preliminary Layout Plan for perimeter and streetscape buffers.

The 10' Type D Streetfront Buffer shall not be required along minor or major collectors where street trees are provided at a rate equivalent to 1 tree per 1,000 sf of the area that would otherwise be provided as buffer.

ARCHITECTURAL STANDARDS

The proposed development offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. The elevations included are a condition of approval. Elevations included are limited examples of multiple options available. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Residential Master Subdivision Plan or Site Plan submittal.

Residential areas envisioned for Depot 499 will be comprised of single-family homes, attached townhomes, and multi-family units. In order to create a variety of architectural character along the streetscapes, the project will offer a variety of distinct residential elevations - see examples on the following pages. These elevations will incorporate a natural material selection and earth tone color palette with wood, brick or stone accents, which will help to add diversity to the streetscape.

While each of the architectural offerings proposed will have their own identity, a number of common threads will link the different neighborhoods within Depot 499 including color palettes, materials, roofing, and decorative garage doors. Elevations have been included below in an effort to represent the bulk, massing, scale and architectural style of the development.

Additional features used as focal points or key terminus points shall be located within or around the development (i.e. gazebos, fountains, and public art) in order to meet the Community Amenities requirement of the UDO. Other features not mentioned may be considered with administrative staff approval.

Residential Design Guidelines (all product types):

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. All single-family homes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 12 inches from average grade across the front of the house to the finished floor level at the front door.
3. All townhomes shall have a crawl space or have a raised slab foundation which at a minimum rises at least 6 inches from average grade across the front of the house to the finished floor level at the front door.
4. Front-facing garage doors shall have windows, decorative details or carriage-style adornments on them.
5. The garage cannot protrude more than 1 foot out from the front façade or front porch, measured from roof of porch.
6. On single-family homes, the roof shall be pitched at 5:12 or greater (not to include porches, bay windows, etc.).

7. On townhomes, roof line cannot be a single mass; it must be broken up either horizontally and/or vertically between, at minimum, every other unit.
8. House entrances for units with front-facing single-car garages must have a covered porch/stoop area leading to the front door.
9. Rear and side elevations of units that have right-of-way frontage shall have trim around the windows.
10. Four of the following decorative elements shall be used on each building: decorative shake, board and batten siding, decorative porch rails and posts, shutters, decorative functional foundation and roof vents, recessed windows, decorative windows, decorative brick or stone, decorative gables, decorative cornices, or metal roofing.
11. A varied color palette shall be utilized on single family and townhome units throughout the subdivision and shall include siding, trim, shutter, and accent colors complementing the siding colors.
12. All apartment buildings along S. Salem Street shall have interior corridors.
13. Recesses and projections shall be provided for at least 50% of each façade on each apartment building.
14. A solar PV system shall be installed on at least 15% of the single-family homes within the development. All solar installation required by this condition shall be completed or under construction prior to 90% of the building permits being issued for the approved number of single-family lots. The lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended.
15. Solar conduit will be provided on all single-family homes to accommodate the future installation of solar panels.

Proposed Residential Materials

Proposed materials will be of a similar palette to provide consistency of character along with visual interest. Exterior materials that may be incorporated into any of the residential building products include:

- Cementitious lap siding
- Board and batten siding
- Shake and shingle siding
- Wood siding
- Stone or synthetic stone
- Brick

Additional building materials may be included with administrative staff approval. Substitute materials shall be allowed by staff as long as they are determined by the Planning Director to be substantially similar.

Representative Residential Building Elevations

Single-Family Home Elevations

Townhouse Elevations

Townhouse Elevations

Front Elevation 5-Plex

Townhouse Elevations

Townhouse Elevations

Affordable Housing Elevation

Elevation represents the minimum standard for affordable units. At the time of Master Subdivision or Site Plan, alternate elevations may be proposed and approved by staff as long as they are substantially similar.

Multi-Family Elevations

Non-Residential Design Guidelines:

- Buildings shall be arranged to define, create and activate edges and public places. They shall be situated to address the street and provide massing that looks to define the street realm for pedestrians as well as automobiles.
- Every effort shall be made to locate service and loading areas in the rear of structures. Where these features are located on the side of the building along a public road, they will be designed in such a way that they do not distract from the character of the development and they will be screened in accordance with the UDO.
- Elevations of buildings facing a street shall incorporate detailing in keeping with the character and style of the architectural features on adjacent buildings.
- Elevations of corner buildings shall utilize design features such as variations in wall plane, variation in building mass and window placement to generate street interest.
- Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials and ornamental details as well as landscaping shall be incorporated to add visual interest. Large expanses of blank walls, greater than 25' in length or height, shall be broken up with windows or other architectural features to reduce visual impacts.
- Differences of roof height, pitch, ridgelines and materials shall be used to create visual interest and avoid repetition.
- Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material.
- Solar conduit shall be provided on every non-residential building that has a flat roof, not to include public or private schools.

Non-residential exteriors shall incorporate variation in materials. The primary (front) façade and other façades located along a public right-of-way may include:

- Brick and/or stone masonry
- Decorative concrete block (integral color or textured)
- Stone accents
- Aluminum storefronts with anodized or pre-finished colors
- EIFS cornices, and parapet trim
- EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only 25% of each building façade
- Precast concrete
- Soffit and fascia materials to be considered include EIFS with crown trim elements
- Cementitious siding

Non-residential buildings visible from public view shall be constructed with compatible materials to other uses in the PUD. Rear elevations of non-residential buildings facing opaque landscape buffers or not visible from vehicular use areas or public rights-of-way may incorporate decorative concrete masonry, metal coping, or EIFS trim.

Exterior materials not allowable as part of the residential or non-residential development are as follows:

- Vinyl siding
- Painted, smooth faced concrete block
- Metal Walls

Public Art

Refer to PUD Preliminary Layout Plan for potential locations dedicated to public art. Two location options are provided and a minimum of one location will be implemented.

PARKING AND LOADING

As part of the review and approval of a Master Subdivision Plan or Site Plan, the Planning Director may approve a parking reduction per UDO Section 8.3.9 *or* a reduction up to fifteen (15) percent in the number of required parking spaces (excluding single-family and townhomes), whichever is greater. The latter may be approved if the reduced number of parking spaces will be sufficient to satisfy the demand for parking, based on evidence provided by a licensed traffic engineer in the form of a parking study or other supporting evidence deemed appropriate by the Planning Director.

Guest parking shall be distributed so that there is at least one guest parking space within 200' of each townhome lot. On-street parallel parking stalls may be used to satisfy guest parking requirements.

SIGNAGE

All signage for this PUD shall comply with Section 8.7, *Signs*, of the Town of Apex UDO.

LANDSCAPING

All landscaping for this PUD shall comply with Section 8.2 Landscaping, of the Town of Apex UDO, except for the following provision regarding building landscaping requirements for townhomes (Section 8.2.4 A.3):

- Street trees located within street right-of-way shall count toward landscaping requirements. Additionally, shrubs may be located either on the townhome lot or within HOA owned common areas to meet UDO requirements.

NATURAL RESOURCES AND ENVIRONMENTAL DATA

River Basins and Watershed Protection Overlay Districts

This project is located within the Beaver Creek Drainage Basin, which is within the Cape Fear River Basin. Almost all of the project site is located within the Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Map, and the northeast corner of the property falls under the Secondary Watershed Protection Overlay District. Accordingly, this PUD will comply with all built upon area, vegetated conveyances, structural SCMs and riparian stream buffer requirements of Section 6.1.7.

Resource Conservation Areas (RCA) - Required and Provided

This PUD will be subject to, and meet the requirements of, Section 8.1.2 of the UDO, *Resource Conservation Area* and Section 2.3.4, *Planned Development Districts.*

The PUD will provide a minimum of 20% of the gross project area as a Resource Conservation Area (RCA). Designated RCA areas will be consistent with the items listed in Section 8.1.2(B) of the Town's UDO. Preserved streams, wetlands, and associated riparian buffers provide the primary RCAs throughout the site. Additional RCA areas may include perimeter and streetfront buffers, stormwater management areas (as permitted by the UDO), and greenway trails.

Floodplain

The project site does not sit within a designated current or future 100 year floodplain as shown on the Town of Apex FEMA map and FIRM Panel 3720073100J, dated May 2, 2006.

Tree Canopy

The Apex 2045 Land Use Plan designates the majority of this property as Community Mixed-Use. This land use designation prescribes a mix of High Density Residential (over 14 units/acre), Office Employment and Commercial uses. In order to implement this mix of uses in compliance with the land use plan, it will be necessary to remove some tree canopy outside of environmentally protected areas.

As part of the implementation of this community, the project will re-establish a new tree canopy by creating a new urban street grid containing canopy trees within the public rights-of-way, along with vegetated perimeter buffers, pocket parks, community gathering spaces and other open space areas.

To further illustrate the project's commitment to preserving and re-establishing tree canopy in our region, at the time of first subdivision or site plan submittal, the developer will provide a donation of $10,000 to a local non-profit organization with a mission towards tree preservation and tree replacement. We estimate the project will retain or replace almost 70% of existing canopy on the residential portion, and preserve or replant an additional 27% on the non-residential portion of the development, bringing replacement amount close to 97%. As such, this donation represents an assigned per-tree value in substitute canopy for the remaining 3%. The developer will work with the Town of Apex to identify a mutually acceptable non-profit organization to receive these funds. Developer is responsible for providing documentation for qualifying organizations.

Historic Structures

As confirmed by the North Carolina State Historic Preservation Office and Capital Areas Preservation, Inc. there are no historic structures present within the project boundary.

STORMWATER MANAGEMENT

This PUD shall meet all stormwater management requirements for quality and quantity treatment in accordance with Section 6.1.7 of the UDO such that:

- Post development peak runoff shall not exceed pre-development peak runoff conditions for the 1 year, 10 year, and 24-hour storm events.
- Treatment for the first 1 inch of runoff will provide 85% removal of total suspended solids.

Acceptable stormwater structures shall include detention ponds, constructed wetlands, bio-retention areas, or other approved devices consistent with the NC DEQ Stormwater Design Manual and the Town of Apex UDO.

PARKS AND RECREATION

The project was reviewed by the Parks, Recreation, and Cultural Resources Advisory Commission on February 26, 2020 and fee-in-lieu of dedication was recommended and unanimously approved.

Number of Units*	Housing Type	Fee Per Unit**	Total Fees
50	Single-Family	$3446.98	$172,349.00
600	Townhomes	$2321.54	$1,392,924.00
850	Apartments	$2044.05	$1,737,442.50
Total	-	-	$3,302,715.50

*Final unit mix will be determined at the time of Master Subdivision.

**Fees are based upon approval date and runs with project with exception of the increase in total unit count.

PUBLIC FACILITIES

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F)(1)(f) and be designed according to sound engineering standards. Road and utility infrastructure shall be as follows:

General Roadway Infrastructure

All proposed roadway infrastructure and right-of-way dedications will be consistent with the Town of Apex UDO and Transportation Plan if the requested Transportation Plan amendments are approved.

The minor collector street extending from the major collector street at South Salem Street to Apex Barbecue Road will not be directly accessed by residential driveways.

The location of the major collector street connection to South Salem Street is subject to change based on the ultimate layout and will be determined in coordination with staff during master subdivision plan review.

Water and Sanitary Sewer

All lots within the project will be served by Town of Apex for water and sanitary sewer. The utility design will be finalized at the time of master subdivision plan approval and be based on available facilities adjacent to the site at that time. The design will meet the current Town of Apex master plans for water and sewer.

Developer may seek a developer agreement with the Town for the oversized waterline sizing along the site frontage and waterline connection under 540 for reimbursement per the Town's Policy Regarding Town Participation in Utility Projects.

Transit

At least two bus stops shall be provided at locations to be determined at the time of subdivision or site plan approval. In accordance with Apex standards, stops will provide a concrete landing pad between sidewalk and curb, an amenity pad behind the sidewalk to accommodate future shelter, lighting at bus stop location, and a sign post for a future sign.

Walkability

The following facilities will be provided to contribute to a walkable community within and surrounding the Depot 499 development:

- Five-foot wide public sidewalks along both sides of all streets unless otherwise noted
- Six-foot wide private walking trails throughout the development
- A greenway connection to Scott's Ridge Elementary School (subject to WCPSS approval)
- Ten-foot wide sidepaths along South Salem Street frontage, Apex Barbecue Road frontage, and the main collector through the development as shown on Sheet C2.00.
- Construction or payment-in-lieu of approximately 910 linear feet of off-site sidewalks and side paths to complete missing pedestrian connections to the project from adjoining communities as shown on Sheet C2.00.
- Up to two high visibility crosswalks constructed along Apex Barbecue Road (subject to NCDOT and the Town of Apex approval)
- Bicycle and pedestrian facilities along existing road frontage along the boundaries of the PUD shall be installed as each pod is developed, and no later than the completion of Phase 2 as described in the zoning conditions related to traffic impacts.

Other Utilities and Facilities

Electricity will be provided by Apex Electric. Phone, cable, and gas will provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Streetscape features may be used to help with establishing a framework for the proposed development. These features may include street trees within the public right-of-way, benches, trash receptacles, and street and/or pedestrian lights compatible with their context. Other features may include markers, bollards, and unique paving patterns.

SCHOOL ALTERNATIVE

If a school use is pursued on Pods R-T on Land Use Option 1, an alternative transportation alignment is permitted as shown on the plan set. This alignment includes roundabouts to facilitate movements along the collector and out to S. Salem Street at site drive #7 to minimize mixing with school bus movements. School buses will access site drive #7 which Wake County Public School System requires to be an at-grade intersection. If a school use is not pursued on Pods R-T, the original collector alignment will be maintained as shown on Land Use Option 2. This intersection will also be at grade to provide needed access to the commercial and office uses on these high-visibility pods.

If a school is pursued on Pods R-T, the transportation commitments on PUD Plan Sheet C2.00 may be modified by the Town Council at site plan to adjust or reduce commensurate with reduced trip generation and/or modified movements. Traffic improvements may be modified based on a revised TIA with the inclusion of the school.

PHASING PLAN

This PUD will be completed in up to 10 phases. Location of phases will be determined at the time of Master Subdivision Review and Approval.

CONSISTENCY WITH LAND USE PLAN

The proposed land use will be consistent with Advance Apex 2045: The Apex Comprehensive Plan, adopted in February 2019 if the requested Land Use Map amendment is approved.

The Future Land Use Map designates a majority of the property as Community Mixed Use, which encompasses High Density Residential, Office Employment, and Commercial Services. The remaining northern portion of the property is divided into three classifications - Medium/High Density Residential, Office Employment, and Commercial Services. A Future Land Use Map Amendment is requested for approximately 5.41 acres of land in the northeast corner of PIN 0731761944 from Office Employment to High Density Residential.

The proposed development will align with these uses and include single-family homes, townhomes, apartments, and non-residential uses accordingly. Thirty percent of the Community Mixed Use designated area will be non-residential uses.

COMPLIANCE WITH UDO

The development standards adopted for this PUD are in compliance with those set forth in the current version of the Town's Unified Development Ordinance (UDO).

TRANSPORTATION IMPROVEMENTS

The following zoning conditions represent the recommendations by Apex staff based on a review of the TIA prepared for the Depot 499 development plan. Reported lane lengths represent storage length and do not include full width deceleration or taper length unless stated otherwise. While not all staff recommendations match what was recommended in the TIA or otherwise recommended by NCDOT, they represent the findings of Apex staff based on an interpretation of the requirements of the UDO to mitigate traffic impacts of the proposed development.

All recommendations are subject to consideration by Town Council, and on state-maintained roadways are ultimately subject to review and approval by NCDOT. NCDOT may reject and/or require alternative improvements compared to zoning conditions approved by Apex on state-maintained roadways. If offsite right of way or easements cannot be acquired by the developer through private negotiation, developer shall request legal assistance from the Town in the interest of obtaining such property for the purposes of satisfying the zoning conditions. If ROW is unable to be obtained, a fee-in-lieu may be accepted per UDO 7.1.7. During buildout, if the subdivision or site plan submittals exceed the trip generation potential that was studied in the original TIA, a revised analysis can be prepared, if requested by staff.

"Phase 1" in the following conditions represents improvements required prior to platting no more than 450 townhomes and/or single family homes, and/or certificate of occupancy for no more than 400 apartment dwelling units, and/or certificate of occupancy for no more than 150,000 square feet of commercial development. If a school is pursued on Pods R-T, the transportation commitments on PUD Plan Sheet C2.00 may be modified by the Town Council at site plan pursuant a modified TIA to adjust or reduce commensurate with reduced trip generation and/or modified movements. Addition of a school site in Phase 1 will require an updated TIA to reevaluate Phase 1 improvements which may result in modified and additional required improvements during that phase, subject to Apex and NCDOT approval.

Improvements to be constructed in Phase 1 as defined above:

- Apex Barbecue Road and Kelly Road
  - » Construct a 200-foot westbound left-turn lane on Apex Barbecue Road.
  - » Construct a 200-foot eastbound left-turn lane on Apex Barbecue Road.

"Phase 2" in the following conditions represents improvements required prior to platting no more than 600 townhomes and/or single family homes, and/or certificate of occupancy for no more than 600 apartment dwelling units, and/or certificate of occupancy for no more than 300,000 square feet of commercial development.

Improvements to be constructed in Phase 2 as defined above:

- S. Salem Street and Southbound NC-540 Ramps (Signalized)
  - » Extend the southbound right turn lane on the ramp to provide 375 feet of storage and place it under signalized control rather than free-flow.
  - » Construct an additional westbound through lane on S. Salem Street prior to the interchange, extending through the intersection of NC-540 Northbound Ramps across the bridge and through the intersection of NC-540 Southbound Ramps in order to provide two contiguous westbound through lanes (see alternative below)*.
- S. Salem Street and Northbound NC-540 Ramps (Signalized)
  - » Construct two contiguous westbound through lanes carried from the site frontage across the bridge and through the intersection of Southbound NC-540 Ramps (see alternative below)*.
- *Alternative recommendations for NC 540 Interchange Ramps, Phase 2
  - » *Developer shall construct an additional westbound through lane on S. Salem Street at Southbound NC-540 Ramps starting immediately west of the bridge for a minimum of 200 feet and construct a 200-foot westbound right turn lane on S. Salem Street.
  - » *Developer shall construct an additional 150-foot southbound left turn lane on the Northbound NC-540 Exit Ramp, and begin an additional eastbound/northbound receiving through lane on S. Salem Street, carrying that additional (second) through lane across the development frontage and terminating in a left turn lane at Apex Barbecue Road.
  - » *Developer shall terminate the additional westbound/southbound through lane on S. Salem Street as a right turn lane at the NC 540 Northbound Ramps.

- S. Salem Street and Site Drive 7 (full movement access nearest NC 540)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
  - » Install a traffic signal once warranted and permitted by NCDOT. If not warranted, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirements to install a traffic signal.
- S. Salem Street and Site Drive 4 (between Site Drive 7 and Site Drive 1)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
- S. Salem Street and Site Drive 1 (main access for townhomes & commercial buildings)
  - » Construct an additional southbound through lane on S. Salem Street, converting the right turn lane to a through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
  - » Install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.

  S. Salem Street and Site Drive 3 (limited-movement access for commercial buildings north of Site Drive 1)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.
- S. Salem Street and Site Drive 6 (right-in/right-out access nearest Apex Barbecue Road)
  - » Construct an additional southbound through lane on S. Salem Street providing two southbound through lanes with a shared through-right lane.
  - » *For alternative NC 540 Interchange improvements, also construct an additional northbound through lane on S. Salem Street providing two northbound through lanes.

- S. Salem Street and Apex Barbecue Road
  - » Convert the existing southbound right turn lane on S. Salem Street to a through lane in order to provide two southbound through lanes carried southward across the site frontage.
  - » Construct a 200-foot southbound right turn lane.
  - » Extend the northbound left turn lane on S. Salem Street to provide 300 feet of storage (*or for alternative NC 540 Interchange improvements, terminate the additional northbound through lane as a left turn lane).
  - » Extend the eastbound left turn lane on Apex Barbecue Road to provide 375 feet of storage.
- Apex Barbecue Road and Kelly Road
  - » Construct a second northbound through lane on Kelly Road that starts 800 feet south of the intersection and continues for approximately 1,000 feet north, dropping off with a 45:1 merge taper beyond the intersection of Grand Kelly Way.
  - » Widen the southbound approach of Kelly Road to provide a two-way left turn lane from Apex Barbecue Road to Karawind Lane.
  - » Construct a 200-foot southbound right turn lane on Kelly Road.

Improvements required with construction of Site Drives:

- S. Salem Street and Site Drive 7 (full movement access nearest NC 540)
  - » With construction of Site Drive 7, developer shall:
    - › Provide a 150-foot eastbound left turn lane on the driveway.
    - › Construct a 250-foot northbound left turn lane on S. Salem Street.
    - › Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 7 is constructed prior to Phase 2.
- S. Salem Street and Site Drive 4 (between Site Drive 7 and Site Drive 1)
  - » With construction of Site Drive 4, developer shall:
    - › Provide a minimum of 600 feet of separation between Site Drive 4 and both of the adjacent intersections, Site Drive 7 and Site Drive 1, in order to construct northbound left-over access with 150 feet of storage at Site Drive 4. Otherwise, Site Drive 4 shall be constructed as a right-in/right-out access.
    - › Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 4 is constructed prior to Phase 2.
- S. Salem Street and Site Drive 1 (main access for townhomes & commercial buildings)
  - » With construction of Site Drive 1, developer shall:
    - › Provide a 150-foot eastbound left turn lane on the driveway.
    - › Construct a 200-foot northbound left turn lane on S. Salem Street.
    - › Construct a 100-foot southbound right turn lane on S. Salem Street.

- S. Salem Street and Site Drive 3 (limited-movement access for commercial buildings north of Site Drive 1)
  - » With construction of Site Drive 3, developer shall:
    - › Construct Site Drive 3 as a right-in/right-out, left-over access.
    - › Construct a 150-foot northbound left turn lane on S. Salem Street.
    - › Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 3 is constructed prior to Phase 2.
- S. Salem Street and Site Drive 6 (right-in/right-out access nearest Apex Barbecue Road)
  - » With construction of Site Drive 6, developer shall:
    - › Provide right-in/right-out access with a minimum offset of 250 feet from Apex Barbecue Road.
    - › Construct a 100-foot southbound right turn lane to later be converted to a through lane if Site Drive 6 is constructed prior to Phase 2.
- Apex Barbecue Road and Site Drive 5 (right-in/right-out access nearest S. Salem Street)
  - » With construction of Site Drive 5, developer shall:
    - › Provide right-in/right-out access with a minimum offset of 250 feet from S. Salem Street.
    - › Construct a 100-foot eastbound right turn lane on Apex Barbecue Road.
- Apex Barbecue Road and Site Drive 2 / St. Mary Magdalene
  - » With construction of Site Drive 2, developer shall:
    - › Provide a full movement intersection aligned with the St. Mary Magdalene driveway.
    - › Provide a 150-foot northbound left turn lane on the driveway.
    - › Construct a 100-foot westbound left turn lane on Apex Barbecue Road.
    - › Construct a 100-foot eastbound right turn lane on Apex Barbecue Road.
- Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive
  - » Upon opening access to Aspen River Lane, developer shall:
    - › Install a double yellow centerline and edge line pavement markings per the Town of Apex major collector street typical section along Aspen River Lane and Woodall Crest Drive to Apex Barbecue Road.
  - » Developer shall install a traffic signal once warranted and permitted by NCDOT. If not warranted in Phase 2, developer shall pay a fee in lieu for estimated design and construction cost of a traffic signal. If not permitted by NCDOT upon build-out of Phase 2, developer shall be released from the requirement to install a traffic signal.

LAND PLANNING,
LANDSCAPE ARCHITECTURE +
CIVIL ENGINEER

DEVELOPER

MCADAMS

LENNAR

DEPOT 499

SOUTH SALEM STREET & APEX BARBECUE ROAD

APEX, NC, 27502

PLANNED DEVELOPMENT PLAN FOR PUD-CZ

PROJECT NUMBER: LEN-19090

DATE: JANUARY 02, 2020

SHEET INDEX

C1.00 EXISTING CONDITIONS
C2.00 PRELIMINARY LAYOUT PLAN
C3.00 PRELIMINARY UTILITY AND STORMWATER PLAN

AERIAL AND VICINITY MAP

1"=1000' SCALE

OWNERS

1. MEKA, NARENDRA
   PIN: 731459383
   0 KELLY RD
   APEX, NC 27502
2. VARYA LLC
   PIN: 731554102
   1604 SALEM ST
   APEX, NC 27502
3. POE ACRES FAMILY FARM LLC
   PIN: 731564395
   0 APEX BARBECUE RD
   APEX, NC 27502
4. HUNTER, CAREY B
   PIN: 731641147
   1525 S SALEM ST
   APEX, NC 27502
5. SZYMKIEWICS, PAUL M JIN, WEI
   PIN: 731645370
   1420 S SALEM ST
   APEX, NC 27502
6. UTLEY, PAMELA
   PIN: 731646532
   1420 S SALEM ST
   APEX, NC 27502
7. POE ACRES FAMILY FARMS LLC
   PIN: 731657116
   1330 S SALEM ST
   APEX, NC 27502
8. POE, DARYL POE, JEANNE
   PIN: 731676714
   6401 APEX BARBECUE RD
   APEX, NC 27502
9. POE ACRES FAMILY FARMS LLC
   PIN: 731750984
   1300 S SALEM ST
   APEX, NC 27502
10. POE ACRES FAMILY FARMS LLC
    PIN: 731761944
    0 APEX BARBECUE RD
    APEX, NC 27502
11. POE, WILLIAM DOUGLAS POE, JEAN S
    PIN: 731766588
    1216 S SALEM ST
    APEX, NC 27502
12. REGENCY INTERNATIONAL INVESTMENTS LLC
    PIN:731873224
    0 APEX BARBECUE RD
    APEX, NC 27502

SITE DATA

DEVELOPER	LENNAR 1100 PERIMETER PARK DRIVE, SUITE 112 MORRISVILLE, NC 27560
PARCELS	731459383, 731554102, 731564395, 731641147, 731645370, 731646532, 731657166, 731676714, 731750984, 731761944, 731766588, 731873224 (SEE TABLE ON COVER SHEET FOR OWNER INFORMATION)
SITE AREA	GROSS AREA: 200.80 AC
EXISTING ZONING	RA AND B1-CZ
PROPOSED ZONING	PUD-CZ
RIVER BASIN	CAPE FEAR
WATERSHED OVERLAY	PRIMARY WATERSHED OVERLAY
MAX BUILT UPON AREA (IMPERVIOUS)	70%
2045 LAND USE MAP DESIGNATION	CURRENT 2045 LAND USE MAP DESIGNATION: COMMUNITY MIXED USE (HIGH DENSITY RESIDENTIAL, COMMERCIAL SERVICES, AND OFFICE EMPLOYMENT), MEDIUM/HIGH DENSITY RESIDENTIAL, COMMERCIAL SERVICES, AND OFFICE EMPLOYMENT PROPOSED 2045 LAND USE MAP DESIGNATION: A CHANGE IS REQUESTED FOR APPROXIMATELY 5.41 ACRES OF LAND IN THE NORTHEAST CORNER OF PIN 731761944 FROM OFFICE EMPLOYMENT TO HIGH DENSITY RESIDENTIAL.
PROPOSED USE	MIXED-USE DEVELOPMENT WITH OFFICE, RETAIL, SINGLE-FAMILY, TOWNHOMES, AND MULTI-FAMILY UNITS
MAXIMUM DENSITY	APARTMENTS: 850 TOWNHOMES/SINGLE-FAMILY: 650 (50 SINGLE-FAMILY MAXIMUM) NON-RESIDENTIAL: 650,000 SF
AREA DESIGNATED AS MIXED USE ON 2045 LUM	171.90 AC
AREA OF MIXED USE PROPOSED AS NON-RESIDENTIAL	51.57 AC
MAXIMUM SF OF NON-RESIDENTIAL LAND AREA	650,000 SF
PERCENT OF MIXED USE AREAS PROPOSED AS NON-RESIDENTIAL	30%
BUFFER CALL IDENTIFICATION NUMBER	APEX 17-004

SINGLE-FAMILY		
LOT WIDTH	MINIMUM	36'
LOT DEPTH	MINIMUM	85'
LOT SIZE	MINIMUM	2,550 SF
BUILDING HEIGHT	MAXIMUM	45' (IN POD G, THE FIRST ROW OF LOTS IMMEDIATELY ADJACENT TO THE WOODALL SUBDIVISION SHALL NOT EXCEED 2 STORIES UNLESS BUFFER IS INCREASE TO A 50' TYPE A BUFFER)
SETBACKS	SIDE	5'
	FRONT	8' (HOUSE-BUILDING FACADE) 20' (GARAGE)
	CORNER SIDE	8'
	REAR	15'
	ALLEY	5'
TOWNHOMES		
LOT WIDTH	MINIMUM	16' ALLEY-LOADED / 18' FRONT-LOADED
LOT DEPTH	MINIMUM	65'
BUILDING HEIGHT	MAXIMUM	45' (IN POD G, THE FIRST ROW OF LOTS IMMEDIATELY ADJACENT TO THE WOODALL SUBDIVISION SHALL NOT EXCEED 2 STORIES, UNLESS BUFFER IS INCREASE TO A 50' TYPE A BUFFER.
SETBACKS	SIDE	5'
	FRONT	FRONT-LOADED 5' (HOUSE-BUILDING FACADE) 20' (GARAGE) ALLEY-LOADED 5' (HOUSE-BUILDING FACADE)
	CORNER SIDE	8'
	REAR	FRONT-LOADED 10' ALLEY-LOADED 5'
	ALLEY	5'
	BUILDING SEPARATION	10'
APARTMENTS		
BUILDING HEIGHT	MINIMUM	SOUTH SALEM STREET: 4 STORIES; A MAXIMUM OF 25% OF BUILDINGS ALONG THIS FRONTAGE MAY BE 3 STORIES APEX BARBECUE ROAD: 4 STORIES; A MAXIMUM OF 25% OF BUILDINGS ALONG THIS FRONTAGE MAY BE 3 STORIES
	MAXIMUM	SOUTH SALEM STREET: 6 STORIES OR 90' APEX BARBECUE ROAD: 6 STORIES OR 90'; THE FIRST ROW OF BUILDINGS ALONG THIS FRONTAGE SHALL NOT EXCEED 4 STORIES
SETBACKS	FRONT	10'
	CORNER SIDE	10'
	REAR	10'
	BUILDING SEPARATION	30'
FEMA FIRM PANEL	3720073100J	
RESOURCE CONSERVATION AREA (RCA)	THE PUD WILL PROVIDE A MINIMUM OF 20% OF THE GROSS PROJECT AREA AS RCA.	

MIXED-USE DESIGN CONTROLS		
MAX BUILDING HEIGHT		80'
MIN BUILDING HEIGHT		3 STORIES (ROOFTOP TERRACES THAT INCLUDE A MINIMUM OF 1,500 SF OF ENCLOSED SPACE FOR EVENT, AMENITY, OR OTHER USE SUCH AS A BAR OR RESTAURANT SHALL QUALIFY AS A 3RD FLOOR)
MIN BUILDINGS SETBACKS	SIDE	10'
	FRONT	10'
	CORNER SIDE	15'
	REAR	10'
NON-RESIDENTIAL DESIGN CONTROLS		
MAX BUILDING HEIGHT		100'
MIN BUILDINGS SETBACKS	SIDE	10'
	FRONT	10'
	CORNER SIDE	15'
	REAR	10'

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

McADAMS

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2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CONTACT

BOB ZUMWALT
zumwalt@mcadamsco.com
PHONE: 919.361.5000

CLIENT

LENNAR OF THE CAROLINAS
1100 PERIMETER PARK DRIVE SUITE 112
MORRISVILLE, NORTH CAROLINA
PHONE: 919.465.5900

LENNAR

PROJECT DIRECTORY

LENNAR OF THE CAROLINAS
1100 PERIMETER PARK DRIVE SUITE 112
MORRISVILLE, NORTH CAROLINA
PHONE: 919.465.5900

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1155 07-15-20 ROBERT C. ZUMWALT

REVISIONS

NO.	DATE	
1	02.14.2020	RESPONSE TO COMMENTS
2	03. 13. 2020	RESPONSE TO COMMENTS
3	05.14. 2020	RESPONSE TO COMMENTS
4	06.05. 2020	RESPONSE TO COMMENTS
5	06.29. 2020	RESPONSE TO COMMENTS
5	07.15. 2020	COVERSHEET REVISIONS

PUD-CZ DRAWINGS FOR:

DEPOT 499
APEX, NC, 27502
PROJECT NUMBER: LEN-19090

X:\Projects\LEN\LEN-19090\04-Production\Planning and LA\PUD-CZ\Current Drawings\LEN19090-CS1.dwg, 7/15/2020 2:04:21 PM, Vandenlice, Sean

ADJACENT PROPERTY INFORMATION:

1. WAKE COUNTY BOARD OF EDUCATION PIN: 0731477630
2. WOODALL ESTATES OWNERS ASSOCIATION PIN: 0731575313
3. WOODALL ESTATES OWNERS ASSOCIATION PIN: 0731670122
4. POON, KENNETH RONG, MENGQI PIN: 0731673262
5. PETERSON, CEARA AMELIA, LAURA PIN: 0731673490
6. WOODALL, ANN C. PIN: 0731672786
7. ROMAN CATHOLIC DIOCESES OF RAL NC PIN: 0731782553
8. POE, BOBBY W. POE, ELIZABETH A. PIN: 0731776915
9. POE, BOBBY W. POE, ELIZABETH A. PIN: 0731776890
10. CANTRELL, DONALD T. CANTRELL, MARY E. PIN: 0731779802
11. CANTRELL, DARYL S. CANTRELL, JESSICA PIN: 0731870820
12. CANTRELL, DANIEL T. CANTRELL, COURTNEY PIN: 0731871830
13. BRITT, MARJORIE TINGEN PIN: 0731873793
14. MCKINNISH, LORI PIN: 0731877367
15. CJS APEX ASSEMBLAGE LLC PIN: 0731863120
16. POE ACRES FAMILY FARM LLC PIN: 0731756252
17. CJS APEX ASSEMBLAGE LLC PIN: 0731731163
18. HUNTER, CAREY B. PIN: 0731641147
19. FAHEY FAMILY FARM LLC PIN: 0731434504
20. FAHEY FAMILY FARM LLC PIN: 0731435707
21. SM RALEIGH LLC PIN: 0731441619
22. NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY PIN: 0731452647
23. MILLS, DOROTHY M. MILLS, DAVID G. TRUSTEE PIN: 0731366481
24. NC DEPARTMENT OF TRANSPORTATION TURNPIKE AUTHORITY PIN: 0731457553

GENERAL NOTES

1. TOPOGRAHIC AND SURROUNDING PARCEL INFORMATION TAKEN FROM TOWN OF APEX LIDAR DATA.
2. PORTION OF BOUNDARY BY SURVEY FROM MCADAMS ALTA SURVEY DATED 11-22-2019, ADDITIONAL BOUNDARY FROM WAKE COUNTY GIS.
3. THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON FIRM PANEL 3720073100J DATED MAY 2, 2006.
4. THERE ARE NO HISTORIC STRUCTURES ON THE SUBJECT PROPERTY.
5. A DEMOLITION PERMIT WILL NEED TO BE ISSUED PRIOR TO TAKING DOWN THE EXISTING STRUCTURES. A LETTER OF ASBESTOS ABATEMENT WILL NEED TO ACCOMPANY THE APPLICATION FOR PERMIT.
6. ALL EXISTING STRUCTURES ON THE SUBJECT PROPERTY SHALL BE REMOVED PER TOWN OF APEX STANDARDS AND REQUIREMENTS.
7. BUFFER CALL IDENTIFICATION NUMBER - APEX 17-004.

LEGEND

- AIR CONDITIONING
- LIGHT POLE
- SEWER MANHOLE
- TELEPHONE BOX
- TELEPHONE PEDESTAL
- TRANSFORMER
- UTILITY POLE
- WELL
- OVERHEAD UTILITY
- RIGHT OF WAY
- SEWER EASEMENT
- SEWER
- STORM DRAINAGE

GRAPHIC SCALE
0 100 200 400
1 inch = 200 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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LENNAR

DEPOT 499
PUD-CZ SET
S. SALEM STREET
APEX, NORTH CAROLINA

PETER C. ROSS 155 NORTH CAROLINA LANDSCAPE ARCHITECT 6-29-20 ROBERT C. ZUMMIST

REVISIONS

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4	06.05. 2020	RESPONSE TO COMMENTS
5	06.29. 2020	RESPONSE TO COMMENTS

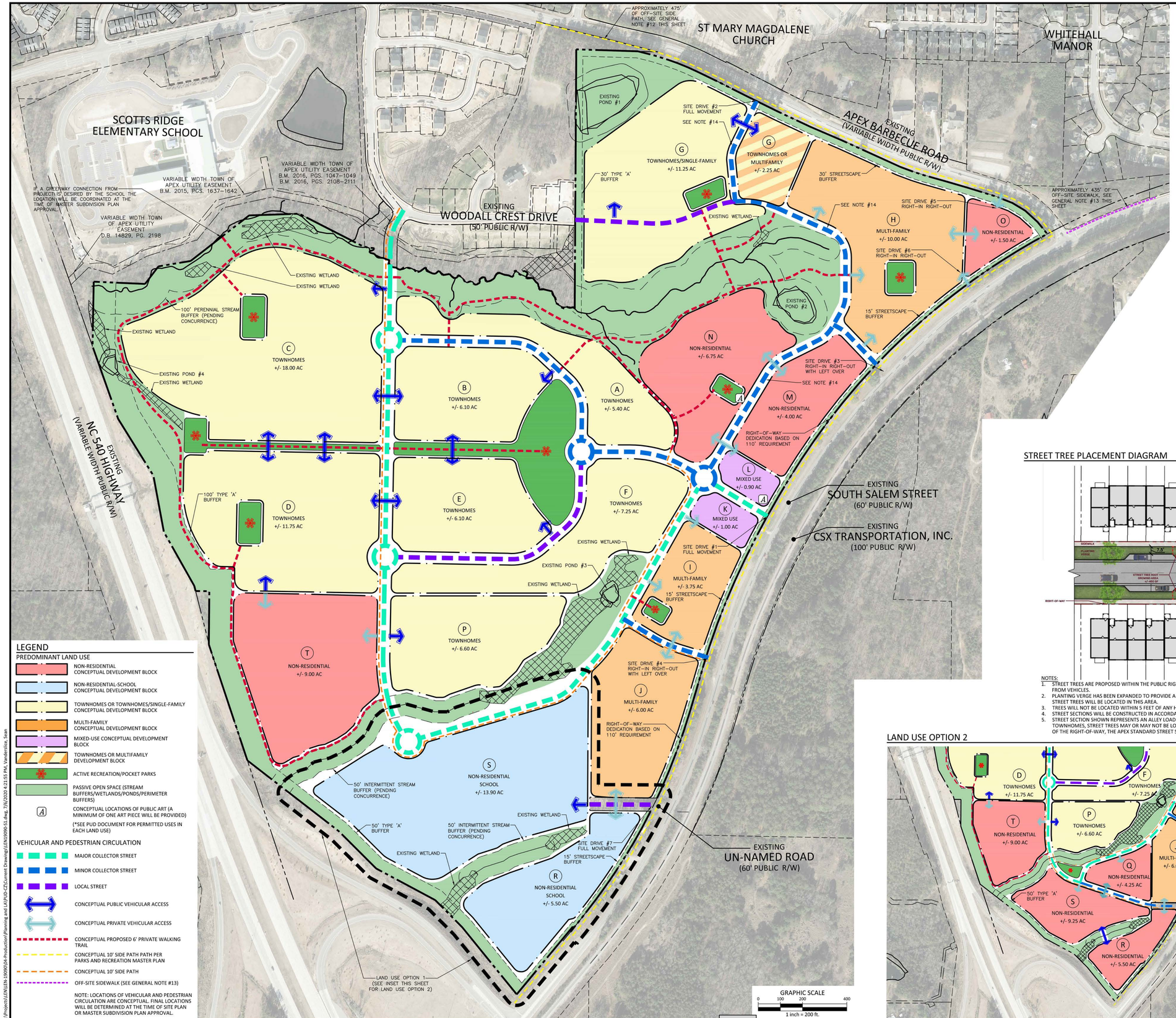
PLAN INFORMATION

PROJECT NO.	LEN-19090
FILENAME	LEN19090-XC1
CHECKED BY	RCZ
DRAWN BY	SMV
SCALE	1"=200'
DATE	03.13.2020

SHEET

EXISTING CONDITIONS
C1.00

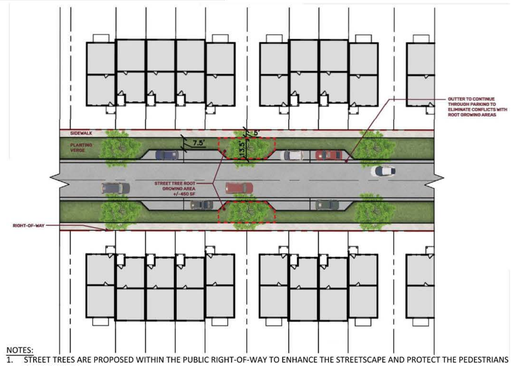
X:\Projects\LEN\LEN-19090\04-Production\Planning and LA\PUD-CZ\Current Drawings\LEN19090-XC1.dwg, 7/6/2020 4:15:42 PM, Vandersice, Sam



GENERAL NOTES

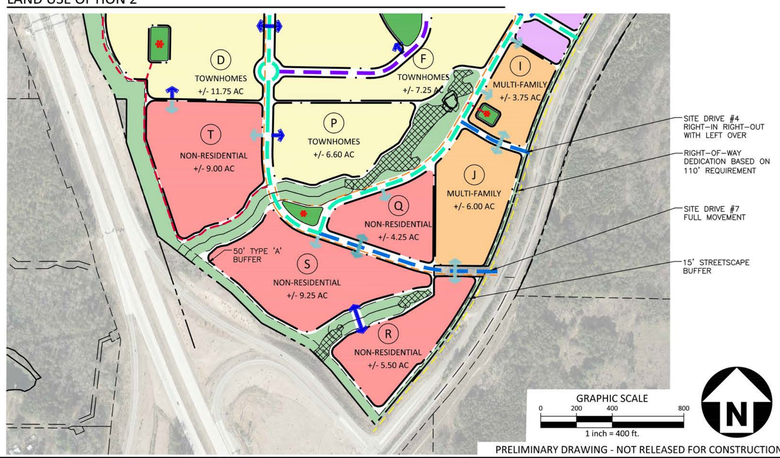
1. REFER TO PUD DOCUMENT FOR COMPLETE LIST OF ALLOWABLE USES FOR EACH TRACT OR DEVELOPMENT AREA.
2. SITE ELEMENTS REQUIRED TO SATISFY RECREATIONAL REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS FOUND IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PARKS AND RECREATION DEPARTMENT
3. SITE ITEMS SUCH AS BUT NOT LIMITED TO, LIGHTING, LANDSCAPING (INCLUDING MULCH), SCREENING (i.e.: DUMPSTERS/TRASH, MECHANICAL/HVAC, ETC.), SITE STABILIZATION (SEEDING), AND PARING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.
4. NO SIGNS ARE APPROVED AS PART OF THE PUD-CZ PLAN APPROVAL. A SEPARATE SIGN PERMIT MUST BE OBTAINED. SIGNAGE WILL COMPLY WITH APEX'S UDO.
5. EXACT ACCESS AND STUB LOCATIONS TO BE FINALIZED AT SUBDIVISION PLAN PHASE.
6. EXACT LOCATION OF RESOURCE CONSERVATION AREA TO BE FINALIZED AT SUBDIVISION PLAN PHASE.
7. INTERNAL PUBLIC STREETS SHALL BE DEDICATED TO THE TOWN OF APEX. ROAD STUB-OUTS SHALL BE PROVIDED PER THE TOWN OF APEX REQUIREMENTS.
8. ALL PARKING STANDARDS WITHIN THE PUD WILL COMPLY WITH THE TOWN OF APEX'S UDO.
9. PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY.
10. PUBLIC AND PRIVATE VEHICULAR ACCESS AND WALKING TRAILS ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE AT TIME OF SITE PLAN OR MASTER SUBDIVISION PLAN APPROVAL.
11. ACREAGE AND CONFIGURATION OF PODS IS APPROXIMATE. FINAL SIZE AND CONFIGURATION WILL BE DETERMINED AT THE TIME OF MASTER SUBDIVISION OR SITE PLAN BASED ON ACTUAL FIELD SURVEY AND FINAL DESIGN.
12. OFF-SITE SIDE PATH - SUBJECT TO RIGHT-OF-WAY OR EASEMENT ACQUISITION, THE PROJECT WILL CONSTRUCT APPROXIMATELY 475 LF OF OFF-SITE SIDE PATH (10' WIDE) ALONG THE SOUTH SIDE OF APEX BARBECUE ROAD ON WAKE COUNTY PIN 0731-67-6714 PRIOR TO THE ISSUANCE OF CERTIFICATES OF OCCUPANCY IN PODS G AND H. IN THE EVENT RIGHT-OF-WAY OR EASEMENT ACQUISITION IS NOT POSSIBLE, THE PROJECT WILL MAKE A PAYMENT-IN-LIEU FOR CONSTRUCTION OF THIS FACILITY IN ACCORDANCE WITH SECTION 7.1.7 OF THE APEX UDO.
13. OFF-SITE SIDEWALK - SUBJECT TO RIGHT-OF-WAY OR EASEMENT ACQUISITION, THE PROJECT WILL CONSTRUCT APPROXIMATELY 435 LF OF OFF-SITE SIDEWALK (5' WIDE) ALONG THE NORTH SIDE OF SOUTH SALEM STREET ON WAKE COUNTY PIN 0731-87-7367 PRIOR TO THE COMPLETION OF PHASE 2 AS DESCRIBED IN THE ZONING CONDITIONS RELATED TO TRAFFIC IMPACTS. IN THE EVENT RIGHT-OF-WAY OR EASEMENT ACQUISITION IS NOT POSSIBLE, THE PROJECT WILL MAKE A PAYMENT-IN-LIEU FOR CONSTRUCTION OF THIS FACILITY IN ACCORDANCE WITH SECTION 7.1.7 OF THE APEX UDO.
14. THE MINOR COLLECTOR STREET EXTENDING FROM THE MAJOR COLLECTOR STREET AT SOUTH SALEM STREET TO APEX BARBECUE ROAD WILL NOT BE DIRECTLY ACCESSED BY RESIDENTIAL DRIVEWAYS.
15. THE LOCATION OF THE MAJOR COLLECTOR STREET CONNECTION TO SOUTH SALEM STREET IS SUBJECT TO CHANGE BASED ON THE ULTIMATE LAYOUT AND WILL BE DETERMINED IN COORDINATION WITH STAFF DURING MASTER SUBDIVISION REVIEW.

STREET TREE PLACEMENT DIAGRAM



NOTES:
1. STREET TREES ARE PROPOSED WITHIN THE PUBLIC RIGHT-OF-WAY TO ENHANCE THE STREETSCAPE AND PROTECT THE PEDESTRIANS FROM VEHICLES.
2. PLANTING VERGE HAS BEEN EXPANDED TO PROVIDE A CLEAR PLANTING AREA OF 450 SF WITH A MINIMUM WIDTH OF 13.5 FEET. STREET TREES WILL BE LOCATED IN THIS AREA.
3. TREES WILL NOT BE LOCATED WITHIN 5 FEET OF ANY HARDSCAPE OR UTILITY.
4. STREET SECTIONS WILL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF APEX STANDARD SPECIFICATIONS.
5. STREET SECTION SHOWN REPRESENTS AN ALLEY LOADED TOWNHOME PRODUCT. FOR STREET SECTIONS WITH FRONT LOADED TOWNHOMES, STREET TREES MAY OR MAY NOT BE LOCATED WITHIN THE RIGHT-OF-WAY. IF STREET TREES ARE LOCATED OUTSIDE OF THE RIGHT-OF-WAY, THE APEX STANDARD STREET SECTION WILL BE CONSTRUCTED TO RATHER THAN THIS SECTION.

LAND USE OPTION 2



LEGEND

PREDOMINANT LAND USE
- NON-RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- NON-RESIDENTIAL-SCHOOL CONCEPTUAL DEVELOPMENT BLOCK
- TOWNHOMES OR TOWNHOMES/SINGLE-FAMILY CONCEPTUAL DEVELOPMENT BLOCK
- MULTI-FAMILY CONCEPTUAL DEVELOPMENT BLOCK
- MIXED-USE CONCEPTUAL DEVELOPMENT BLOCK
- TOWNHOMES OR MULTIFAMILY DEVELOPMENT BLOCK
- ACTIVE RECREATION/POCKET PARKS
- PASSIVE OPEN SPACE (STREAM BUFFERS/WETLANDS/PONDS/PERIMETER BUFFERS)
- [A] CONCEPTUAL LOCATIONS OF PUBLIC ART (A MINIMUM OF ONE ART PIECE WILL BE PROVIDED) (*SEE PUD DOCUMENT FOR PERMITTED USES IN EACH LAND USE)

VEHICULAR AND PEDESTRIAN CIRCULATION
- MAJOR COLLECTOR STREET
- MINOR COLLECTOR STREET
- LOCAL STREET
- CONCEPTUAL PUBLIC VEHICULAR ACCESS
- CONCEPTUAL PRIVATE VEHICULAR ACCESS
- CONCEPTUAL PROPOSED 6' PRIVATE WALKING TRAIL
- CONCEPTUAL 10' SIDE PATH PATH PER PARKS AND RECREATION MASTER PLAN
- CONCEPTUAL 10' SIDE PATH
- OFF-SITE SIDEWALK (SEE GENERAL NOTE #13)

NOTE: LOCATIONS OF VEHICULAR AND PEDESTRIAN CIRCULATION ARE CONCEPTUAL. FINAL LOCATIONS WILL BE DETERMINED AT THE TIME OF SITE PLAN OR MASTER SUBDIVISION PLAN APPROVAL.

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PHONE: 919.465.5900

LENNAR

DEPOT 499
PUD-CZ SET
S. SALEM STREET
APEX, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035155 ENGINEER ROBERT C. ZUMWALT 6-29-20

REVISIONS

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2	03. 13. 2020	RESPONSE TO COMMENTS
3	05.14. 2020	RESPONSE TO COMMENTS
4	06.05. 2020	RESPONSE TO COMMENTS
5	06.29. 2020	RESPONSE TO COMMENTS

PLAN INFORMATION

PROJECT NO.	LEN-19090
FILENAME	LEN19090-S1
CHECKED BY	RCZ
DRAWN BY	SMV
SCALE	1"=200'
DATE	03.13.2020

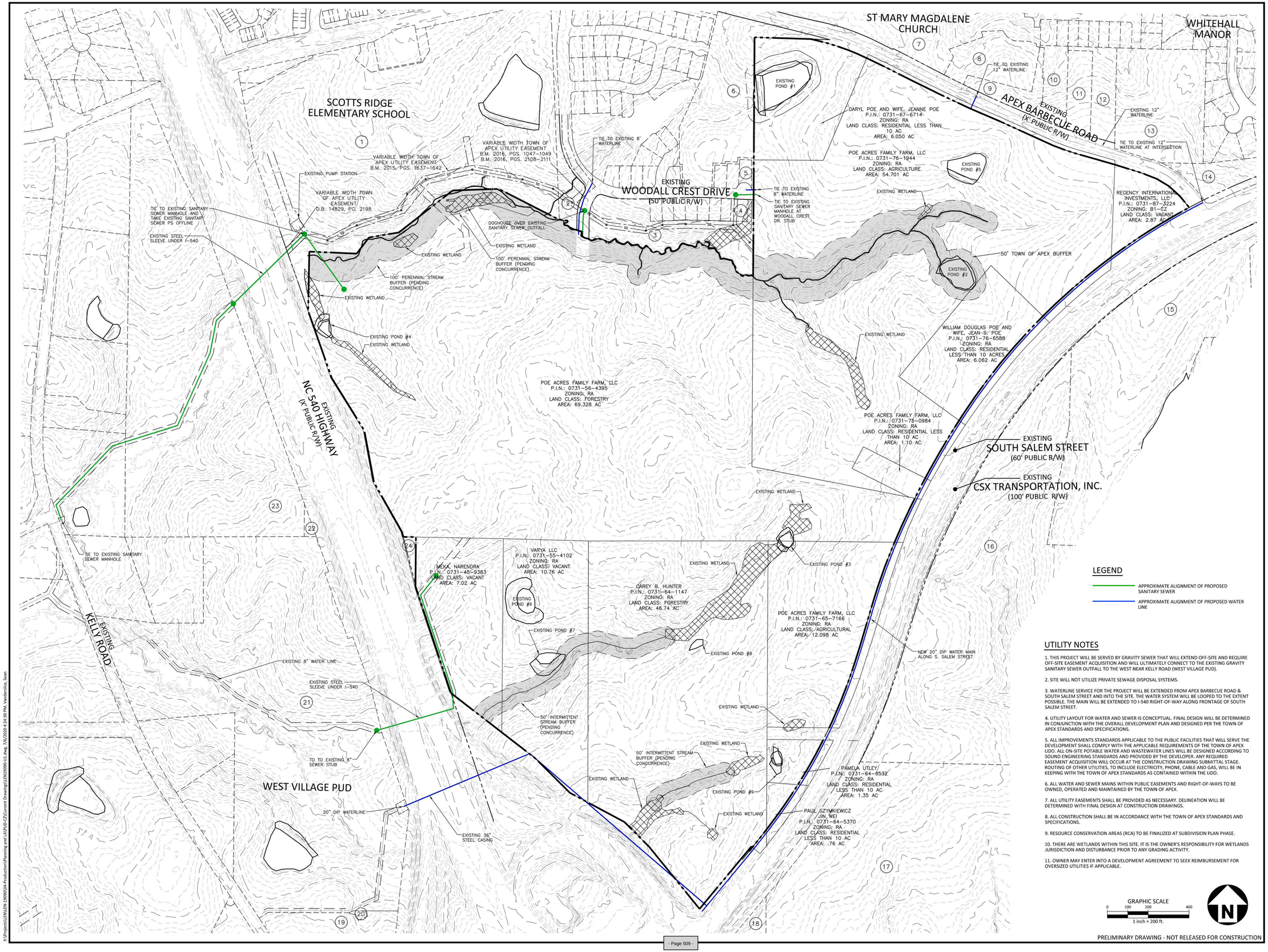
SHEET

PRELIMINARY LAYOUT PLAN

C2.00

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

X:\Projects\LEN\LEN-19090\04-Production\Planning and LA\PUD-CZ\Current Drawings\LEN19090-S1.dwg, 7/6/2020 4:21:55 PM, Vanderslice, Sean



LEGEND

- APPROXIMATE ALIGNMENT OF PROPOSED SANITARY SEWER
- APPROXIMATE ALIGNMENT OF PROPOSED WATER LINE

UTILITY NOTES

1. THIS PROJECT WILL BE SERVED BY GRAVITY SEWER THAT WILL EXTEND OFF-SITE AND REQUIRE OFF-SITE EASEMENT ACQUISITION AND WILL ULTIMATELY CONNECT TO THE EXISTING GRAVITY SANITARY SEWER OUTFALL TO THE WEST NEAR KELLY ROAD (WEST VILLAGE PUD).
2. SITE WILL NOT UTILIZE PRIVATE SEWAGE DISPOSAL SYSTEMS.
3. WATERLINE SERVICE FOR THE PROJECT WILL BE EXTENDED FROM APEX BARBECUE ROAD & SOUTH SALEM STREET AND INTO THE SITE. THE WATER SYSTEM WILL BE LOOPED TO THE EXTENT POSSIBLE. THE MAIN WILL BE EXTENDED TO I-540 RIGHT-OF-WAY ALONG FRONTAGE OF SOUTH SALEM STREET.
4. UTILITY LAYOUT FOR WATER AND SEWER IS CONCEPTUAL. FINAL DESIGN WILL BE DETERMINED IN CONJUNCTION WITH THE OVERALL DEVELOPMENT PLAN AND DESIGNED PER THE TOWN OF APEX STANDARDS AND SPECIFICATIONS.
5. ALL IMPROVEMENTS STANDARDS APPLICABLE TO THE PUBLIC FACILITIES THAT WILL SERVE THE DEVELOPMENT SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE TOWN OF APEX UDO. ALL ON-SITE POTABLE WATER AND WASTEWATER LINES WILL BE DESIGNED ACCORDING TO SOUND ENGINEERING STANDARDS AND PROVIDED BY THE DEVELOPER. ANY REQUIRED EASEMENT ACQUISITION WILL OCCUR AT THE CONSTRUCTION DRAWING SUBMITTAL STAGE. ROUTING OF OTHER UTILITIES, TO INCLUDE ELECTRICITY, PHONE, CABLE AND GAS, WILL BE IN KEEPING WITH THE TOWN OF APEX STANDARDS AS CONTAINED WITHIN THE UDO.
6. ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS AND RIGHT-OF-WAYS TO BE OWNED, OPERATED AND MAINTAINED BY THE TOWN OF APEX.
7. ALL UTILITY EASEMENTS SHALL BE PROVIDED AS NECESSARY. DELINEATION WILL BE DETERMINED WITH FINAL DESIGN AT CONSTRUCTION DRAWINGS.
8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF APEX STANDARDS AND SPECIFICATIONS.
9. RESOURCE CONSERVATION AREAS (RCA) TO BE FINALIZED AT SUBDIVISION PLAN PHASE.
10. THERE ARE WETLANDS WITHIN THIS SITE. IT IS THE OWNER'S RESPONSIBILITY FOR WETLANDS JURISDICTION AND DISTURBANCE PRIOR TO ANY GRADING ACTIVITY.
11. OWNER MAY ENTER INTO A DEVELOPMENT AGREEMENT TO SEEK REIMBURSEMENT FOR OVERSIZED UTILITIES IF APPLICABLE.

GRAPHIC SCALE
0 100 200 400
1 inch = 200 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

LENNAR OF THE CAROLINAS
1100 PERIMETER PARK DRIVE SUITE 112
MORRISVILLE, NORTH CAROLINA
PHONE: 919.465.5900

LENNAR

DEPOT 499
PUD-CZ SET
S. SALEM STREET
APEX, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 33828 ENGINEER RYAN C. AKERS
6/29/2020

REVISIONS

NO.	DATE	
1	02.14.2020	RESPONSE TO COMMENTS
2	03. 13. 2020	RESPONSE TO COMMENTS
3	05.14. 2020	RESPONSE TO COMMENTS
4	06.05. 2020	RESPONSE TO COMMENTS
5	06.29. 2020	RESPONSE TO COMMENTS

PLAN INFORMATION

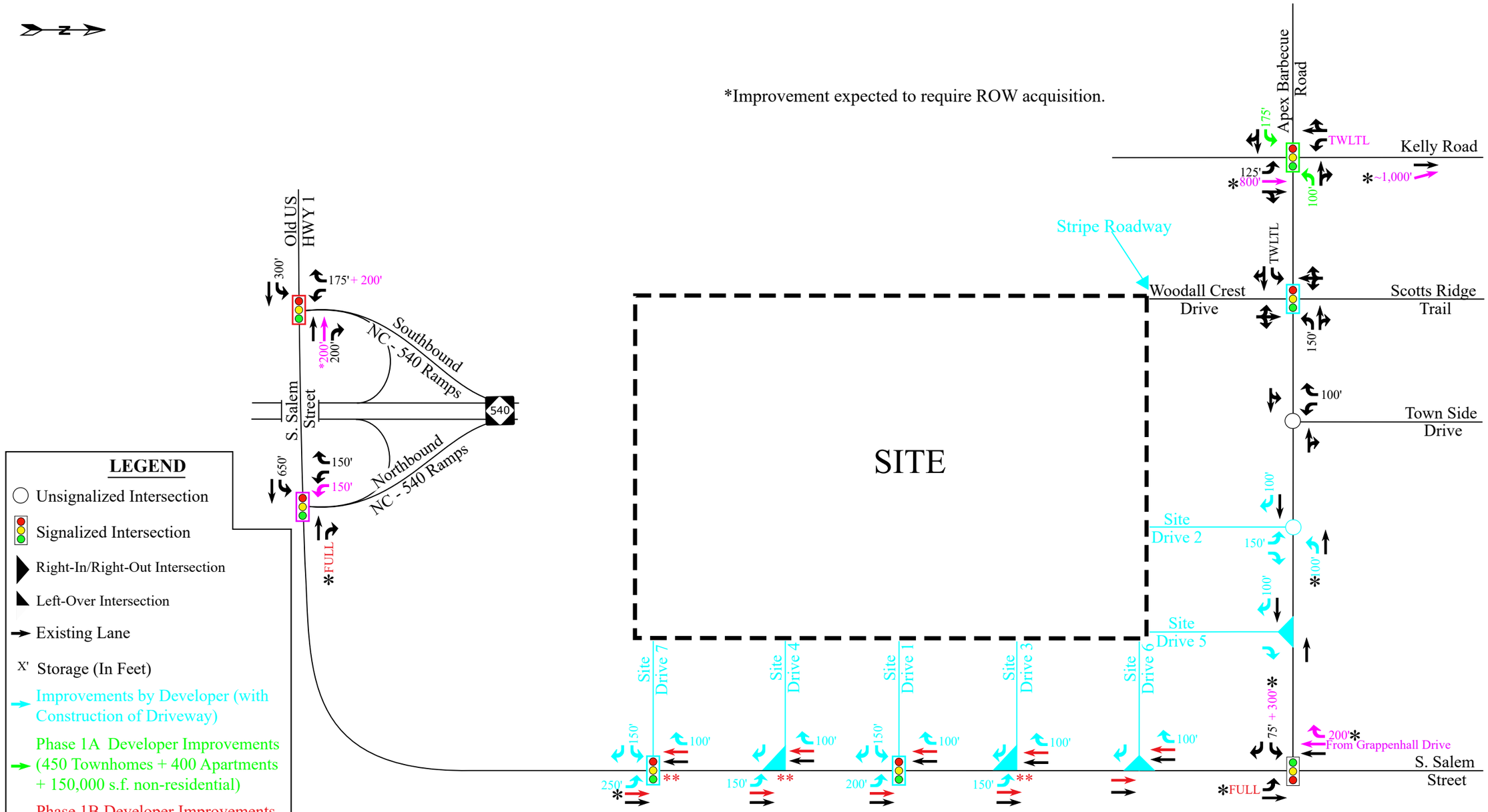
PROJECT NO.	LEN-19090
FILENAME	LEN19090-U1
CHECKED BY	RCZ
DRAWN BY	SMV
SCALE	1"=200'
DATE	03.13.2020

SHEET

PRELIMINARY UTILITY AND STORMWATER PLAN
C3.00

X:\Projects\LEN\LEN-19090\04-Production\Planning and LA\PUD-CZ\Current Drawings\LEN19090-U1.dwg, 7/6/2020 4:24:30 PM, VanJenlice, Sean

*Improvement expected to require ROW acquisition.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- Existing Lane
- X' Storage (In Feet)
- Improvements by Developer (with Construction of Driveway)
- Phase 1A Developer Improvements (450 Townhomes + 400 Apartments + 150,000 s.f. non-residential)
- Phase 1B Developer Improvements (900 residential units + 150,000 s.f. non-residential)
- Phase 2 Developer Improvements (1,200 residential units + 300,000 s.f. non-residential)
- Developer Monitor for Signalization / Signal Timing Modifications

**Access contingent on NCDOT Median Crossover Guideline Exception approval (otherwise access may be restricted at time median construction).

Moving forward. RKA RAMEY KEMP ASSOCIATES

Depot 499
Apex, NC

Developer Lane Configurations with Phasing

Scale: Not to Scale

RAMEY KEMP ASSOCIATES
Moving forward.

T 919 872 5115

5808 Faringdon Place
Raleigh, NC 27609

June 26, 2020

Russell H. Dalton, PE
Town of Apex
Public Works & Transportation
P: 919-249-3358
E: Russell.Dalton@apexnc.org

Reference: Depot 499 – Apex, North Carolina

Subject: **Trip Generation Comparison Letter**

Dear Mr. Dalton,

The contents of this letter present the findings of a trip generation comparison for the Depot 499 development in Apex, North Carolina. The purpose of this technical memorandum is to evaluate the differences in the trips generated by the proposed site under two scenarios. This will include the trips generated under the previously approved densities, studied within the approved January 2020 TIA, and newly proposed densities included in the PUD submittal.

Trip Generation

The previously approved densities were shown in the approved Depot 499 TIA submitted in January 2020. Table 1 illustrates these densities and corresponding trip generation. Table 2 illustrates the proposed densities and corresponding trip generation.

The approved trip generation consists of 1,500 multifamily units (apartments or townhomes), 375,000 s.f. of office space, and 250,000 s.f. of retail. The proposed trip generation adds 50 single family homes, reduces the multifamily density to 1,450 units, adds an additional 25,000 s.f. of office space (400,000 s.f. total), and maintains the 250,000 s.f. of retail, for a total of 650,000 s.f. of non-residential development.

Table 1: Depot 499 – Approved Trip Generation

Land Use (ITE Code)	Intensity	Weekday Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220)	1,500 units	11,300	144	481	415	243
General Office Building (710)	375,000 s.f.	3,820	467	64	86	392
Shopping Center (820)	250,000 s.f.	11,210	172	105	514	556
Combined Total		**26,330**	**783**	**650**	**1,015**	**1,191**
Internal Capture (7% Entering AM, 8% Exiting AM 24% Entering PM, 20% Exiting PM)			*-55*	*-52*	*-244*	*-238*
Total External			**728**	**598**	**771**	**953**
Pass-By Trips: Shopping Center (34% PM)			*0*	*0*	*-142*	*-142*
Total New External Trips			**728**	**598**	**629**	**811**

Table 2: Depot 499 – Proposed Trip Generation

Land Use (ITE Code)	Intensity	Weekday Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single Family Homes (210)	50 units	550	10	30	33	19
Multifamily Housing (Low-Rise) (220)	1,450 units	10,920	139	466	402	236
General Office Building (710)	400,000 s.f.	4,070	495	68	91	414
Shopping Center (820)	250,000 s.f.	11,210	172	105	514	556
Combined Total		**26,750**	**816**	**669**	**1,040**	**1,225**
Internal Capture (7% Entering AM, 8% Exiting AM 23% Entering PM, 20% Exiting PM)			*-57*	*-54*	*-239*	*-244*
Total External			**759**	**615**	**801**	**981**
Pass-By Trips: Shopping Center (34% PM)			*0*	*0*	*-143*	*-143*
Total New External Trips			**759**	**615**	**658**	**838**

Table 3: Trip Generation Comparison

Difference in External Trips	+420	+31	+17	+29	+27
% Increase in External Trips	1.5%	4.3%	2.8%	4.6%	3.3%

The combined total trip generation, after internal capture and pass-by reductions, is only expected to increase by 1.5%, or 420 trips. The AM entering and exiting is expected to increase by 31 trips and 17 trips, respectively. This results in a 4.3% and 2.8% increase, respectively. The PM entering increases by 29 trips (4.6% increase) while the exiting increases by 27 trips (3.3% increase) when compared to the approved trip generation.

Conclusions

A trip generation comparison was performed comparing the approved density for the Depot 499 development to the density proposed in the June 29, 2020 PUD submittal. Only minor increases in trips are expected when comparing daily trips. Trips during the peak hour will increase by 4.6% or less with an increase of approximately 1.5% expected during the typical weekday. This relatively minor increase in trips should be considered negligible. The PUD document has also been updated with verbiage indicating that updated analysis will be provided with future site plans if the total trip generation for the site exceeds what was studied within the previously approved TIA, if requested by staff. Due to these reasons, it is recommended that the site proceed forward with the proposed densities.

Please feel free to contact me with any questions or comments regarding this study.

Sincerely,

Nathaniel Bouquin, PE
Traffic Engineering Project Manager
Ramey Kemp & Associates, Inc.

NC Corporate License # C-0910

Attachments: NCHRP Internal Capture Reports

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Depot 499	**Organization:**	RKA
Project Location:	Apex NC	**Performed By:**	TCP
Scenario Description:	Full Build	**Date:**	6/26/2020
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	400	KSF	563	495	68
Retail	820	250	KSF	277	172	105
Restaurant						
Cinema/Entertainment						
Residential	210/220	1,550	DU	665	149	496
Hotel						
All Other Land Uses[2]						
				1,505	816	669

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.10	0%	0%	1.10	0%	0%
Retail	1.10	0%	0%	1.10	0%	0%
Restaurant	1.10	0%	0%	1.10	0%	0%
Cinema/Entertainment	1.10	0%	0%	1.10	0%	0%
Residential	1.10	0%	0%	1.10	0%	0%
Hotel	1.10	0%	0%	1.10	0%	0%
All Other Land Uses[2]	1.10	0%	0%	1.10	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		21	0	0	0	0
Retail	22		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,635	898	737
Internal Capture Percentage	8%	7%	8%
External Vehicle-Trips[5]	1,373	759	614
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	6%	28%
Retail	14%	22%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual* , published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Depot 499
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	495	545	1.10	68	75
Retail	1.10	172	189	1.10	105	116
Restaurant	1.10	0	0	1.10	0	0
Cinema/Entertainment	1.10	0	0	1.10	0	0
Residential	1.10	149	164	1.10	496	546
Hotel	1.10	0	0	1.10	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		21	47	0	1	0
Retail	34		15	0	16	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	5	109	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		60	0	0	0	0
Retail	22		0	0	3	0
Restaurant	76	15		0	8	0
Cinema/Entertainment	0	0	0		0	0
Residential	16	32	0	0		0
Hotel	16	8	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	33	512	545	465	0	0
Retail	26	163	189	148	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	161	164	146	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	21	54	75	49	0	0
Retail	25	91	116	83	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	16	530	546	482	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Depot 499	**Organization:**	RKA
Project Location:	Apex NC	**Performed By:**	TCP
Scenario Description:	Full Build	**Date:**	6/26/2020
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	400	KSF	505	91	414
Retail	820	250	KSF	1,070	514	556
Restaurant						
Cinema/Entertainment						
Residential	210/220	1,550	DU	710	435	255
Hotel						
All Other Land Uses[2]						
				2,285	1,040	1,225

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.10	0%	0%	1.10	0%	0%
Retail	1.10	0%	0%	1.10	0%	0%
Restaurant	1.10	0%	0%	1.10	0%	0%
Cinema/Entertainment	1.10	0%	0%	1.10	0%	0%
Residential	1.10	0%	0%	1.10	0%	0%
Hotel	1.10	0%	0%	1.10	0%	0%
All Other Land Uses[2]	1.10	0%	0%	1.10	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		100	1000		1000	
Retail					1000	
Restaurant					1000	
Cinema/Entertainment					1000	
Residential		1000	1000			
Hotel					1000	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		45	0	0	8	0
Retail	12		0	0	148	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	43	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,492	1,144	1,348
Internal Capture Percentage	21%	23%	20%
External Vehicle-Trips[5]	1,780	798	982
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	23%	12%
Retail	16%	26%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	33%	19%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	Depot 499
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	91	100	1.10	414	455
Retail	1.10	514	565	1.10	556	612
Restaurant	1.10	0	0	1.10	0	0
Cinema/Entertainment	1.10	0	0	1.10	0	0
Residential	1.10	435	479	1.10	255	281
Hotel	1.10	0	0	1.10	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		91	14	0	8	0
Retail	12		177	24	148	31
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	90	45	0		8
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		45	0	0	19	0
Retail	31		0	0	220	0
Restaurant	30	283		0	77	0
Cinema/Entertainment	6	23	0		19	0
Residential	57	43	0	0		0
Hotel	0	11	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	23	77	100	70	0	0
Retail	88	477	565	434	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	156	323	479	294	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	53	402	455	365	0	0
Retail	160	452	612	411	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	54	227	281	206	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Traffic Impact Analysis
Depot 499
Apex, North Carolina

RAMEY KEMP & ASSOCIATES

TRAFFIC IMPACT ANALYSIS

FOR

DEPOT 499

LOCATED

IN

Apex, North Carolina

Prepared For:
Lennar Corporation
1100 Perimeter Park Drive, Suite 112
Morrisville, North Carolina 25760

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

January 2020

RKA Project No. 19399

Prepared By: NB

Reviewed By: RS

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EXECUTIVE SUMMARY

A Traffic Impact Analysis (TIA) was conducted for the proposed Depot 499 mixed use project (formerly Poe Property) in accordance with Town of Apex and NCDOT Guidelines. The proposed development is located south of Apex Barbecue Road and west of S. Salem Street in Apex, North Carolina and is anticipated to consist of a maximum of 1,500 low-rise multi-family units (650 townhomes and 850 apartments), 250,000 square feet (s.f.) of retail, and 375,000 s.f. of general office. For the purpose of this TIA, the development is assumed to be constructed in phases with full buildout expected in 2028.

Access to the school site is proposed to be provided via the two (2) full movement driveways on S. Salem Street, two (2) left-over driveways on S. Salem Street, one (1) right-in / right-out driveway on S. Salem Street, one (1) full movement driveway on Apex Barbecue Road, and one (1) right-in/right-out driveway on Apex Barbecue Road. The site will also be served via connection to the existing Woodall Crest Drive, to the north, which has an existing full movement connection to Apex Barbecue Road.

Phase 1:

Under Phase 1 conditions, all intersections are expected to operate at acceptable levels of service during the weekday AM and PM peak hours. Turn-lanes were recommended at the site driveways according to the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Full Buildout:

Under full buildout conditions, recommendations are provided to improve all study intersections to acceptable level of service during the weekday AM and PM peak hours. Turn-lanes were recommended at the site driveways according to the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual. It should be noted that of the recommended roadway improvements, not all improvements are expected to be warranted after completion of Phase 1. Due to this, off-site roadway improvements are recommended to be tied to specific phases / certificate of occupancy / site driveway construction. Specific improvements are discussed in section 7 of this report. Refer to section 9 for a summary of the recommended improvements / phasing.

TRAFFIC IMPACT ANALYSIS

DEPOT 499

APEX, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Depot 499 development (formerly Poe Property) to be located west of S. Salem Street (Old US Hwy 1) and south of Apex Barbecue Road in Apex, North Carolina. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development was analyzed in two phases. Phase 1 is anticipated to be complete in 2025 and consist of 650 townhomes. Full build-out of the proposed development is expected to be complete in 2028 and is expected to add the following land uses to those of Phase 1:

- 250,000 square foot (s.f.) shopping center
- 850 apartments (total of 1,500 low-rise multifamily units)
- 375,000 s.f. general office building

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2019) Traffic Conditions
- Background (2025) Traffic Conditions
- Background (2028) Traffic Conditions
- Combined (2025) Traffic Conditions – Phase 1
- Combined (2028) Traffic Conditions – Full Build-Out

1.1. Site Location and Study Area

The development is proposed to be located west of S. Salem Street (Old US Hwy 1) and south of Apex Barbecue Road in Apex, North Carolina. The study area for the TIA was determined

through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Apex (Town) and consists of the following existing intersections:

- S. Salem Street and Apex Barbecue Road
- S. Salem Street and Northbound NC-540 Ramps
- S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps
- Old US Hwy 1 and Kelly Road
- Kelly Road and Apex Barbecue Road
- Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive
- Apex Barbecue Road and Town Side Drive

A copy of the Memorandum of Understanding (MOU) approved by NCDOT and the Town is provided in Appendix A.

1.2. Proposed Land Use and Site Access

The proposed development was analyzed in two phases. Phase 1 is anticipated to be complete in 2025 and consist of 650 townhomes. Full build-out of the proposed development is expected to be complete in 2028 and is expected to add the following land uses to those of Phase 1:

- 850 apartments (total of 1,500 low-rise multifamily units)
- 250,000 s.f. shopping center
- 375,000 s.f. general office building

Access to Phase 1 of the proposed development is proposed to be provided via one (1) full movement driveway on Apex Barbecue Road and one (1) full movement driveway on S. Salem Street. Phase 1 will also provide an internal connection to Woodall Crest Drive to the north. Full buildout of the development is proposed to provide five (5) additional driveways on S. Salem Street (two (2) left-over driveways, two (2) full movement driveways, and one (1) right-in/right-out driveway). Refer to Figure 2 for a copy of the preliminary site plan.

1.3. Adjacent Land Uses

The proposed development is located in an area consisting primarily of undeveloped land and residential development. The Scotts Ridge Elementary School is located west of the proposed Depot 499 development and east of NC-540 within the study area.

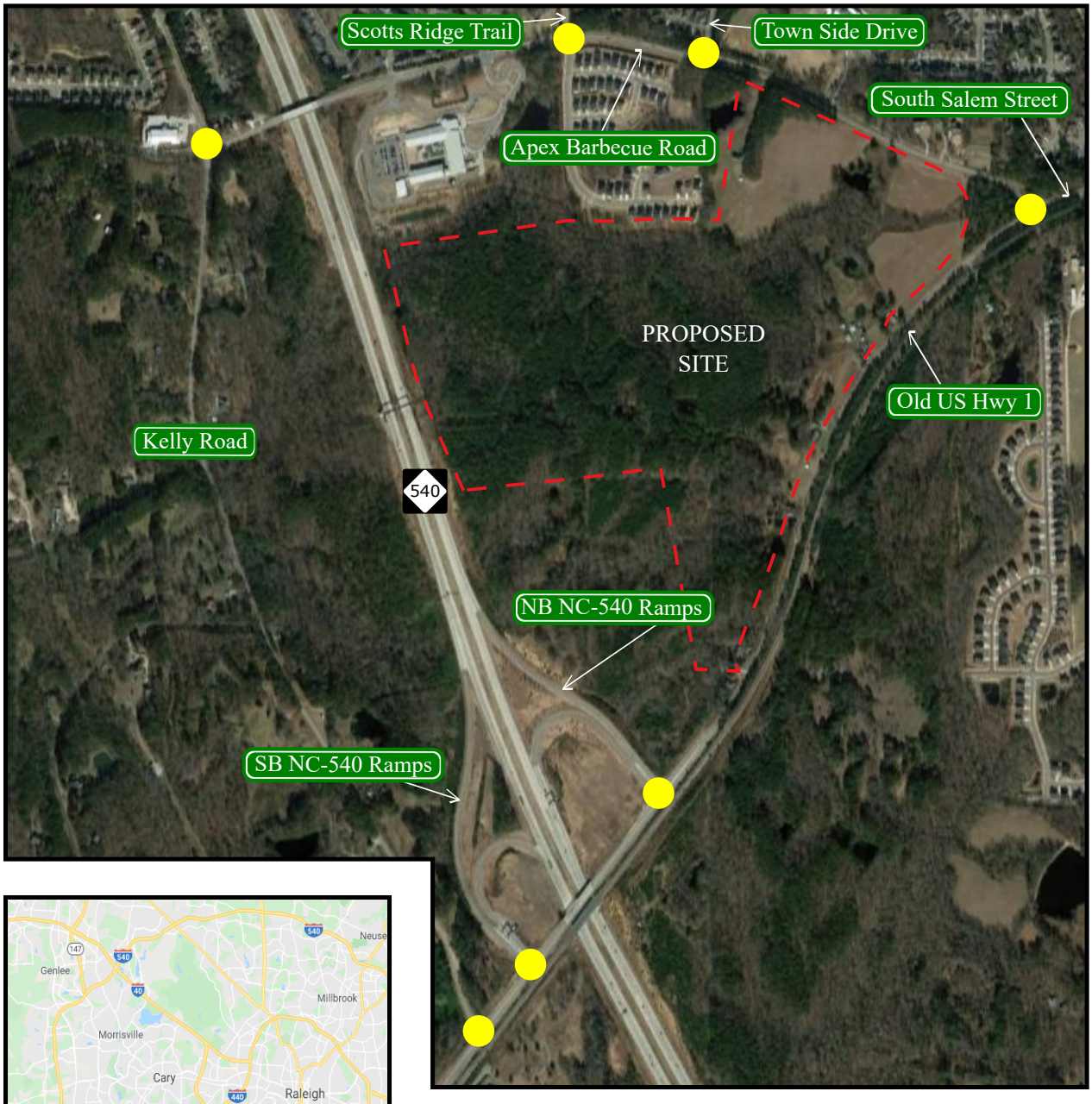
1.4. Existing Roadways

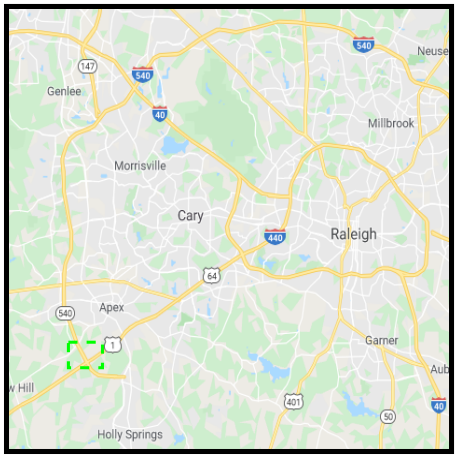
Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Roadway Name	Route #	Typical Cross Section	Speed Limit	2018 NCDOT AADT (vpd)	Maintained By
NC 540		6-lane divided by grass median	70 mph	29,500	NCDOT
S. Salem Street / Old US Hwy 1	SR 1011	2-lane undivided	55 mph	12,000[2]	NCDOT
Apex Barbecue Road	SR 1162	2-lane undivided	45 mph	6,700	NCDOT
Kelly Road	SR 1163	2-lane undivided	45 mph	2,500[2]	NCDOT
Scotts Ridge Trail	N/A	2-lane undivided	25 mph	1,200[1]	Town
Town Side Drive	N/A	2-lane undivided	25 mph	1,130[1]	Town

1. NCDOT AADT data not available. Average daily traffic volumes determined based on current traffic counts from 2019, assuming the PM peak hour volume is 10% of the average daily traffic.
2. Traffic volumes based on 2017 NCDOT AADT data.





N

LEGEND

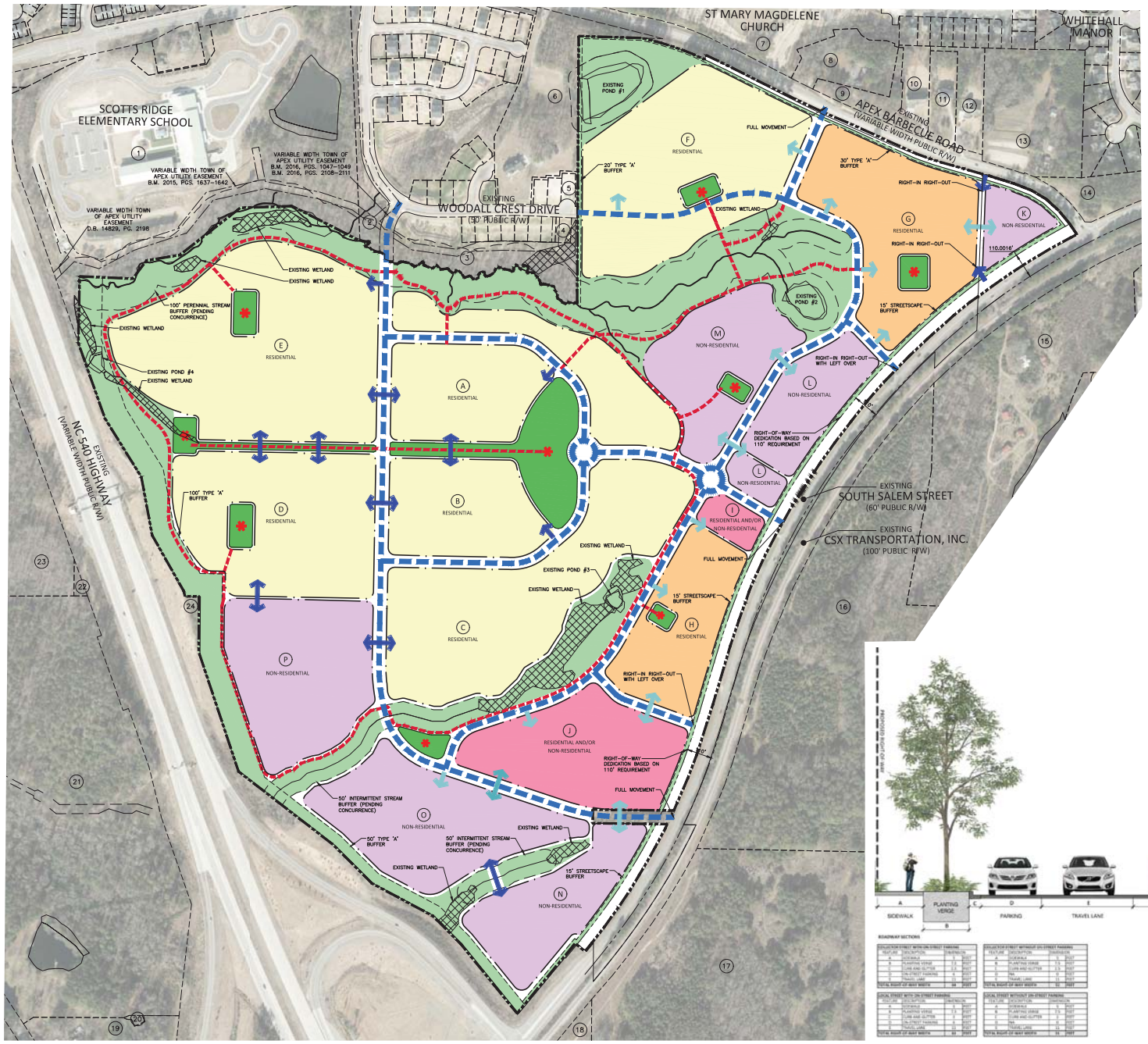
- Proposed Site Location
- Study Intersection
- Study Area

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Site Location Map

Scale: Not to Scale | Figure 1



ADJACENT PROPERTY INFORMATION:

1. WAKE COUNTY BOARD OF EDUCATION PIN: 0731477630
2. WOODALL ESTATES OWNERS ASSOCIATION PIN: 0731575313
3. WOODALL ESTATES OWNERS ASSOCIATION PIN: 0731670122
4. POON, KENNETH RONG, MENGQI PIN: 0731673262
5. PETERSON, CEARA AMELIA, LAURA PIN: 0731673490
6. WOODALL, ANN C. PIN: 0731672786
7. ROMAN CATHOLIC DIOCESES OF RAL NC PIN: 0731782553
8. POE, BOBBY W. POE, ELIZABETH A. PIN: 0731776915
9. POE, BOBBY W. POE, ELIZABETH A. PIN: 0731776890
10. CANTRELL, DONALD T. CANTRELL, MARY E. PIN: 0731779802
11. CANTRELL, DARYL S. CANTRELL, JESSICA PIN: 0731870820
12. CANTRELL, DANIEL T. CANTRELL, COURTNEY PIN: 0731871830
13. BRITT, MARJORIE TINGEN PIN: 0731873793
14. MCKINNISH, LORI PIN: 0731877367
15. CJS APEX ASSEMBLAGE LLC PIN: 0731863120
16. POE ACRES FAMILY FARM LLC PIN: 0731756252
17. CJS APEX ASSEMBLAGE LLC PIN: 0731731163
18. HUNTER, CAREY B. PIN: 0731641147
19. FAHEY FAMILY FARM LLC PIN: 0731434504
20. FAHEY FAMILY FARM LLC PIN: 0731435707
21. SM RALEIGH LLC PIN: 0731441619
22. NC DEPT OF TRANSPORTATION TURNPIKE AUTHORITY PIN: 0731452647
23. MILLS, DOROTHY M. MILLS, DAVID G. TRUSTEE PIN: 0731366481
24. NC DEPARTMENT OF TRANSPORTATION TURNPIKE AUTHORITY PIN: 0731457553

LEGEND

PREDOMINANT LAND USE

- NON-RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- RESIDENTIAL - LOW TO MEDIUM DENSITY CONCEPTUAL DEVELOPMENT BLOCK
- RESIDENTIAL - HIGH DENSITY CONCEPTUAL DEVELOPMENT BLOCK
- RESIDENTIAL AND/OR NON-RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- ACTIVE RECREATION/POCKET PARKS
- PASSIVE OPEN SPACE (STREAM BUFFERS/WETLANDS/PONDS/PERIMETER BUFFERS)

VEHICULAR AND PEDESTRIAN CIRCULATION

- PUBLIC STREET
- PUBLIC VEHICULAR ACCESS
- PRIVATE VEHICULAR ACCESS
- PROPOSED 6' WALKING TRAIL

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CLIENT

LENNAR OF THE CAROLINAS
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MORRISVILLE, NORTH CAROLINA
PHONE: 919.465.5900

DEPOT 499
PUD-CZ SET
S. SALEM STREET
APEX, NORTH CAROLINA

REVISIONS

NO.	DATE	
1	XX. XX. XXXX	REVISION DESCRIPTION
2	XX. XX. XXXX	REVISION DESCRIPTION

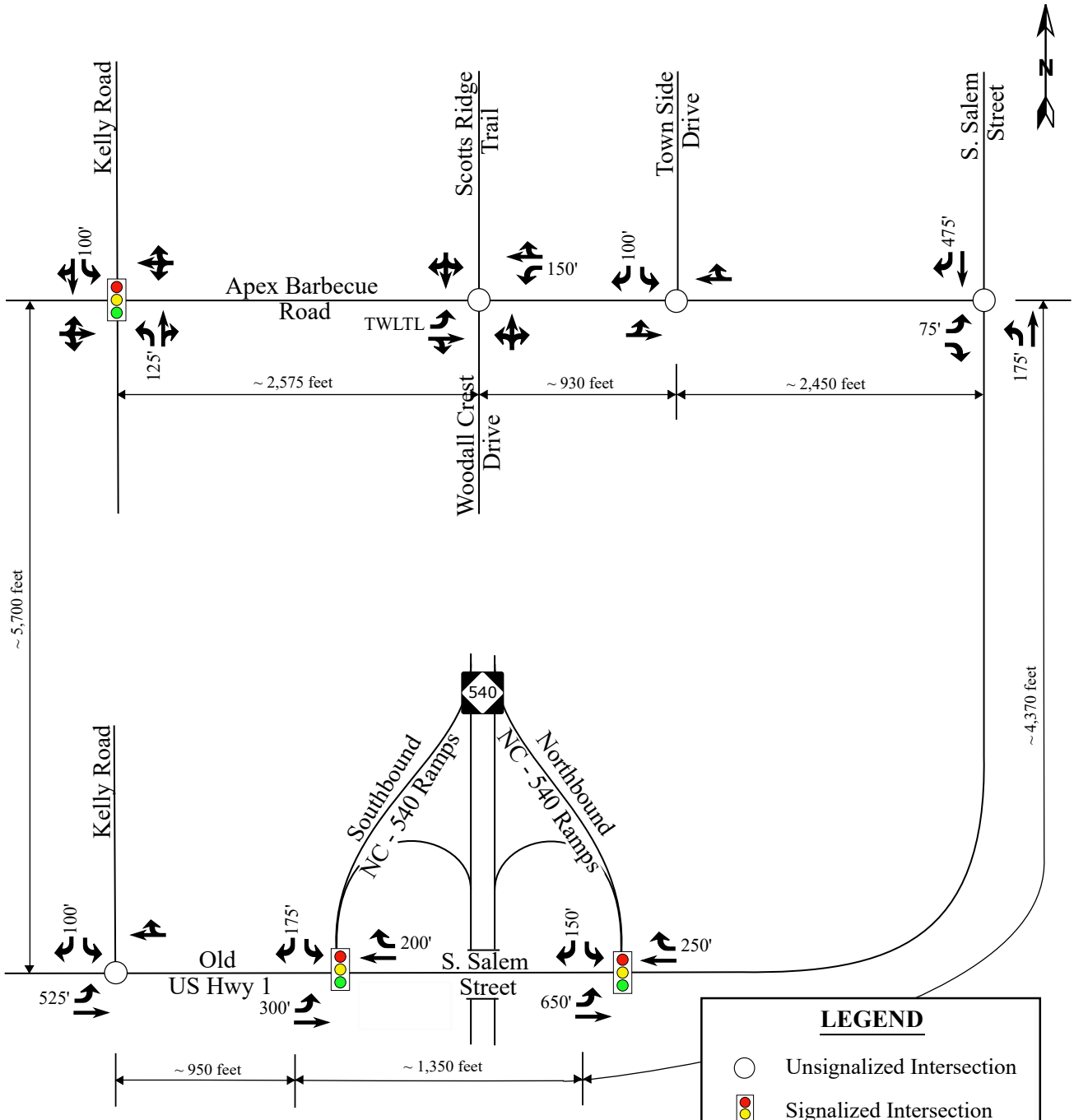
PLAN INFORMATION

PROJECT NO.	LEN-19090
FILENAME	LEN19090-S1
CHECKED BY	RCZ
DRAWN BY	SMV
SCALE	1"=200'
DATE	12.12.2019

SHEET

PRELIMINARY LAYOUT PLAN

C2.00



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TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Existing Lane Configurations

Scale: Not to Scale | Figure 3

2. EXISTING (2019) PEAK HOUR CONDITIONS

2.1. Existing (2019) Peak Hour Traffic

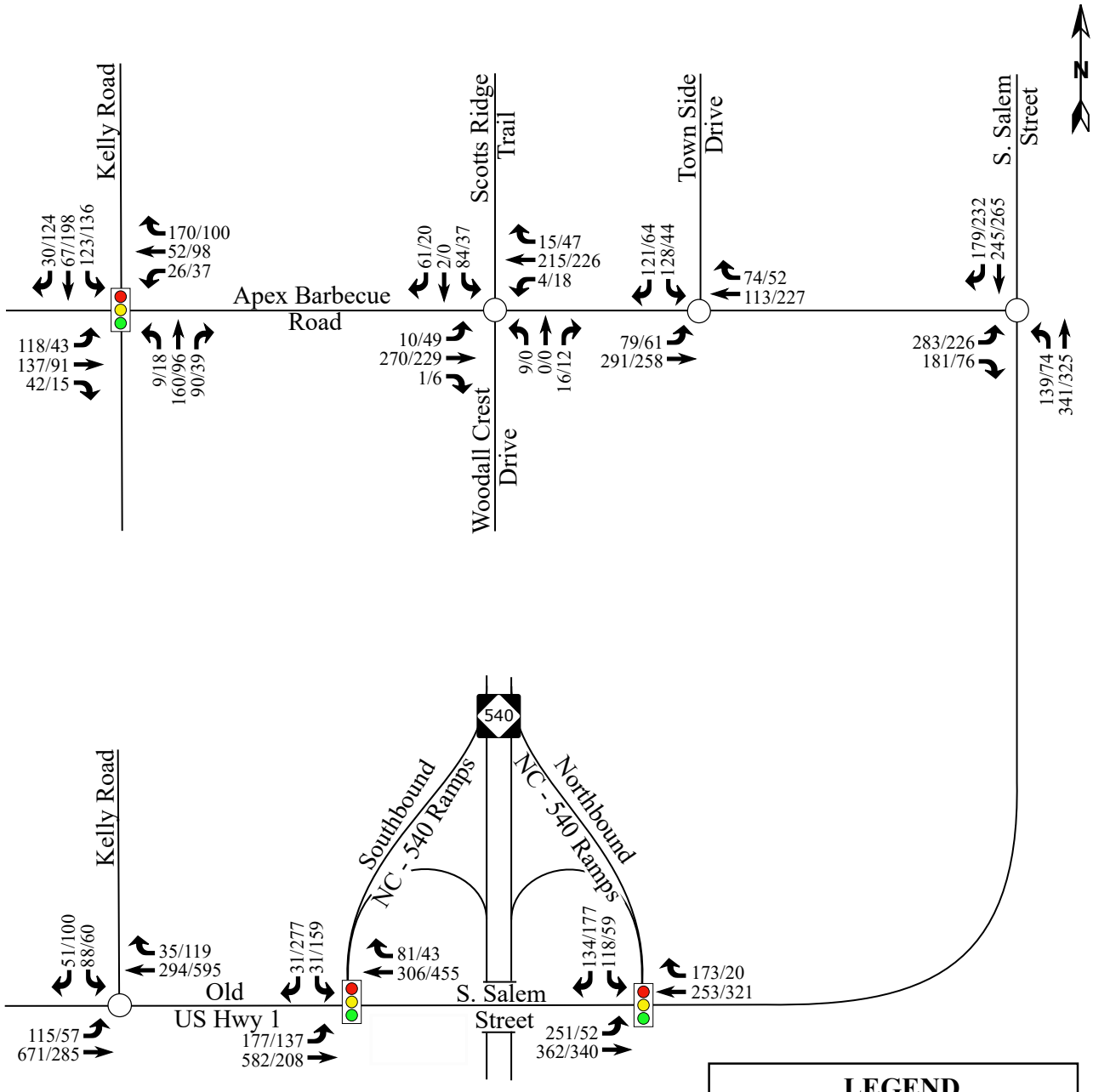
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below in October of 2019 by RKA during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- S. Salem Street and Apex Barbecue Road
- S. Salem Street and Northbound NC-540 Ramps
- S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps
- Old US Hwy 1 and Kelly Road
- Kelly Road and Apex Barbecue Road
- Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive
- Apex Barbecue Road and Town Side Drive

Traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for existing (2019) weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of Existing (2019) Peak Hour Traffic

The existing (2019) weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. Signal information was obtained from NCDOT and is included in Appendix C. The results of the analysis are presented in Section 7 of this report.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

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TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Existing (2019)
Peak Hour Traffic

Scale: Not to Scale | Figure 4

3. BACKGROUND (2025 / 2028) PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, background traffic projections are needed. Background traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. Background traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of 3% would be used to project existing traffic volumes to the analysis years of 2025 and 2028. The ambient traffic growth rate was applied to all intersections within the study area. Refer to Figures 5a and 5b for illustrations of the projected (2025) and projected (2028) peak hour traffic volumes, respectively.

3.2. Adjacent Development Traffic

Based on discussions with Town of Apex staff, the following adjacent developments and current build-out assumptions were considered in the analysis of future traffic conditions:

- Buckhorn Preserve (Currently 20% Built-out)
- Friendship Station (Full Buildout)
- Jordan Manors (Currently 40% Built-out)
- Jordan Pointe (Currently 65% Built-out)
- New Hill Assembly
- Olive Ridge
- Pleasant Park
- West Village (Full Build-out)
- Woodbury (Currently 25% Built-out)

The Buckhorn Preserve development is proposed to consist of 347 single-family homes and be constructed in three phases, with the final phase to be completed by 2020. The site is located on the east side of Richardson Road, just north of Mt. Zion Church Road in Apex, North

Carolina. Per coordination with Town staff, this development is assumed to have been 20% built-out at the time of data collection. The remaining 80% of the development is included in future conditions.

Friendship Station is proposed to consist 316 single-family homes, 185 apartment units, 238 townhome units, 99 townhome units north of Humie Olive Road, 44,000 sq. ft. of retail, 68,000 sq. ft. of office, and 100,000 sq. ft. of retail after two phases of construction and is expected to be completed by 2025. The site is located along Humie Olive Road at Olive Farm Road in Apex, North Carolina. Per coordination with Town staff, this development had not yet begun being built-out at the time of data collection and 100% of the full buildout scenario traffic was included in this study.

The Jordan Manors development is proposed to consist of 240 single-family homes and was expected to be completed by 2018. The site is located on the west side of New Hill Olive Chapel Road in Apex, North Carolina. Per coordination with Town staff, this development is assumed to have been 40% built-out at the time of data collection. The remaining 60% of the development is used in the future conditions.

The Jordon Pointe development is proposed to consist of 440 single-family detached homes and was expected to be completed by 2016. The site is located north of Old US Hwy 1 and east of Horton Road in Apex, North Carolina. Per coordination with Town staff, this development is assumed to have been 65% built-out at the time of data collection. The remaining 35% of the development is used in the future conditions.

The New Hill Assembly development is proposed to include 152 single-family homes and is expected to be completed in 2022. The site is located west of New Hill Olive Chapel Road, north of Old US Hwy 1, in Apex, North Carolina. Per coordination with Town staff, this development had not yet begun being built-out at the time of data collection and 100% of the site traffic was included in this study.

The Olive Ridge development is proposed to include a maximum of 169 single-family home development and is expected to be completed by 2022. The site is located east of New Hill Olive Chapel Road, across from Jordan Manors Drive in Apex, North Carolina. Per coordination with Town staff, this development had not yet begun being built-out at the time of data collection and 100% of the site traffic was included in this study.

The Pleasant Park development is proposed to consist of 4 baseball/softball fields, 3 tennis courts, 6 soccer fields, 2 basketball courts, 3 pickle ball courts, 1 sand volleyball court, cross-country route, and picnic areas on 92 acres and is expected to be completed by 2020. The site is located on the south side of Old US Hwy 1, west of NC 540, in Apex, North Carolina. Per coordination with Town staff, this development had not yet begun being built-out at the time of data collection and 100% of the site traffic was included in this study.

West Village is proposed to consist of 105 single family detached dwelling units and 279 residential townhome dwelling units and was expected to be complete in 2018. The site is located at the northwest quadrant of the intersection of Kelly Road and S. Salem Street/Old US Hwy 1 in Apex, North Carolina. Per coordination with Town staff, this development had not yet begun being built-out at the time of data collection and 100% of the full buildout scenario traffic / roadway improvements were included in this study.

The Woodbury development is proposed to consist of 320 single-family homes and 120 townhomes and is expected to be complete by 2019. The site is located east of New Hill Olive Chapel Road, north of the Old Us Hwy 1, in Apex, North Carolina. Per coordination with Town staff, this development is assumed to have been 25% built-out at the time of data collection. The remaining 75% of the development is used in the future conditions.

As a result of the site driveways for the above listed adjacent developments, the trips associated with these developments may not balance between the study intersections. Additionally, the build-out assumptions provided by the Town were applied to the total site trips of each respective TIA to determine the remaining site trips expected of each development. Refer to Figure 6 for an illustration of the total peak hour adjacent development

trips. Detailed adjacent development information for each development can be found in Appendix D.

3.3. Future Roadway Improvements

Based on coordination with the Town, it was determined that the West Village development would be converting the intersection of Kelly Road and Old US Hwy 1 to a right-in/right-out intersection, with completion of site driveways to the west of this intersection. Per coordination with the Town, it is expected that left-turns onto and off of Kelly Road will utilize this new intersection to the west. To account for this change in traffic patterns, projected and adjacent development traffic was diverted under 2025 and 2028 conditions.

The West Village development is also expected to provide improvements at the intersections of Old US Hwy 1 at Kelly Road, Old US Hwy 1 at Southbound NC-540 Ramps, and Kelly Road at Apex Barbecue Road, which are considered under background and combined conditions of this analysis.

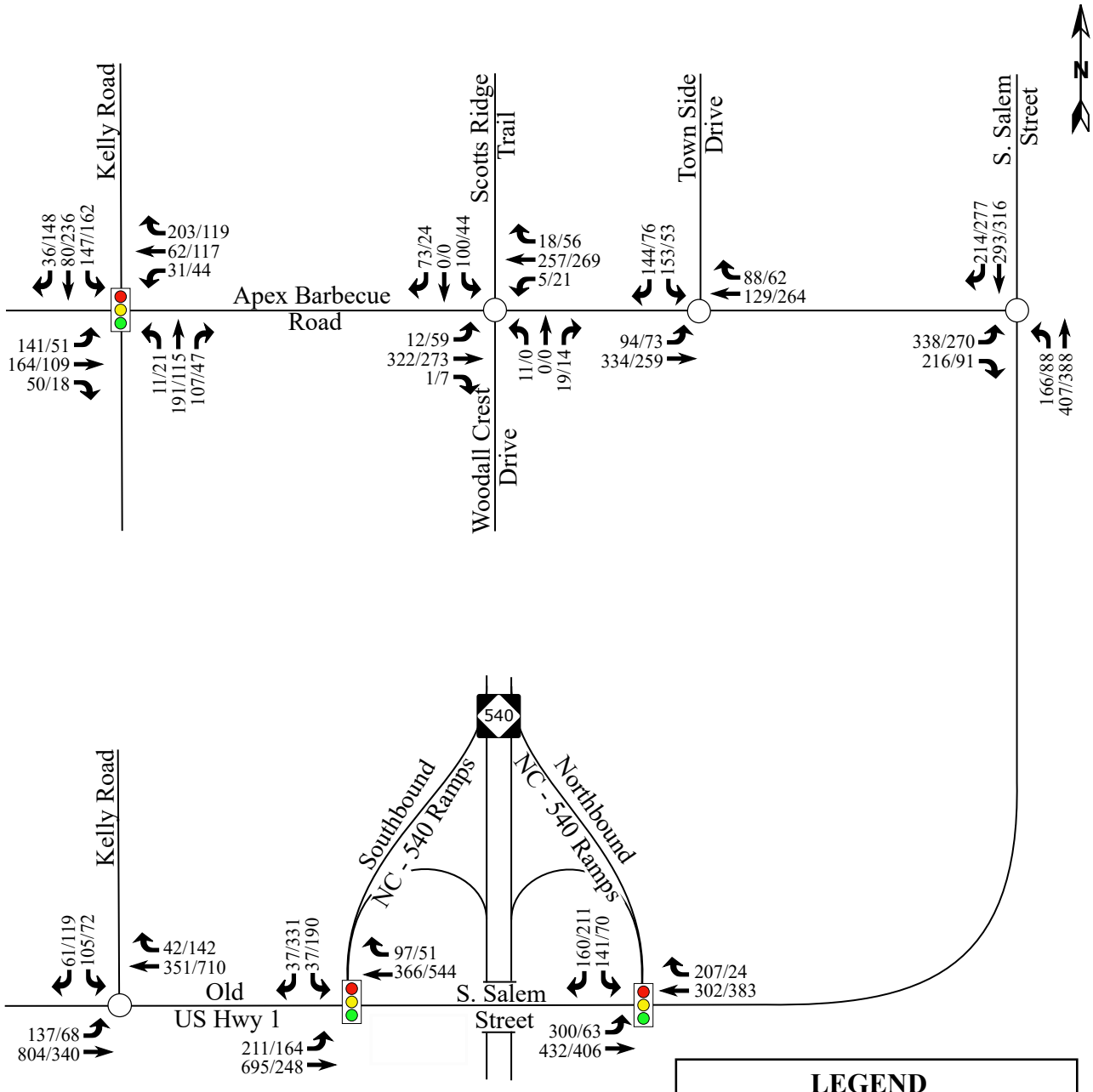
Refer to Figures 7a and 7b for the diverted (2025) peak hour traffic volumes and diverted (2028) peak hour traffic volumes, respectively. Refer to Appendix D for additional information regarding the committed roadway improvements by the West Village development.

3.4. Background (2025 / 2028) Peak Hour Traffic Volumes

The background (2025 / 2028) traffic volumes were determined by projecting the existing (2019) peak hour traffic to the analysis years of 2025 and 2028 and adding the adjacent development trips and diverted traffic. Refer to Figures 8a and 8b for illustrations of the background (2025) peak hour traffic volumes and background (2028) peak hour traffic volumes, respectively.

3.5. Analysis of Background (2025 / 2028) Peak Hour Traffic Conditions

The background (2025 / 2028) AM and PM peak hour traffic volumes at the study intersections were analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.



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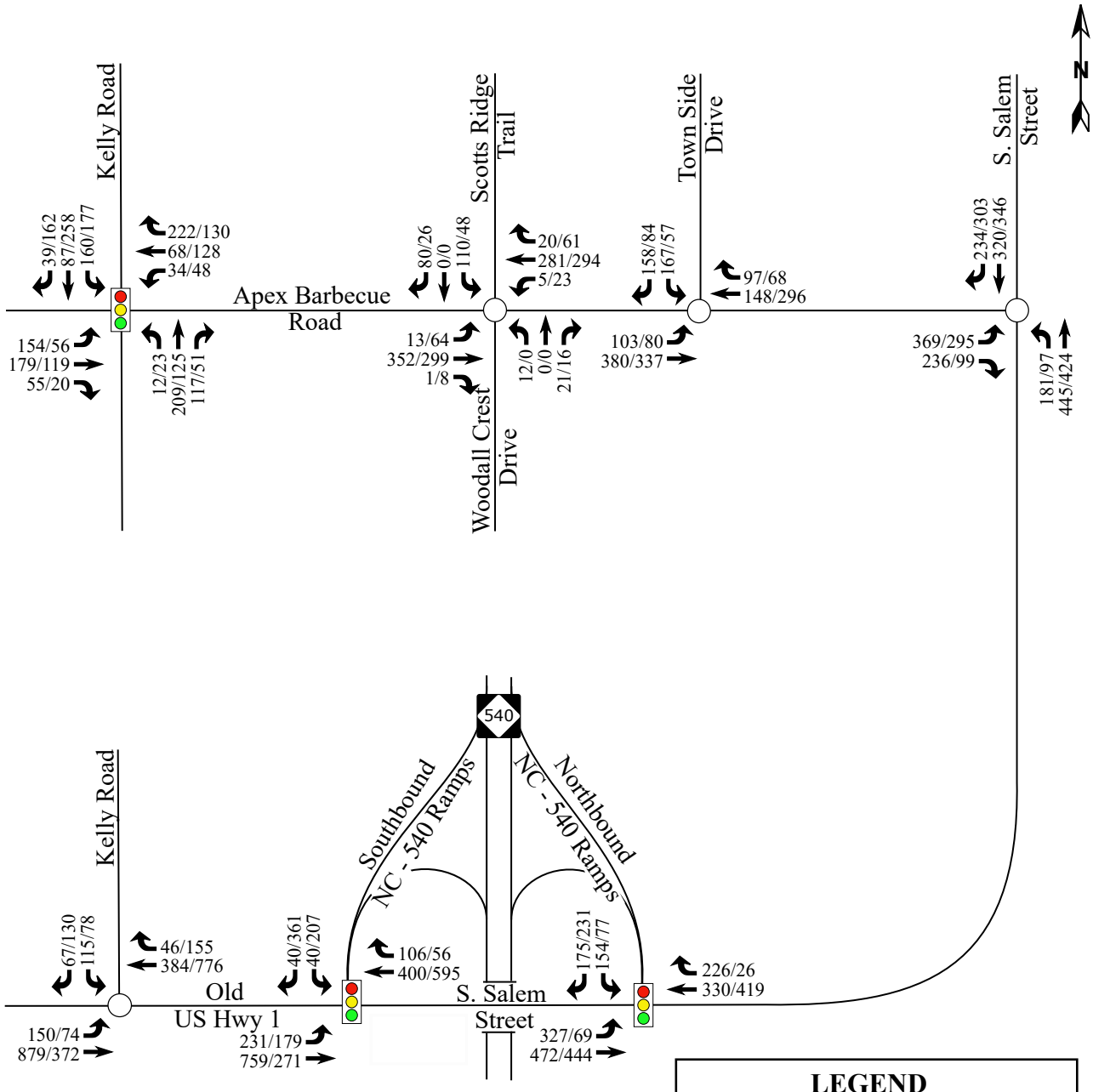
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Projected (2025)
Peak Hour Traffic

Scale: Not to Scale | Figure 5a



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

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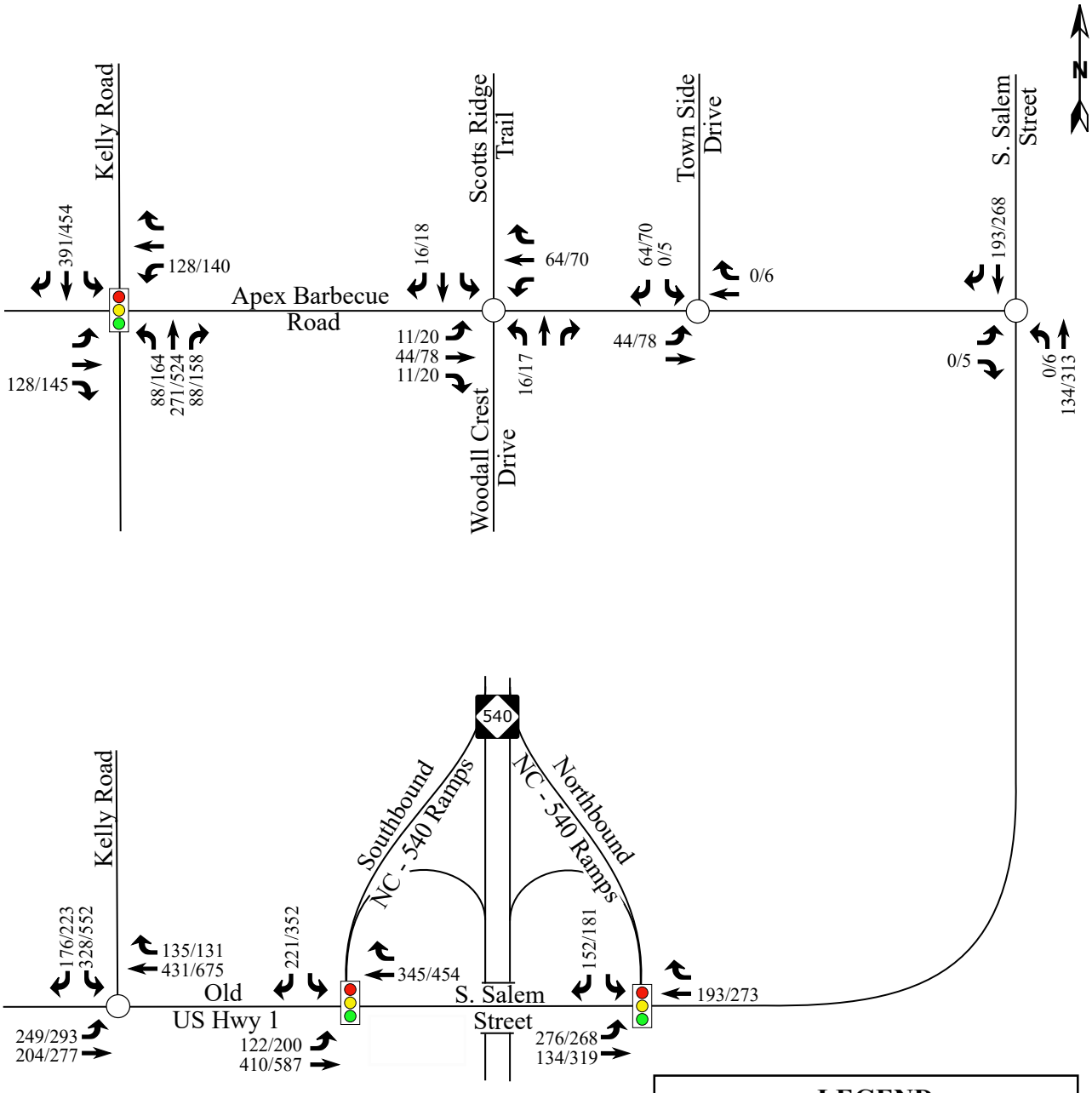
Depot 499
Apex, NC

Projected (2028)
Peak Hour Traffic

Scale: Not to Scale

Figure 5b



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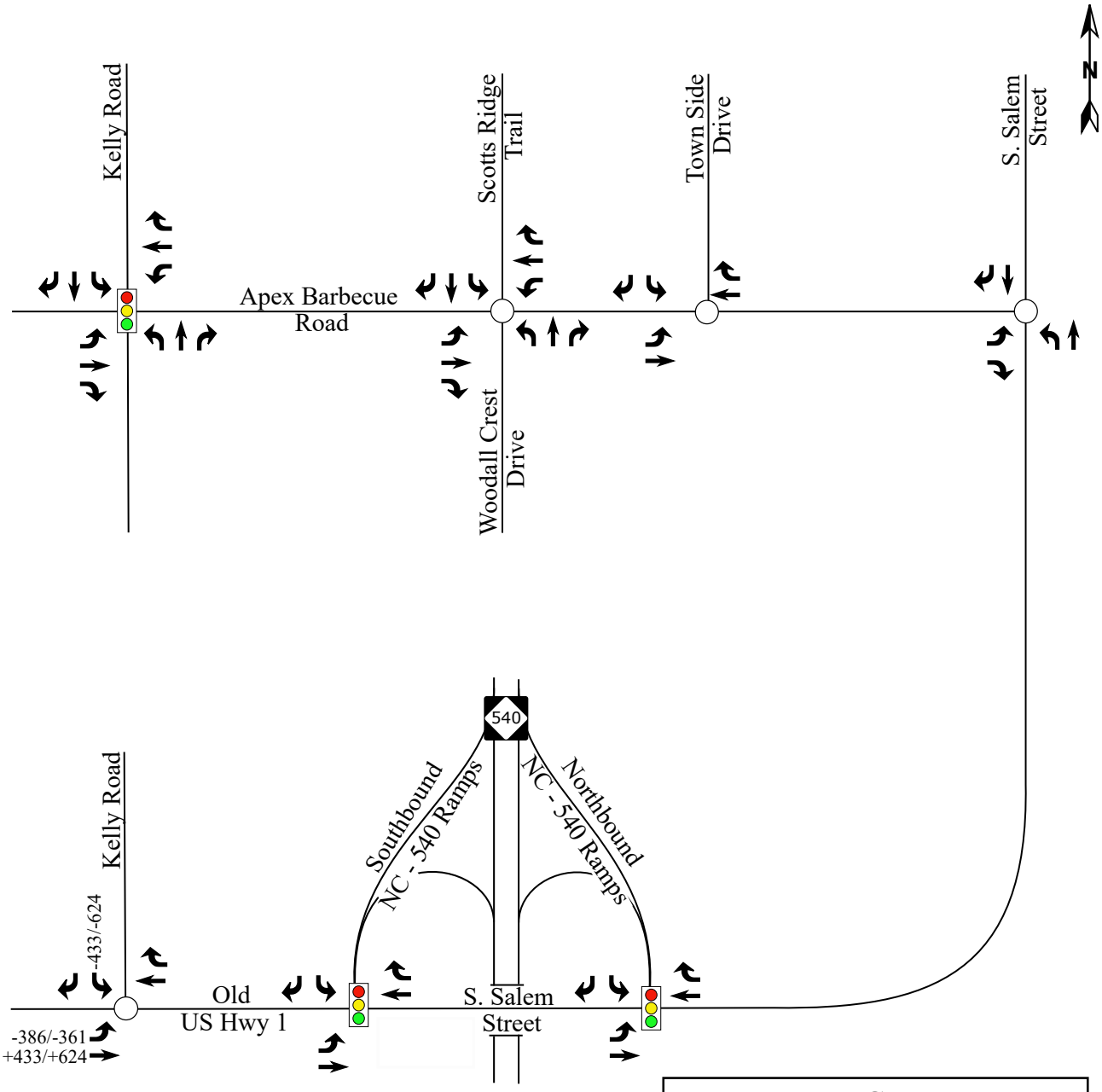
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Peak Hour Adjacent Development Trips

Scale: Not to Scale

Figure 6



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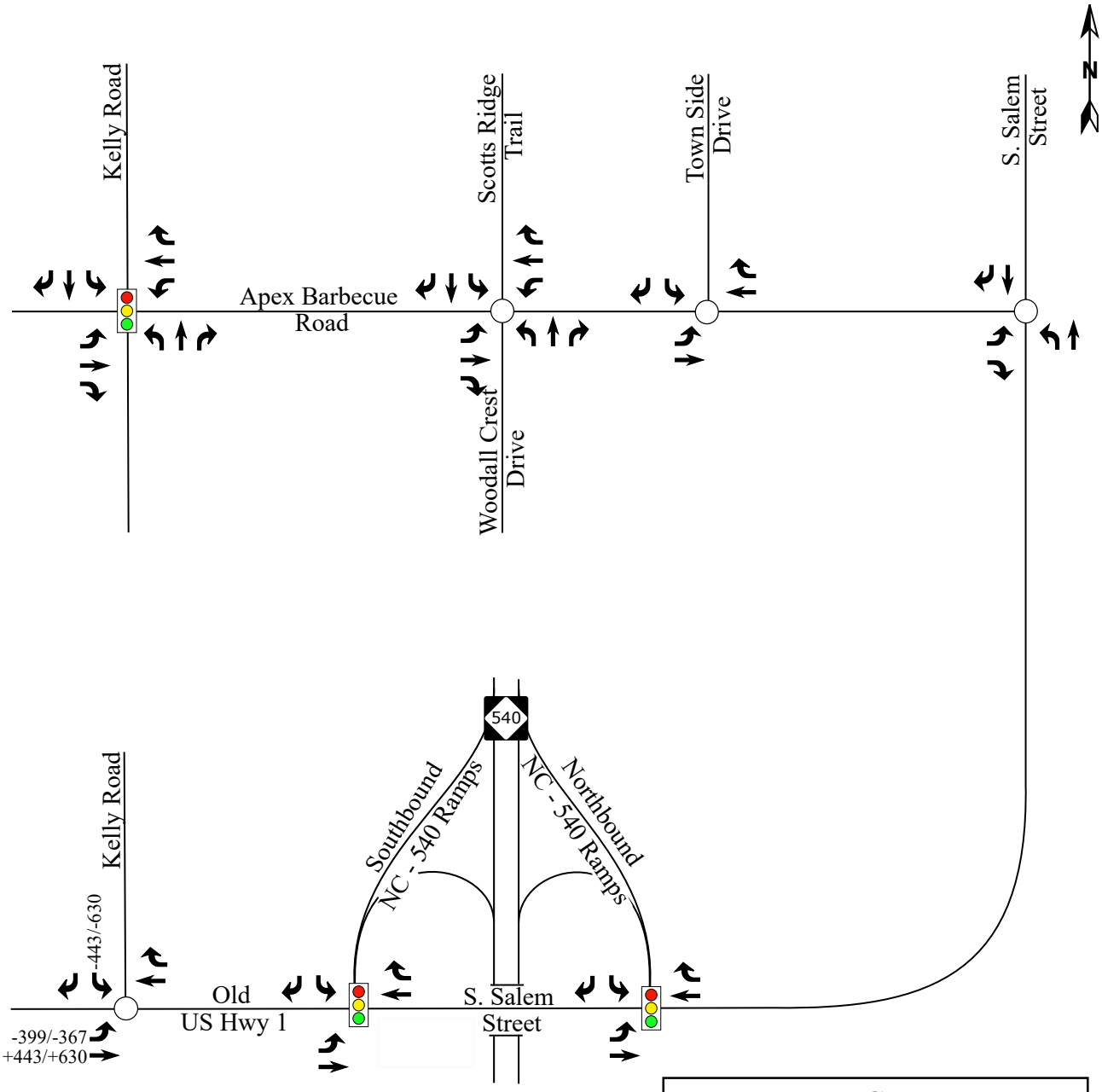
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Diverted (2025) Traffic

Scale: Not to Scale | Figure 7a



LEGEND

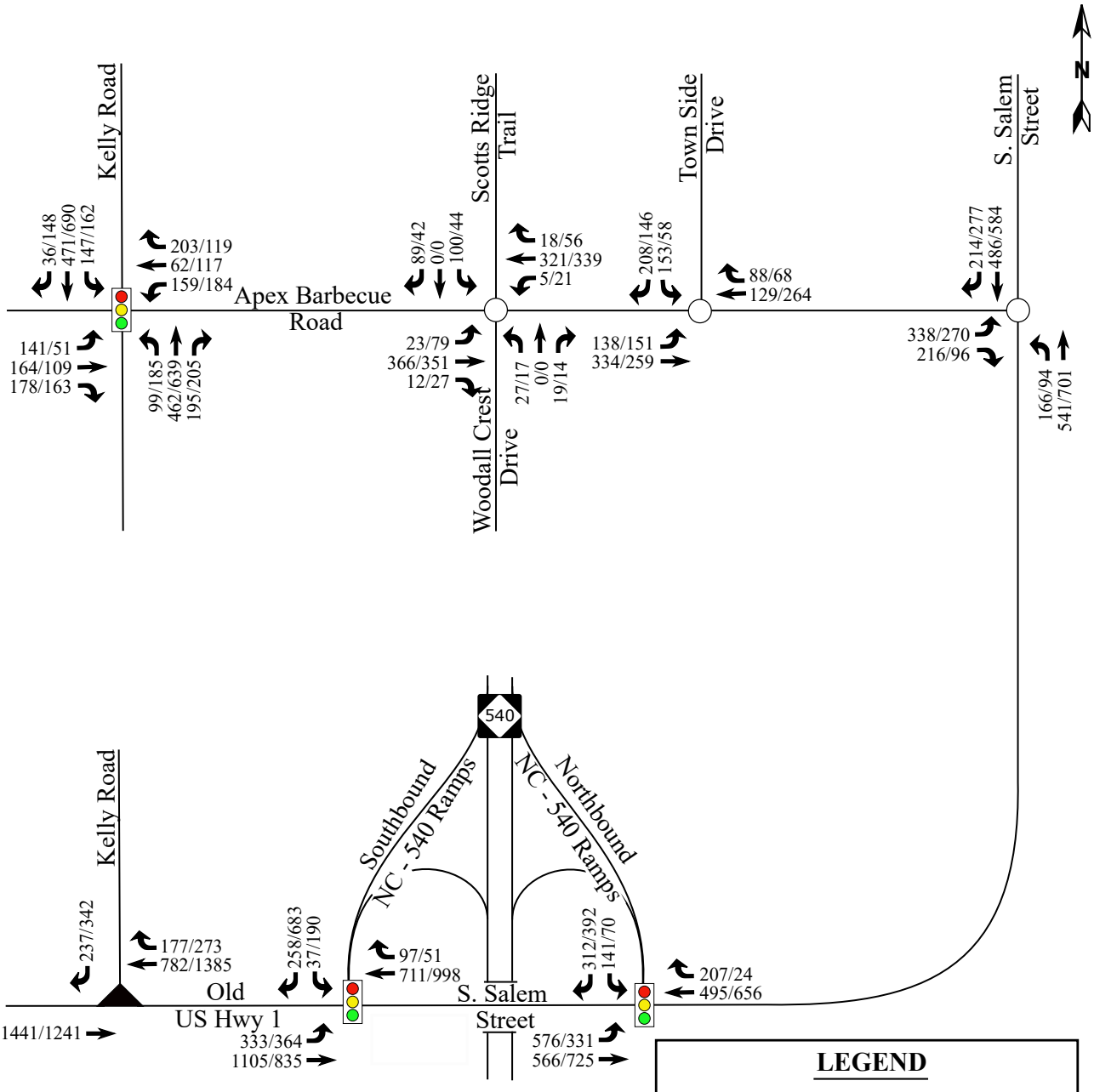
- Unsignalized Intersection
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Diverted Trips

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Diverted (2028) Traffic

Scale: Not to Scale | Figure 7b



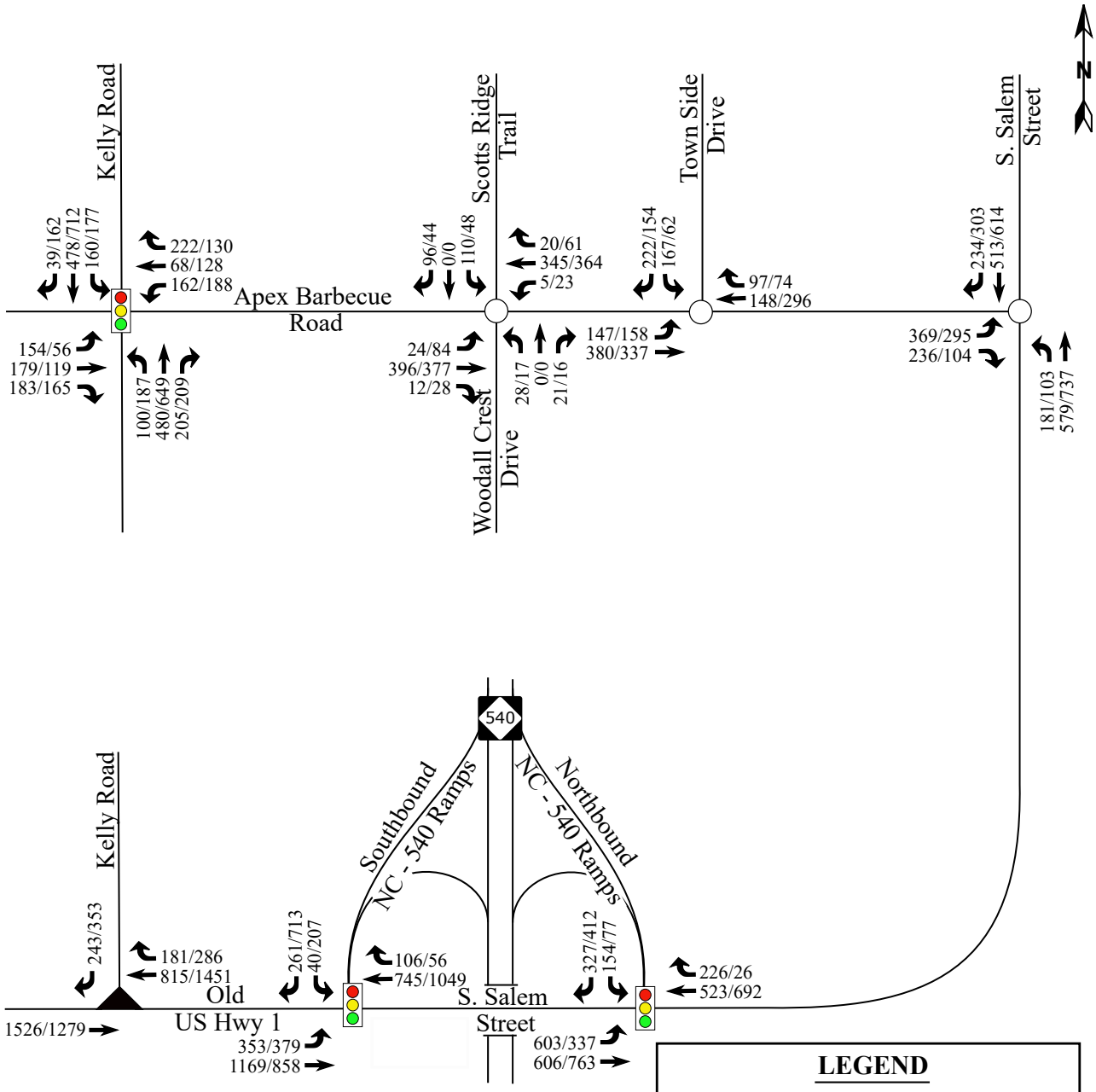
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Background (2025)
Peak Hour Traffic

Scale: Not to Scale

Figure 8a



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Background (2028)
Peak Hour Traffic

Scale: Not to Scale

Figure 8b

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development was analyzed in two phases. Phase 1 is expected to consist of 650 townhomes, while full build out is expected to consist of an additional 850 apartments (total of 1,500 low-rise multifamily units), 250,000 s.f. shopping center, and 375,000 s.f. general office development. Average weekday daily, weekday AM peak hour, and weekday PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Refer to Tables 2A and 2B for a summary of the trip generation potential for Phase 1 and full build-out, respectively.

Table 2A: Trip Generation Summary – Phase 1

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220)	650 units	4,870	65	217	197	115

It is estimated that Phase 1 of the proposed development will generate approximately 4,870 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 282 trips (65 entering and 217 exiting) will occur during the AM peak hour and 312 trips (197 entering and 115 exiting) will occur during the PM peak hour.

Table 2B: Trip Generation Summary – Full Buildout

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220)	1,500 units	11,300	144	481	415	243
General Office Building (710)	375,000 s.f.	3,820	467	64	86	392
Shopping Center (820)	250,000 s.f.	11,210	172	105	514	556
Total		**26,330**	**783**	**650**	**1,015**	**1,191**
Internal Capture (7% Entering AM, 8% Exiting AM 24% Entering PM, 20% Exiting PM)			*-55*	*-52*	*-244*	*-238*
Total External Trips			**728**	**598**	**771**	**953**
Pass-By Trips: Shopping Center (34% PM)			*0*	*0*	*-142*	*-142*
Total Primary Trips			**728**	**598**	**629**	**811**

It is estimated that the proposed development will generate approximately 26,330 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 1,433 trips (783 entering and 650 exiting) will occur during the weekday AM peak hour and 2,206 (1,015 entering and 1,191 exiting) will occur during the weekday PM peak hour.

Internal capture of trips between the residential and retail uses was considered in this study. Internal capture is the consideration for trips that will be made within the site between different land uses, so the vehicle never leaves the internal site but can still be considered as a trip to that specific land use. Internal capture typically only considers trips between residential, office, and retail/restaurant land uses. Based on the NCHRP Internal Capture methodology, an AM peak hour internal capture rate of 7% entering and 8% exiting was applied to the total trips. Also, a PM peak hour internal capture rate of 24% entering and 20% exiting was applied to the total trips. The internal capture reductions are expected to account for 107 (55 entering

and 52 exiting) trips during the AM peak hour and 482 (244 entering and 238 exiting) trips during the PM peak hour.

Pass-by trips were also taken into consideration in this study. Pass-by trips are made by the traffic already using the adjacent roadway, entering the site as an intermediate stop on their way to another destination. Pass-by trips are expected to account for 284 trips (142 entering and 142 exiting) anticipated to occur during the weekday PM peak hour.

The total primary site trips are the calculated site trips after the reduction for internal capture and pass-by trips. Primary site trips are expected to generate approximately 1,326 trips (728 entering and 598 exiting) will occur during the AM peak hour and 1,440 trips (629 entering and 811 exiting) will occur during the PM peak hour. Refer to Appendix A for the NCHRP Internal capture spreadsheets used in these calculations.

4.2. Site Trip Distribution and Assignment

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. It is estimated that residential trips generated by the proposed development will be distributed as follows:

- 30% to/from the north via NC-540
- 30% to/from the south via NC-540
- 20% to/from the north via S. Salem Street
- 10% to/from the north via Kelly Road
- 10% to/from the west via Old US Hwy 1

It is estimated that the commercial and office trips generated by the proposed development will be distributed as follows:

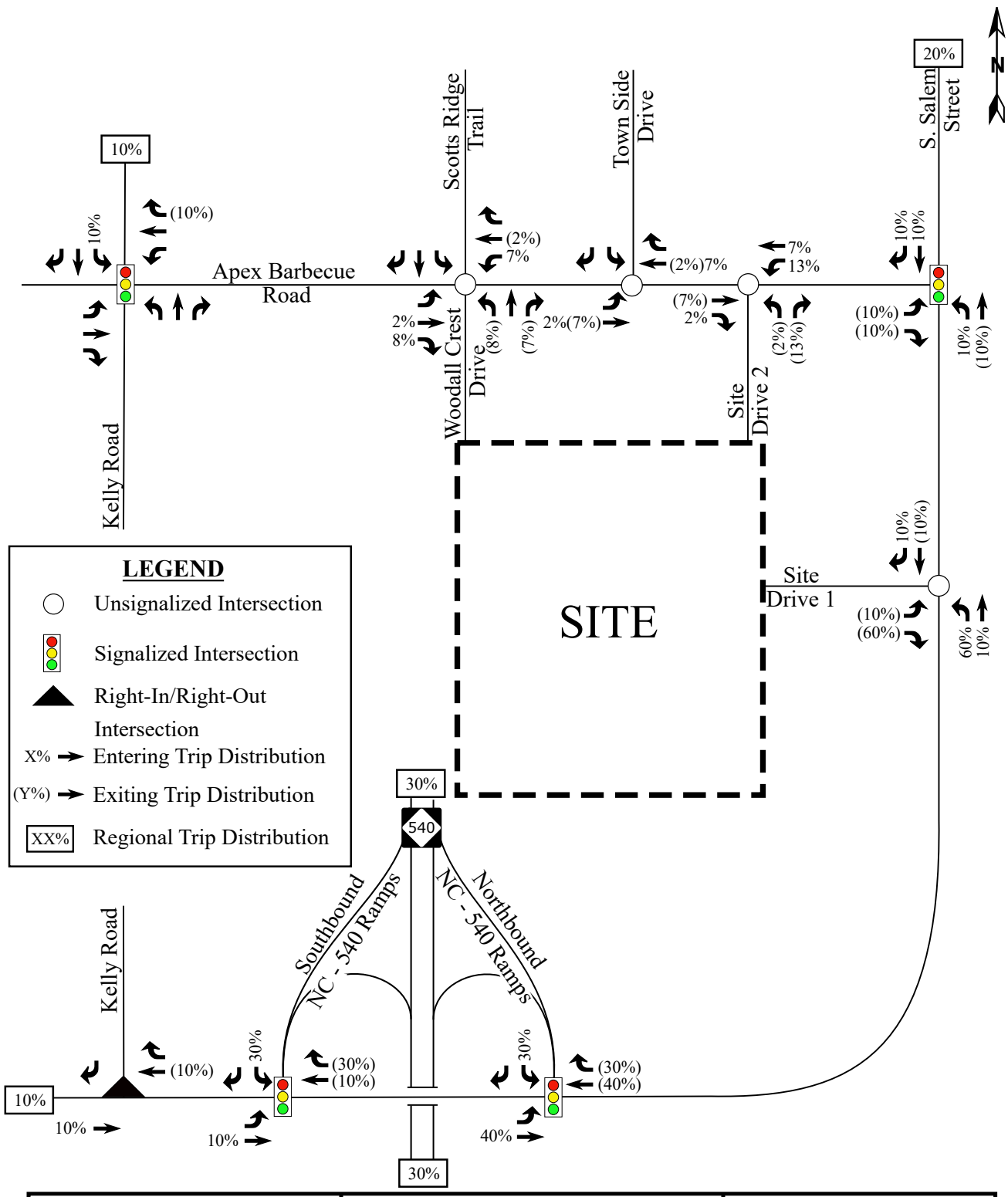
- 25% to/from the north via S. Salem Street
- 15% to/from the north via Kelly Road
- 15% to/from the west via Apex Barbecue Road
- 15% to/from the west via Old US Hwy 1

- 10% to/from the north via NC-540
- 10% to/from the south via NC-540
- 5% to/from the north via Scotts Ridge Trail
- 5% to/from the north via Town Side Drive

The residential site trip distribution for Phase 1 and Full Buildout of the proposed development is shown in Figures 9a and 9b, respectively. The commercial / office site trip distribution is illustrated in Figure 10. Refer to Figures 12a and 12b for the residential site trip assignment for Phase 1 and Full Buildout of the proposed development, respectively. Refer to Figure 13 for the commercial / office site trip assignment.

The pass-by site trips were distributed based on existing traffic patterns with consideration given to the proposed driveway access and site layout. Refer to Figure 11 for the pass-by site trip distribution. Pass-by site trip assignments are shown in Figure 14.

The total site trips were determined by adding the primary site trips and the pass-by site trips. Refer to Figure 12a for the Phase 1 total peak hour site trips and Figure 15 for the full buildout total peak hour site trips at the study intersections.



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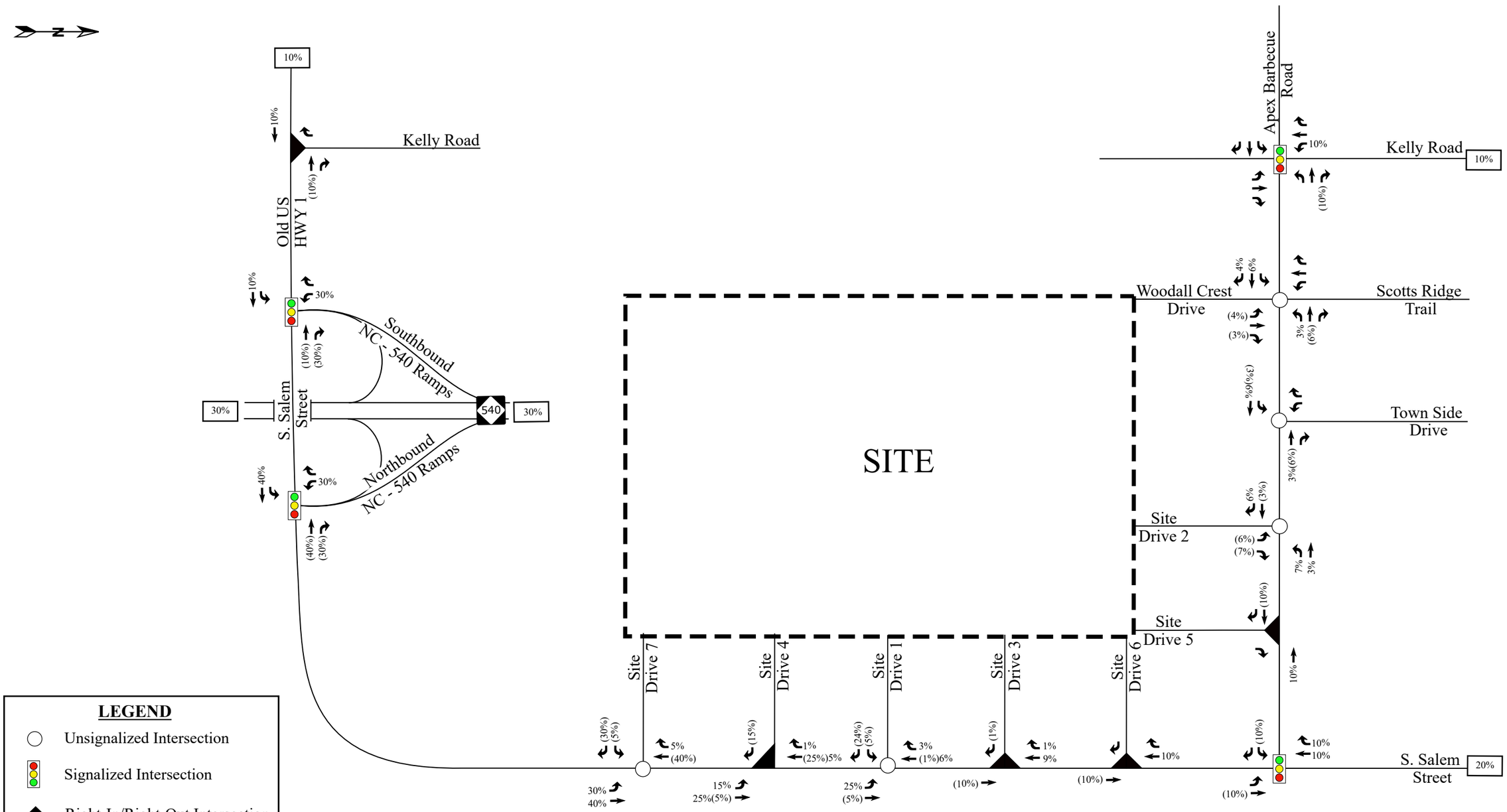
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Residential Site Trip Distribution - Phase 1

Scale: Not to Scale

Figure 9a



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

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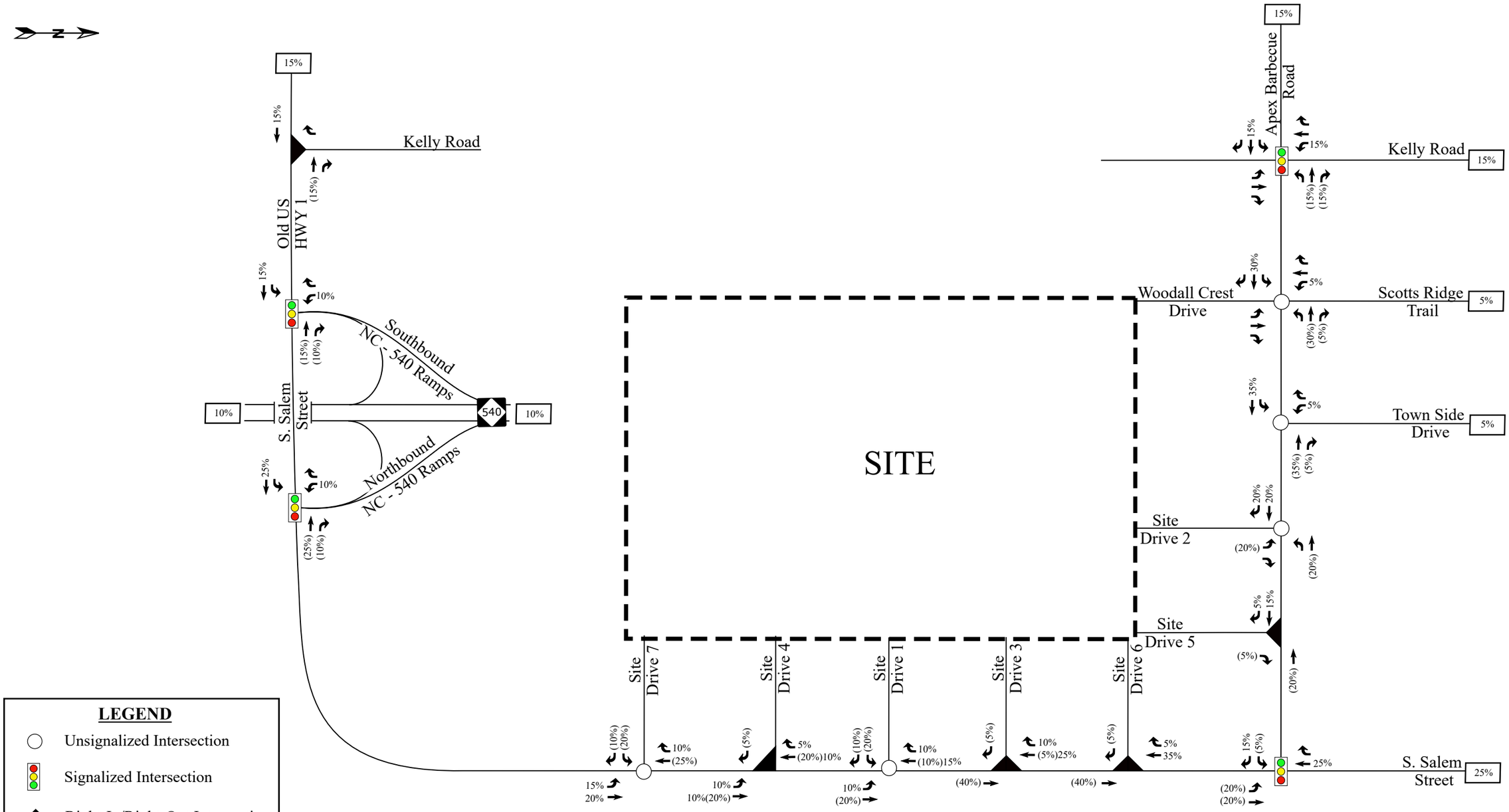
Depot 499
Apex, NC

Residential Site Trip Distribution - Full Build-Out

Scale: Not to Scale

Figure 9b



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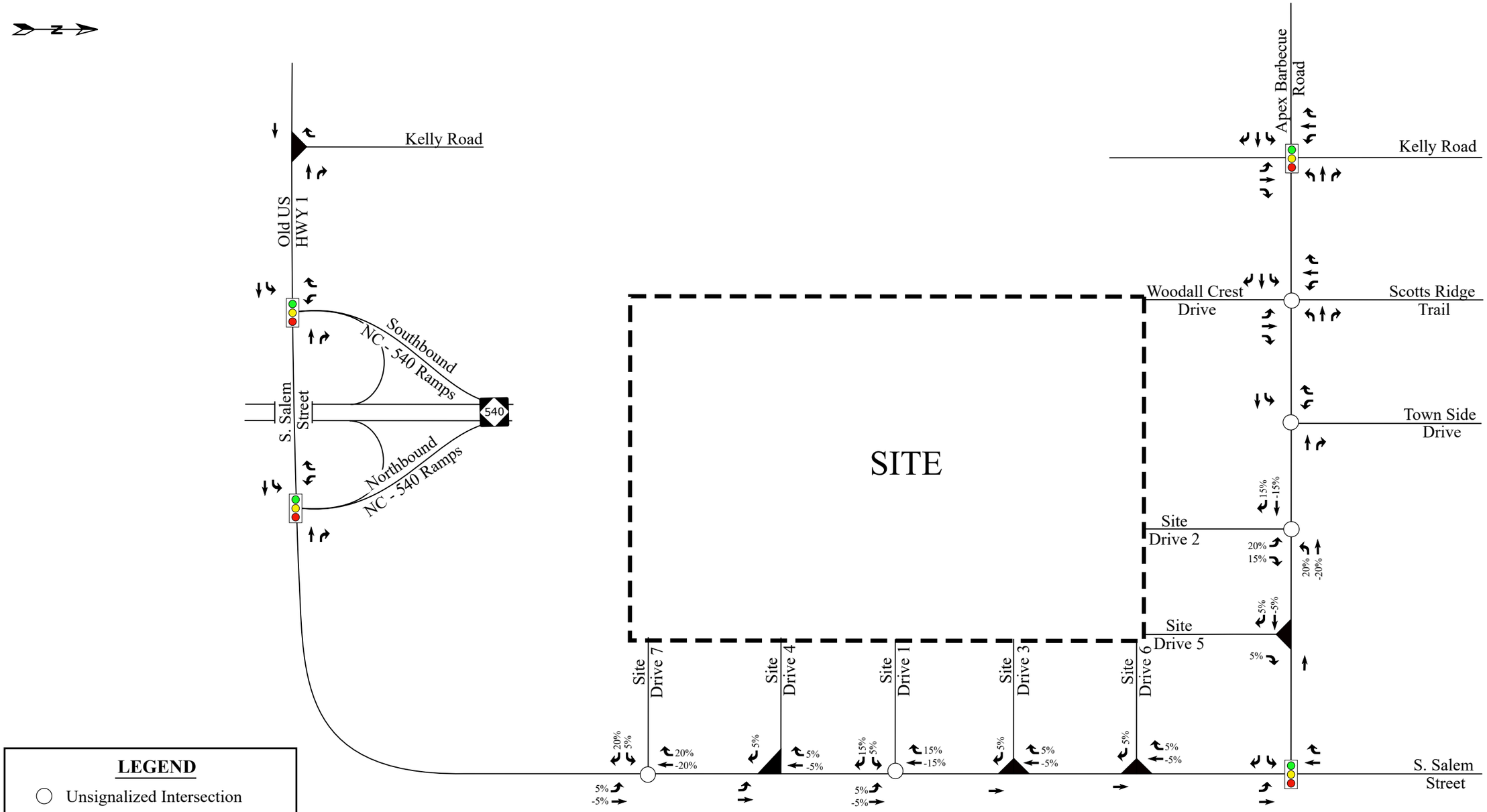
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Commercial Site Trip Distribution

Scale: Not to Scale

Figure 10



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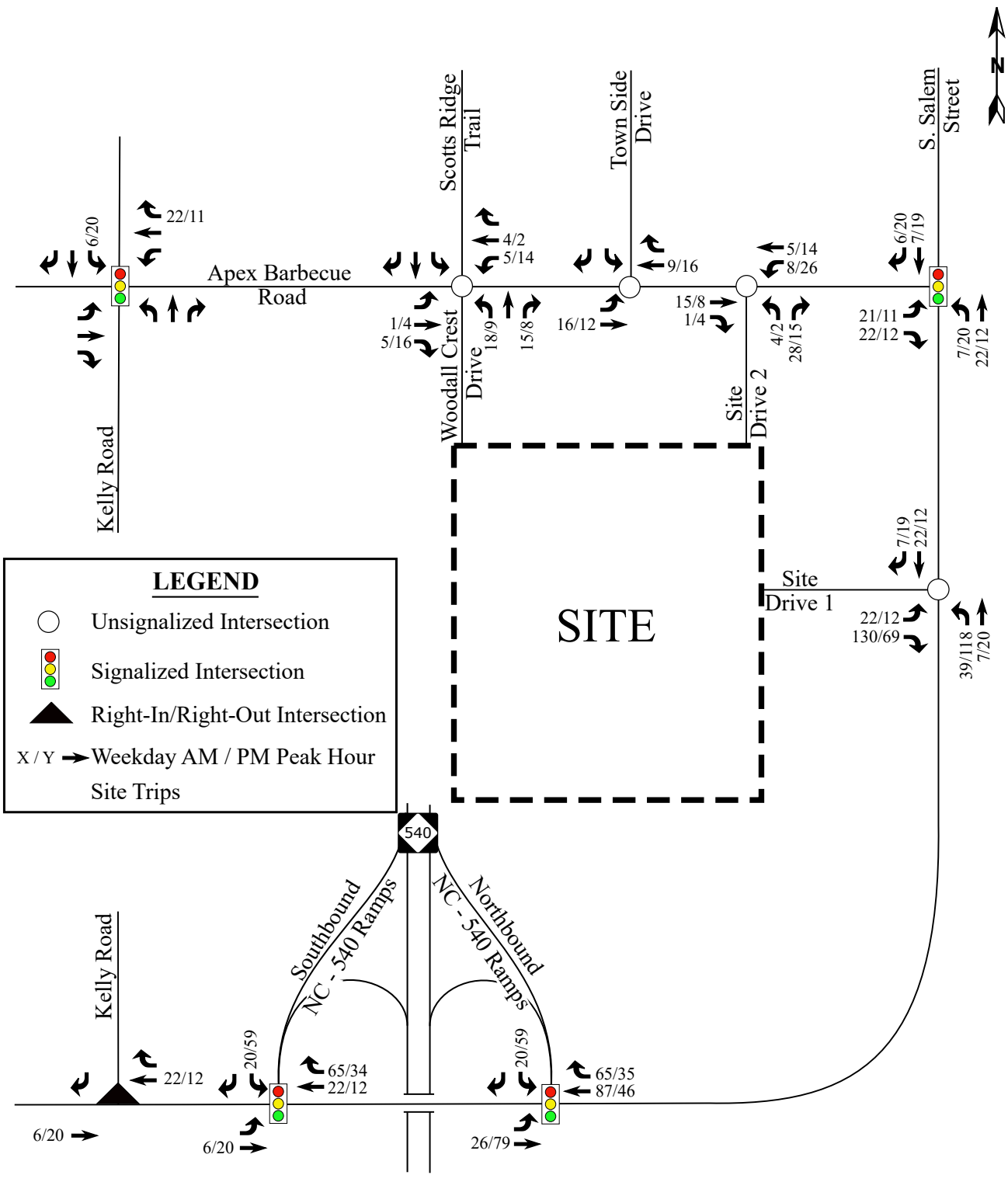
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

PM Pass-By
Trip Distribution

Scale: Not to Scale

Figure 11



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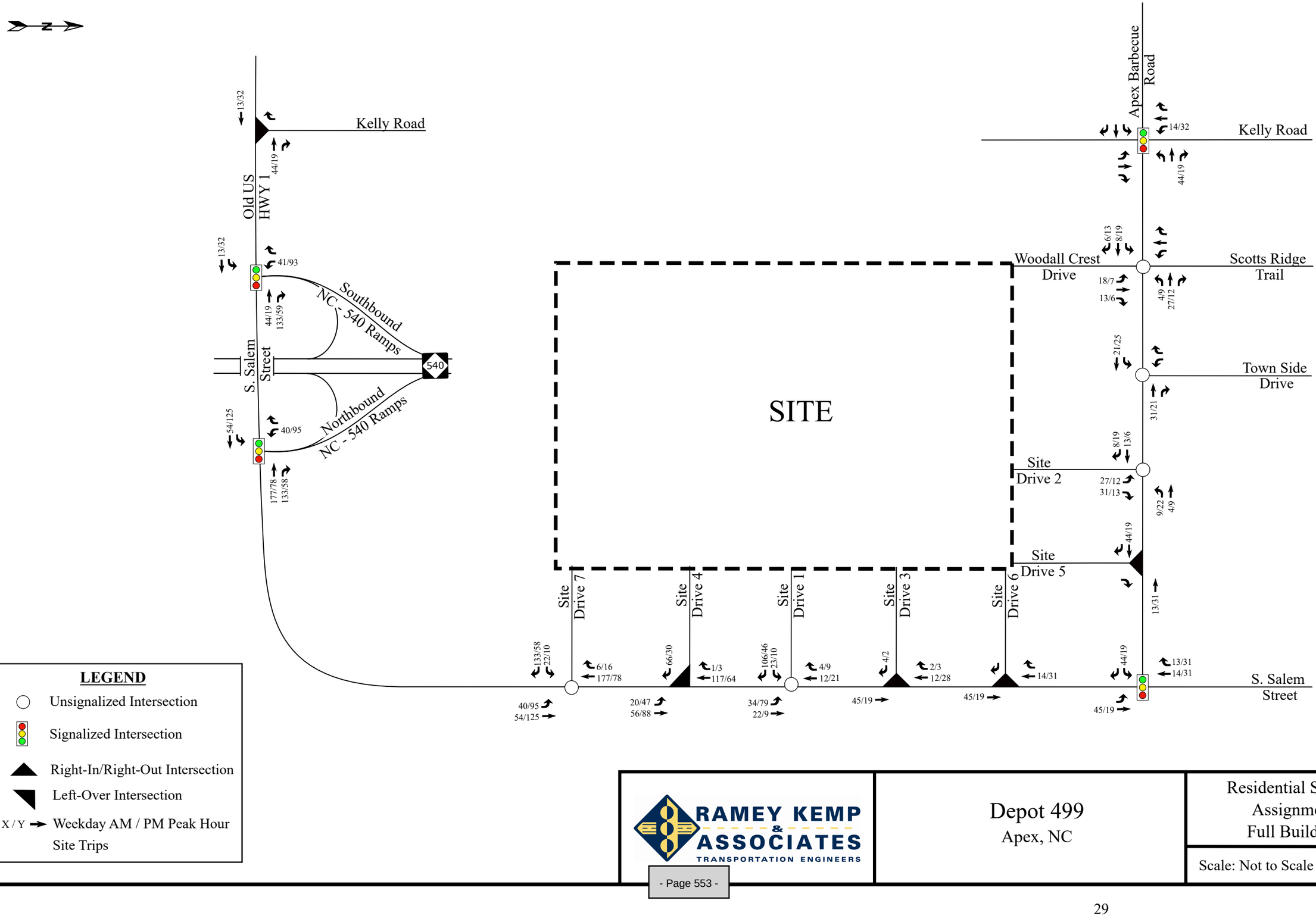
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Total Site Trip Assignment - Phase 1

Scale: Not to Scale | Figure 12a



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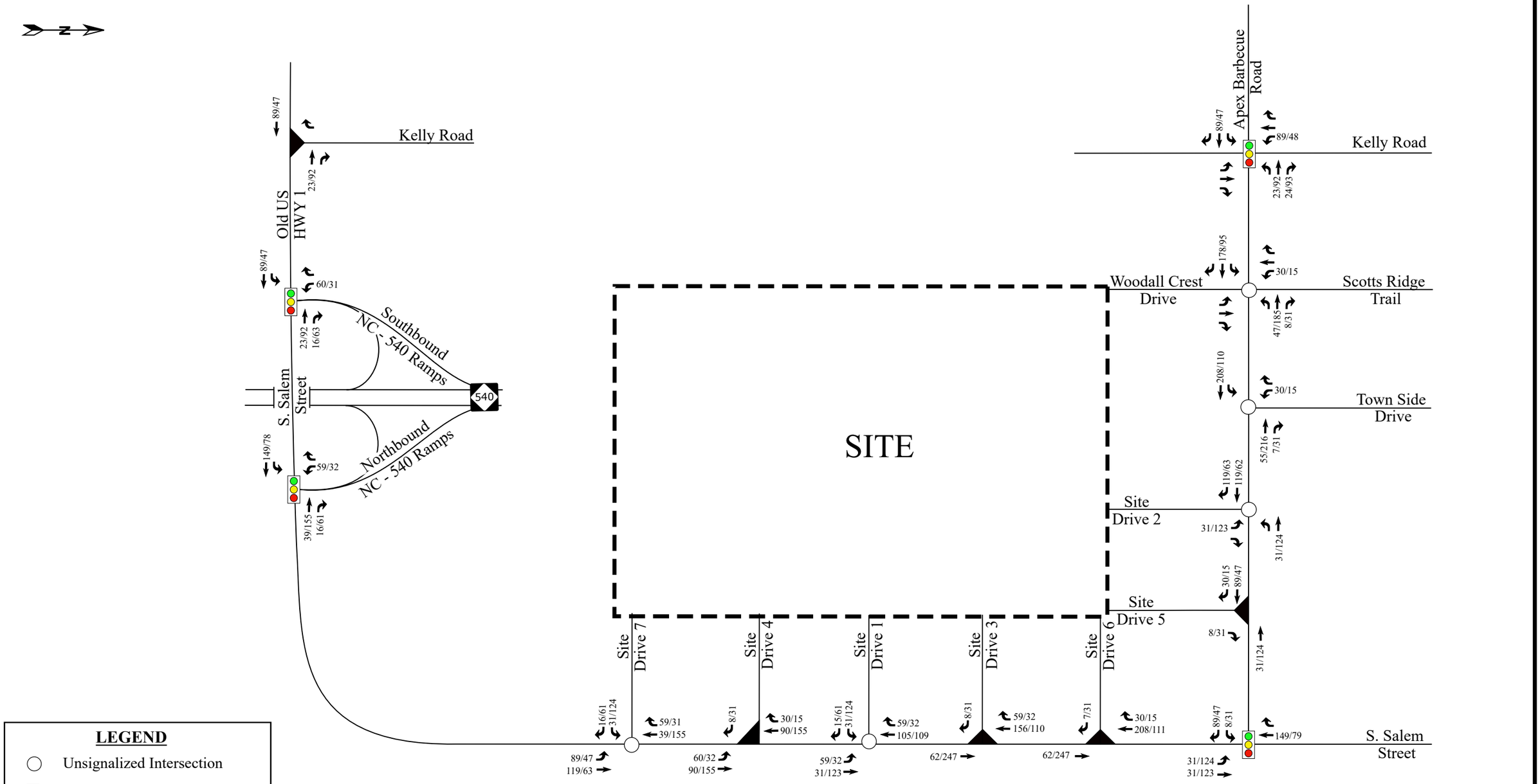
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Residential Site Trip Assignment - Full Build-Out

Scale: Not to Scale

Figure 12b



LEGEND

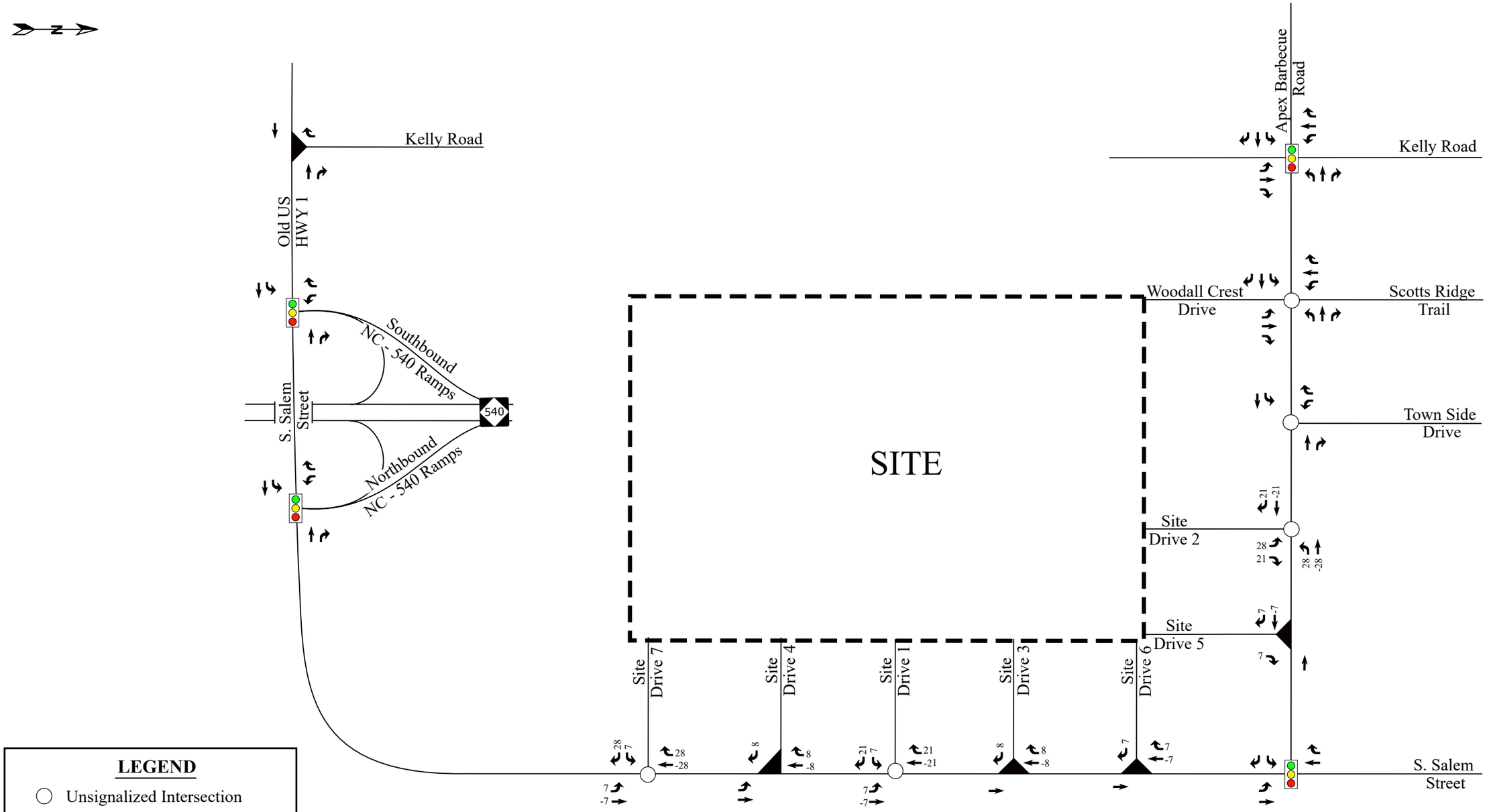
- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Commercial/Office
Site Trip Assignment -
Full Buildout

Scale: Not to Scale | Figure 13



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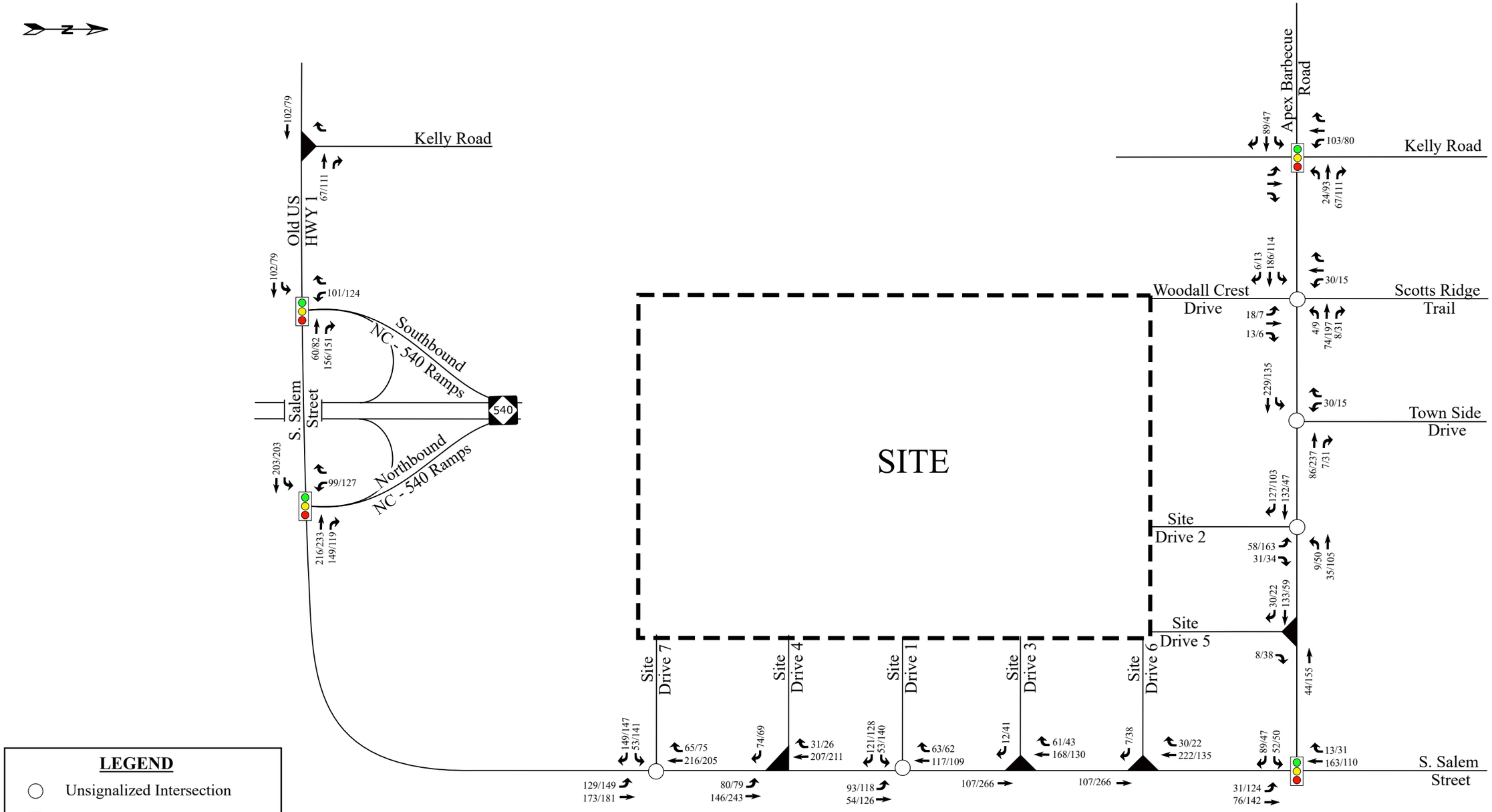
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

PM Pass-By
Trip Assignment

Scale: Not to Scale

Figure 14



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

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TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Total Site Trip Assignment
- Full Buildout

Scale: Not to Scale

Figure 15

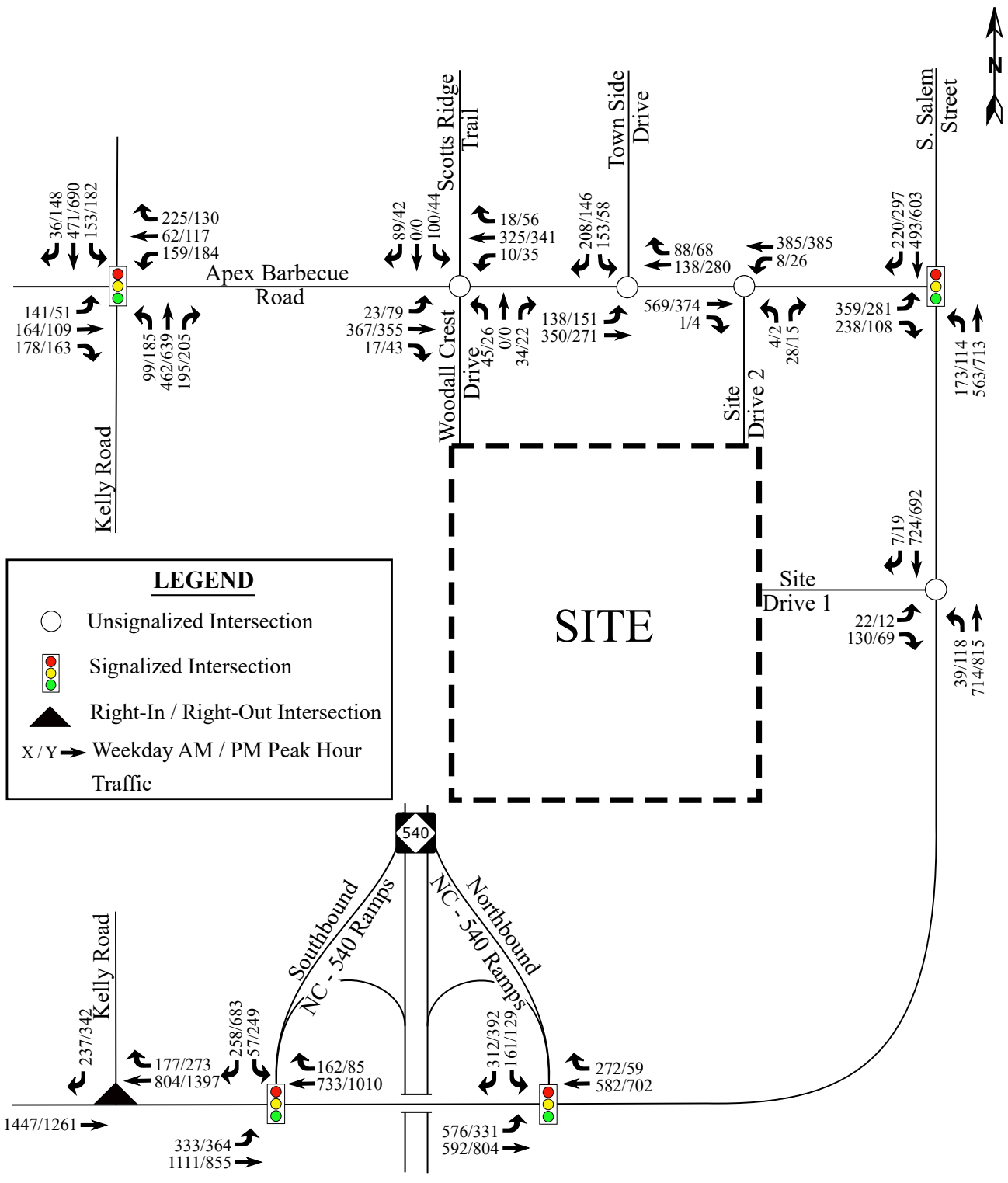
5. COMBINED (2025 / 2028) TRAFFIC CONDITIONS

5.1. Combined (2025 / 2028) Peak Hour Traffic Volumes

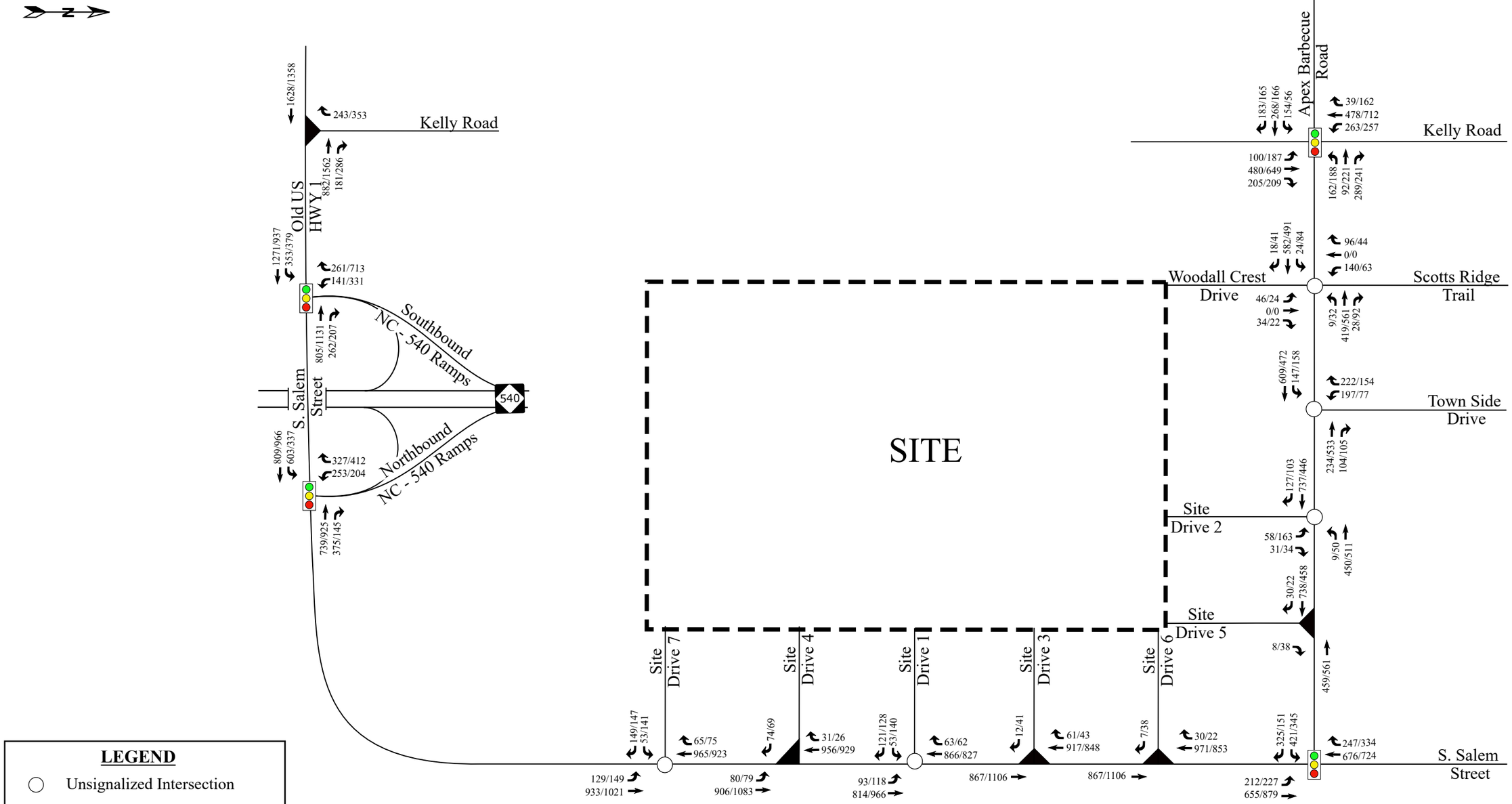
To estimate traffic conditions with the site, the total site trips (Figures 12a, 15) were added to the background (2025 / 2028) traffic volumes (Figures 8a, 8b) to determine the combined (2025 / 2028) traffic volumes that can be expected upon build-out of the proposed development phases. Refer to Figures 16a and 16b for illustrations of the combined (2025) – Phase 1 and combined (2028) – Full Build peak hour traffic volumes, respectively.

5.2. Analysis of Combined (2025 / 2028) Peak Hour Traffic

Study intersections were analyzed with the combined (2025 / 2028) traffic volumes using the same methodology previously discussed for background traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The analysis results are presented in Section 7 of this report.



RAMEY KEMP & ASSOCIATES TRANSPORTATION ENGINEERS	Depot 499 Apex, NC	Combined (2025) Peak Hour Traffic - Phase 1 Scale: Not to Scale | Figure 16a



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Combined (2028) Peak Hour Traffic - Full Buildout

Scale: Not to Scale

Figure 16b

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual* (HCM), 6th Edition, published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 10.3), was used to complete the analyses for most of the study area intersections. The unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level "F" where breakdown conditions are evident. Refer to Table 3 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 3: Highway Capacity Manual – Levels-of-Service and Delay

UNSIGNALIZED INTERSECTION		SIGNALIZED INTERSECTION	
LEVEL OF SERVICE	**AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)**	**LEVEL OF SERVICE**	**AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)**
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

6.1. Adjustments to Analysis Guidelines

Capacity analysis at study intersections was completed according to the NCDOT Congestion Management Guidelines and Town of Apex Unified Development Ordinance (UDO).

7. CAPACITY ANALYSIS

7.1. S. Salem Street and Apex Barbecue Road

The signalized intersection of S. Salem Street and Apex Barbecue Road was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 4. Refer to Table 4 for a summary of the analysis results. Refer to Appendix E for the Synchro capacity analysis reports.

Table 4: Analysis Summary of S. Salem Street and Apex Barbecue Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB NB SB	1 LT, 1 RT 1 LT, 1 TH 1 TH, 1 RT	B A B	B (14)	B A B	B (12)
Background (2025) Conditions	EB NB SB	1 LT, 1 RT 1 LT, 1 TH 1 TH, 1 RT	C B C	C (21)	C B C	B (19)
Combined (2025) Conditions	EB NB SB	1 LT, 1 RT 1 LT, 1 TH 1 TH, 1 RT	C B C	C (22)	C B C	C (20)
Background (2028) Conditions	EB NB SB	1 LT, 1 RT 1 LT, 1 TH 1 TH, 1 RT	C B C	C (22)	C B C	C (22)
Combined (2028) Conditions	EB NB SB	1 LT, 1 RT 1 LT, 1 TH 1 TH, 1 RT	D C C	C (32)	D C C	C (32)
Combined (2028) Conditions – **with Improvements**	EB NB SB	**1 LT**, 1 RT **1 LT**, 1 TH 1 TH, 1 RT	D C C	C (32)	D C C	C (32)

Improvements by Developer in **Bold.**

Capacity analysis of existing (2019), background (2025,2028), and combined (2025,2028) traffic conditions indicates the intersection of S. Salem Street and Apex Barbecue Road is expected to operate at an overall LOS C or better during both weekday AM and PM peak hours. Future traffic volumes were evaluated to determine the need for turn-lane extensions. These turn-lane extensions were recommended under full buildout (2028) conditions for the

eastbound and northbound left-turn movements and are not expected to impact the intersection delay. As these improvements are on the frontage of the corner parcel and are not needed from a level of service standpoint, these turn-lane extensions are recommended to be completed with construction of Site Drive 5 and Site Drive 6. Turn-lane lengths were determined based on review of Synchro and SimTraffic analyses.

7.2. S. Salem Street and Northbound NC-540 Ramps

The signalized intersection of S. Salem Street and Northbound NC-540 Ramps was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 5. Refer to Table 5 for a summary of the analysis results. Refer to Appendix F for the Synchro capacity analysis reports.

Table 5: Analysis Summary of S. Salem Street and Northbound NC-540 Ramps

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	A B B	B (10)	A B B	A (9)
Background (2025) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	D B C	D (37)	B C C	B (20)
Combined (2025) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	F C C	D (50)	B C D	C (25)
Background (2028) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	E C C	D (48)	B C D	C (22)
Combined (2028) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	F C D	F (92)	D D E	D (43)
Combined (2028) Conditions – **with Signal Timing Modifications**	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	D E E	D (53)	C D D	D (38)

Capacity analysis of existing (2019), background (2025,2028), and combined (2025) traffic conditions indicates the intersection of S. Salem Street and Northbound NC-540 Ramps is expected to operate at an overall LOS D or better during both weekday AM and PM peak hours. Under combined (2028) conditions, the intersection is expected to operate at LOS F during the weekday AM peak hour and LOS D during the weekday PM peak hour. Signal timing modifications are recommended under combined (2028) full buildout conditions to improve the overall intersection to LOS D during the weekday AM and PM peak hour. Signal

plans for the NC 540 interchange indicates that this intersection is part of the S. Salem Street closed loop system. Field inspection indicated that these intersections are not currently operating on a coordinated signal plan. Due to this, these signal timing modifications / recommendations include implementation of a coordinated system for the S. Salem Street corridor.

7.3. S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps

The signalized intersection of S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 6. Refer to Table 6 for a summary of the analysis results. Refer to Appendix G for the Synchro capacity analysis reports.

Table 6: Analysis Summary of S. Salem Street / Old US 1 and Southbound NC-540 Ramps

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, 1 RT	A B B	A (8)	A B C	B (16)
Background (2025) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, <u>1 RT</u>	B C A	B (15)	D E B	D (45)
Combined (2025) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, <u>1 RT</u>	C C A	B (19)	D E C	D (52)
Background (2028) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, <u>1 RT</u>	B B A	B (16)	D F B	E (56)
Combined (2028) Conditions	EB WB SB	1 LT, 1 TH 1 TH, 1 RT 1 LT, <u>1 RT</u>	D C C	C (31)	D F E	F (81)
Combined (2028) Conditions – **with Improvements**	EB WB SB	1 LT, 1 TH **2 TH**, 1 RT 1 LT, **<u>1 RT</u>**	C A E	C (22)	C C E	C (35)

Background improvements by the West Village development shown <u>underlined</u>.
Improvements by Developer in **Bold.**

Capacity analysis of existing (2019), background (2025), and combined (2025) traffic conditions indicates the intersection of S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps is expected to operate at LOS D or better during both weekday AM and PM peak hours. Under background (2028) conditions, the intersection is expected to operate at an

overall LOS B during the weekday AM peak hour and LOS E during the weekday PM peak hour. Capacity analysis of combined (2028) conditions indicates that the intersection is expected to operate at an overall LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour. Improvements are necessary to the westbound and southbound approaches to improve the intersection to an overall LOS C during the weekday AM and PM peak hour under combined (2028) full buildout conditions. Signal plans for the NC 540 interchange indicates that this intersection is part of the S. Salem Street closed loop system. Field inspection indicated that these intersections are not currently operating on a coordinated signal plan. Due to this, these signal timing modifications / recommendations include implementation of a coordinated system for the S. Salem Street corridor.

Under background conditions, the West Village development is required to restripe the southbound approach to allow free-flow right-turns onto Old US Hwy 1. With the proposed Depot 499 improvements, this southbound right-turn movement will become signalized to allow for an additional westbound through lane. Due to this signalization, additional storage for the southbound right-turn lane is recommended. The exact storage length for the widening on the westbound approach is also subject to change during design due to construction limitations with the adjacent NC 540 bridge.

Since the largest degradation of level of service at this intersection is due to background growth, it is recommended that this improvement be reevaluated at a later phase of development. It is recommended that the improvements at this intersection be constructed prior to issuance of the driveway permit for Site Drive 7. Site Drive 7 is expected to handle a high volume of traffic / large density of the proposed development and thus be a larger generator of traffic at this intersection. These improvements are also contingent on the widening required of the West Village development. If the proposed development moves forward prior to West Village, it is recommended that these improvements be reevaluated.

7.4. S. Salem Street and Kelly Road

The unsignalized intersection of S. Salem Street and Kelly Road was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 7. Due to the improvements warranted by the West Village development, the intersection was analyzed as a right-in / right-out intersection under all future scenarios. Refer to Table 7 for a summary of the analysis results. Refer to Appendix H for the Synchro capacity analysis reports.

Table 7: Analysis Summary of S. Salem Street and Kelly Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT, 1 TH 1 TH-RT 1 LT, 1 RT	A[1] -- F[2]	N/A	A[1] -- C[2]	N/A
Background (2025) Conditions	EB WB SB	1 TH 2 TH, 1 RT 1 RT	-- -- C[2]	N/A	-- -- F[2]	N/A
Combined (2025) Conditions	EB WB SB	1 TH 2 TH, 1 RT 1 RT	-- -- C[2]	N/A	-- -- F[2]	N/A
Background (2028) Conditions	EB WB SB	1 TH 2 TH, 1 RT 1 RT	-- -- C[2]	N/A	-- -- F[2]	N/A
Combined (2028) Conditions	EB WB SB	1 TH 2 TH, 1 RT 1 RT	-- -- C[2]	N/A	-- -- F[2]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Background improvements by the West Village development shown underlined.

Capacity analysis of existing (2019) traffic conditions indicates that the major-street left-turn movement at the intersection of S. Salem Street and Kelly Road is expected to operate at LOS A during the weekday AM and PM peak hours, while the minor-street approach is expected to operate at LOS F during the weekday AM peak hour and LOS C during the weekday PM peak

hour. Under background (2025,2028) and combined (2025,2028) conditions, the minor-street approach at the intersection is expected to operate at LOS C during the weekday AM peak hour and LOS F during the weekday PM peak hour. It is not uncommon for a minor street approach to operate at a poor level when a high volume of through traffic is on the main-line approach. This intersection is not expected to be a candidate for signalization due to the restricted right-in/right-out access. The traffic signals at the NC 540 ramps to the east are expected to create some gaps in traffic along S. Salem Street, which should result in less delay than shown in the Synchro report. No improvements are recommended by the proposed development.

7.5. Kelly Road and Apex Barbecue Road

The signalized intersection of Kelly Road and Apex Barbecue Road was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 8. Refer to Table 8 for a summary of the analysis results. Refer to Appendix I for the Synchro capacity analysis reports.

Table 8: Analysis Summary of Kelly Road and Apex Barbecue Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB NB SB	1 LT-TH-RT 1 LT-TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH-RT	C B C B	C (23)	B B C B	B (19)
Background (2025) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 RT 1 LT, 1 TH, 1 RT	E D D D	D (47)	E E D D	D (55)
Combined (2025) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 RT 1 LT, 1 TH, 1 RT	E D D D	D (47)	E E D D	E (56)
Background (2028) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 RT 1 LT, 1 TH, 1 RT	E D D D	D (50)	E F D E	E (60)
Combined (2028) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 RT 1 LT, 1 TH, 1 RT	E E D F	E (73)	F F D F	F (93)
Combined (2028) Conditions – **with Improvements**	EB WB NB SB	1 LT, 1 TH, **1 RT** 1 LT, 1 TH, **1 RT** 1 LT, 1 TH, 1 RT 1 LT, 1 TH, 1 RT	D D D E	D (48)	D E D D	D (50)

Background improvements by the West Village development shown underlined.
Improvements by Developer in **Bold.**

Capacity analysis of existing (2019) and background (2025) traffic conditions indicates the intersection of Kelly Road and Apex Barbecue Road is expected to operate at an overall LOS

D or better during the weekday AM and PM peak hours. Under combined (2025) – phase 1 and background (2028) conditions, the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour. Per the Town of Apex UDO, improvements should be recommended to improve intersections that degrade beyond a level of service D during the weekday peak hours when the development is expected to account for greater than 10% of the traffic at the intersection. Phase 1 of the proposed development is expected to add 0 seconds of delay during the weekday AM peak hour and 1 second of delay during the weekday PM peak hour and account for approximately 1% of the traffic during the weekday AM and PM peak hours. Due to the minor increase in intersection delay and low volume of site traffic at this intersection, no improvements are recommended at this intersection by the proposed development as part of Phase 1 of its development.

Capacity analysis of combined (2028) conditions indicates the intersection is expected to operate at LOS E during the weekday AM peak hour and LOS F during the weekday PM peak hour. Improvements are necessary to the eastbound and westbound approaches to improve the intersection to an overall LOS D during the weekday AM and PM peak hours under combined (2028) full buildout conditions. The exact storage length for the widening on the westbound approach is subject to change during design due to construction limitations with the adjacent bridge over NC 540. These eastbound and westbound turn-lanes are also expected to require right-of-way on land not controlled by the proposed development.

7.6. Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive

The unsignalized intersection of Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 9. Refer to Table 9 for a summary of the analysis results. Refer to Appendix J for the Synchro capacity analysis reports.

Table 9: Analysis Summary of Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] B[2] C[2]	N/A	A[1] A[1] B[2] C[2]	N/A
Background (2025) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] C[2] D[2]	N/A	A[1] A[1] C[2] D[2]	N/A
Combined (2025) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] C[2] D[2]	N/A	A[1] A[1] D[2] D[2]	N/A
Background (2028) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] C[2] E[2]	N/A	A[1] A[1] C[2] D[2]	N/A
Combined (2028) Conditions	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	A[1] A[1] F[2] F[2]	N/A	A[1] A[1] F[2] F[2]	N/A
Combined (2028) Conditions – **with Signalization**	EB WB NB SB	1 LT, 1 TH-RT 1 LT, 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	B B C D	C (21)	B C C D	C (23)

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of existing (2019), background (2025), and combined (2025) traffic conditions indicates all minor-street approaches and major-street left-turn movements at the intersection of Apex Barbecue Road and Scotts Ridge Trail / Woodall Crest Drive are expected to operate at LOS D or better during the weekday AM and PM peak hours. Under background (2028) conditions the major-street left-turn movements are expected to operate at LOS A during the weekday AM and PM peak hours, while the northbound minor-street approach is expected to operate at LOS C and the southbound minor-street approach is expected to operate at LOS E during the weekday AM peak hour. Under background (2028) conditions during the weekday PM peak hour, the minor-street approach is expected to operate at LOS D or better. Capacity analysis of combined (2028) conditions indicates that the major-street left-turn movements at the intersection are expected to operate at LOS A during the weekday AM and PM peak hours while the minor-street approaches are expected to operate at LOS F during the weekday AM and PM peak hours.

Although it is not uncommon for a minor-street approach to operate at a poor level of service with a high volume of through traffic on the main-line approach, a signal was considered at this intersection under combined (2028) full buildout conditions. With signalization, the intersection is expected to operate at an overall LOS C during the weekday AM and PM peak hours under combined (2028) full buildout conditions. Peak hour signal warrants were also reviewed under the combined (2028) full buildout conditions following the methodology contained in the Manual on Uniform Traffic Control Devices (MUTCD). The subject intersection is expected to meet warrants under the weekday AM peak hour but not under weekday PM peak hour conditions. These warrants are met on the Scott Ridge Trail approach and not on the Woodall Crest Drive side of the intersection. Due to this, signalization is not recommended by the proposed Depot 499 development.

A roundabout was considered for evaluation; however, a roundabout may not be the best permanent solution due to additional property impacts, increasing traffic on Apex Barbeque Road, the impacts of peak school traffic, and design challenges to accommodate school buses. This improvement would also be cost prohibitive for the development.

7.7. Apex Barbecue Road and Town Side Drive

The unsignalized intersection of Apex Barbecue Road and Town Side Drive was analyzed under existing (2019), background (2025, 2028), and combined (2025, 2028) traffic conditions with the lane configurations and traffic control shown in Table 10. Refer to Table 10 for a summary of the analysis results. Refer to Appendix K for the Synchro capacity analysis reports.

Table 10: Analysis Summary of Apex Barbecue Road and Town Side Drive

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Existing (2019) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT, 1 RT	A[1] -- C[2]	N/A	A[1] -- B[2]	N/A
Background (2025) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT, 1 RT	A[1] -- C[2]	N/A	A[1] -- C[2]	N/A
Combined (2025) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT, 1 RT	A[1] -- C[2]	N/A	A[1] -- C[2]	N/A
Background (2028) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT, 1 RT	A[1] -- D[2]	N/A	A[1] -- C[2]	N/A
Combined (2028) Conditions	EB WB SB	1 LT-TH 1 TH-RT 1 LT, 1 RT	A[1] -- F[2]	N/A	B[1] -- F[2]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of existing (2019), background (2025,2028) and combined (2025) traffic conditions indicates that the major-street left-turn movement and the minor-street approach at the intersection of Apex Barbecue Road and Town Side Drive are expected to operate at LOS D or better during the weekday AM and PM peak hours. Under combined (2028) conditions, the major-street left-turn movement is expected to operate at LOS B or better during the

weekday AM and PM peak hours, while the minor-street approach is expected to operate at LOS F during the weekday AM and PM peak hours. It is not uncommon for a minor street approach to operate at a poor level when a high volume of through traffic is on the main-line approach. As the proposed development is expected to contribute mostly through traffic to this intersection, no improvements are recommended by the proposed development.

7.8. S. Salem Street and Site Drive 1

The proposed unsignalized intersection of S. Salem Street and Site Drive 1 was analyzed under combined (2025, 2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 11. Refer to Table 11 for a summary of the analysis results. Refer to Appendix L for the Synchro capacity analysis reports.

Table 11: Analysis Summary of S. Salem Street and Site Drive 1

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2025) Conditions	**EB** NB SB	**1 LT, 1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	C[2] A[1] --	N/A	D[2] B[1] --	N/A
Combined (2028) Conditions	**EB** NB SB	**1 LT, 1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	F[2] B[1] --	N/A	F[2] B[1] --	N/A
Combined (2028) Conditions – **with Signalization**	**EB** NB SB	**1 LT, 1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	D B C	B (19)	D B C	C (24)

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Improvements by Developer in **Bold.**

Capacity analysis of combined (2025) traffic conditions indicates the minor-street approach and major-street left-turn movement at the intersection of S. Salem Street and Site Drive 1 are expected to operate at LOS D or better during the weekday AM and PM peak hours. Under combined (2028) conditions, the major-street left-turn movement is expected to operate at LOS B and the minor-street approach is expected to operate at LOS F during the weekday AM and PM peak hours. Turn-lane lengths were determined based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Although it is not uncommon for a minor-street approach to operate at a poor level of service with a high volume of through traffic on the main-line approach, a signal was considered at

this intersection under combined (2028) full buildout conditions. With signalization, the intersection is expected to operate at an overall LOS C or better during the weekday AM and PM peak hours under combined (2028) full buildout conditions. Peak hour signal warrants were also reviewed under the combined (2028) full buildout conditions following the methodology contained in the MUTCD. The subject intersection is expected to meet warrants under the weekday AM and PM peak hours. Due to this, it is recommended that the proposed development monitor this intersection for signalization under full buildout conditions and install once warranted and approved by NCDOT.

7.9. Apex Barbecue Road and Site Drive 2

The proposed unsignalized intersection of Apex Barbecue Road and Site Drive 2 was analyzed under combined (2025, 2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 12. Refer to Table 12 for a summary of the analysis results. Refer to Appendix M for the Synchro capacity analysis reports.

Table 12: Analysis Summary of Apex Barbecue Road and Site Drive 2

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2025) Conditions	EB WB **NB**	1 TH, **1 RT** **1 LT**, 1 TH **1 LT, 1 RT**	-- A[1] B[2]	N/A	-- A[1] B[2]	N/A
Combined (2028) Conditions	EB WB **NB**	1 TH, **1 RT** **1 LT**, 1 TH **1 LT, 1 RT**	-- A[1] D[2]	N/A	-- A[1] F[2]	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Improvements by Developer in **Bold.**

Capacity analysis of combined (2025) traffic conditions indicates the minor-street approach and major-street left-turn movement at the intersection of Apex Barbecue Road and Site Drive 2 are expected to operate at LOS B or better during the weekday AM and PM peak hours. Under combined (2028) conditions, the major-street left-turn movement is expected to operate at LOS A and the minor-street approach is expected to operate at LOS D during the weekday AM peak hour and LOS F during the weekday PM peak hour.

Turn-lane lengths were recommended based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Although it is not uncommon for a minor-street approach to operate at a poor level of service with a high volume of through traffic on the main-line approach, a signal was considered at

this intersection under combined (2028) full buildout conditions. Peak hour signal warrants were reviewed under the combined (2028) full buildout conditions following the methodology contained in the MUTCD. The subject intersection is not expected to meet warrants under the weekday AM and PM peak hours. Due to this, signalization of this intersection is not recommended.

7.10. S. Salem Street and Site Drive 3

The proposed right-in / right-out intersection of S. Salem Street and Site Drive 3 was analyzed under combined (2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 13. Refer to Table 13 for a summary of the analysis results. Refer to Appendix N for the Synchro capacity analysis reports.

Table 13: Analysis Summary of S. Salem Street and Site Drive 3

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2028) Conditions	**EB** NB SB	**1 RT** 1 TH 1 TH, **1 RT**	C[1] -- --	N/A	C[1] -- --	N/A

1. Level of service for minor-street approach.
Improvements by Developer in **Bold.**

Capacity analysis of combined (2028) traffic conditions indicates the minor-street approach at the intersection of S. Salem Street and Site Drive 3 is expected to operate at LOS C during the weekday AM and PM peak hours. Turn-lane lengths were recommended based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Although analyzed as a right-in/right-out in the study to match the approved MOU, it is recommended that Site Drive 3 be considered for a left-over access to allow additional ingress into the proposed site. This driveway is located approximately 800 feet north of the full movement Site Drive 1 and approximately 1,000 feet south of the full movement intersection of S. Salem Street and Apex Barbecue Road. Due to these reasons, it is recommended that this driveway be considered for left-over driveway access. The storage length for the northbound left-turn movement is recommended per the storage length recommended at the left-over access at Site Drive 4.

7.11. S. Salem Street and Site Drive 4

The proposed left-over intersection of S. Salem Street and Site Drive 4 was analyzed under combined (2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 14. Refer to Table 14 for a summary of the analysis results. Refer to Appendix O for the Synchro capacity analysis reports.

Table 14: Analysis Summary of S. Salem Street and Site Drive 4

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2028) Conditions	**EB** NB SB	**1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	C[2] B[1] --	N/A	C[2] B[1] --	N/A

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Improvements by Developer in **Bold.**

Capacity analysis of combined (2028) traffic conditions indicates the minor-street approach and the major-street left-turn movement at the intersection of S. Salem Street and Site Drive 4 are expected to operate at LOS C or better during the weekday AM and PM peak hours. Turn-lane lengths were recommended based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Providing a left turn into the development from S. Salem Street at Site Drive 4 will minimize left turning volumes at the main development access (Site Drive 1).

7.12. Apex Barbecue Road and Site Drive 5

The proposed right-in / right-out intersection of Apex Barbecue Road and Site Drive 5 was analyzed under combined (2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 15. Refer to Table 15 for a summary of the analysis results. Refer to Appendix P for the Synchro capacity analysis reports.

Table 15: Analysis Summary of Apex Barbecue Road and Site Drive 5

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2028) Conditions	EB WB **NB**	1 TH, **1 RT** 1 TH **1 RT**	-- -- B[1]	N/A	-- -- B[1]	N/A

1. Level of service for minor-street approach.
Improvements by Developer in **Bold.**

Capacity analysis of combined (2028) traffic conditions indicates the minor-street approach at the intersection of Apex Barbecue Road and Site Drive 5 is expected to operate at LOS B during the weekday AM and PM peak hours. Turn-lane lengths were recommended based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

7.13. S. Salem Street and Site Drive 6

The proposed right-in / right-out intersection of S. Salem Street and Site Drive 6 was analyzed under combined (2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 16. Refer to Table 16 for a summary of the analysis results. Refer to Appendix Q for the Synchro capacity analysis reports.

Table 16: Analysis Summary of S. Salem Street and Site Drive 6

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2028) Conditions	**EB** NB SB	**1 RT** 1 TH 1 TH, **1 RT**	C[1] -- --	N/A	C[1] -- --	N/A

1. Level of service for minor-street approach.
Improvements by Developer in **Bold.**

Capacity analysis of combined (2028) traffic conditions indicates the minor-street approach at the intersection of S. Salem Street and Site Drive 6 is expected to operate at LOS C during the weekday AM and PM peak hours. Turn-lane lengths were recommended based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

7.14. S. Salem Street and Site Drive 7

The proposed intersection of S. Salem Street and Site Drive 7 was analyzed under combined (2028) traffic conditions with the proposed lane configurations and traffic control shown in Table 17. Refer to Table 17 for a summary of the analysis results. Refer to Appendix R for the Synchro capacity analysis reports.

Table 17: Analysis Summary of S. Salem Street and Site Drive 7

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
Combined (2028) Conditions	**EB** NB SB	**1 LT, 1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	F[2] B[1] --	N/A	F[2] B[1] --	N/A
Combined (2028) Conditions – **with Signalization**	**EB** NB SB	**1 LT, 1 RT** **1 LT**, 1 TH 1 TH, **1 RT**	D B C	C (22)	D B C	C (28)

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Improvements by Developer in **Bold.**

Capacity analysis of combined (2028) traffic conditions indicates the minor-street approach at the intersection of S. Salem Street and Site Drive 7 is expected to operate at LOS F during the weekday AM and PM peak hours, while the major-street left-turn movement is expected to operate at LOS B during the weekday AM and PM peak hours. Turn-lane lengths were determined based on review of Synchro and SimTraffic analyses, as well as review of the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Although it is not uncommon for a minor-street approach to operate at a poor level of service with a high volume of through traffic on the main-line approach, a signal was considered at this intersection under combined (2028) full buildout conditions. With signalization, the intersection is expected to operate at an overall LOS C during the weekday AM and PM peak hours under combined (2028) full buildout conditions. Peak hour signal warrants were also

reviewed under the combined (2028) full buildout conditions following the methodology contained in the MUTCD. The subject intersection is expected to meet warrants under the weekday AM and PM peak hours. Due to this, it is recommended that the proposed development monitor this intersection for signalization under full buildout conditions and install once warranted and approved by NCDOT.

NCDOT Median Crossover Guidelines were also reviewed to ensure compliance with the proposed site driveways on S. Salem Street. With construction of this driveway, it is recommended that the speed limit of S. Salem Street to be reduced to 45 miles per hour (mph). By this stage of development, S. Salem Street is expected to be urbanized from downtown Apex, extending beyond the Depot 499 development, south to the West Village development. Due to future traffic volumes and number of intersections along the corridor, the currently signed 55 mph is expected to be uncharacteristic for the corridor, with 45 mph being a more appropriate posted speed limit. This speed reduction will also allow for the median crossover spacing (2,000 feet of 55 mph and 1,200 feet for 45 mph) to be met. A separate request for this speed limit reduction will be submitted with this TIA to the NCDOT District office for review.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Depot 499 development (formerly Poe Property) to be located west of S. Salem Street (Old US Hwy 1) and south of Apex Barbecue Road in Apex, North Carolina. The proposed development was analyzed in two phases. Phase 1 is anticipated to be complete in 2025 and consist of 650 townhomes. Full build-out of the proposed development is expected to be complete in 2028 and is expected to add the following land uses to those of Phase 2:

- 850 apartments (total of 1,500 low-rise multifamily units)
- 250,000 s.f. shopping center
- 375,000 s.f. general office building

Access to Phase 1 of the proposed development is proposed to be provided via one (1) full movement driveway on Apex Barbecue Road and one (1) full movement driveway on S. Salem Street. Phase 1 will also provide an internal connection to Woodall Crest Drive to the north. Full buildout of the development is proposed to provide a total of five (5) driveways on S. Salem Street (two (2) left-over driveways, two (2) full movement driveways, and one (1) right-in/right-out driveway). Full buildout will provide a total of two (2) driveways on Apex Barbecue Road (one (1) full movement driveway and one (1) right-in/right-out driveway).

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- Existing (2019) Traffic Conditions
- Background (2025) Traffic Conditions
- Combined (2025) Traffic Conditions
- Background (2028) Traffic Conditions
- Combined (2028) Traffic Conditions

<u>Trip Generation</u>

It is estimated that full buildout of the proposed development will generate approximately 26,330 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 1,433 trips (783 entering and 650 exiting) will occur

during the weekday AM peak hour and 2,206 (1,015 entering and 1,191 exiting) will occur during the weekday PM peak hour.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the Town's UDO and NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

Intersection Capacity Analysis Summary

Phase 1:

Under Phase 1 conditions, all intersections are expected to operate at acceptable levels of service during the weekday AM and PM peak hours. Turn-lanes were recommended at the site driveways according to the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual.

Full Buildout:

Under full buildout conditions, recommendations are provided to improve all study intersections to acceptable level of service during the weekday AM and PM peak hours. Turn-lanes were recommended at the site driveways according to the "Warrant for Left and Right-Turn Lanes at Grade, Unsignalized Intersections" chart contained in the NCDOT Driveway Manual. Of the recommended roadway improvements, not all improvements are expected to be warranted immediately after completion of Phase 1. Due to this, off-site roadway improvements are recommended to be tied to specific phases / certificate of occupancy / site driveway construction. Specific improvements are discussed in section 7 of this report. Refer to section 9 for a summary of the recommended improvements / phasing. This study considers the roadway improvements needed from a capacity analysis standpoint. Additional improvements required by the Town may be required but are not needed to accommodate the traffic generated by the proposed development.

Although Site Drive 3 is analyzed as a right-in/right-out in the study to match the approved MOU, it is recommended that Site Drive 3 be considered for a left-over access to allow

additional ingress into the proposed site. This driveway is located approximately 800 feet north of the full movement Site Drive 1 and approximately 1,000 feet south of the full movement intersection of S. Salem Street and Apex Barbecue Road. Due to these reasons, it is recommended that this driveway be considered for left-over driveway access. The storage length for the northbound left-turn movement is recommended per the storage length recommended at the left-over access at Site Drive 4.

9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figures 17 for an illustration of the recommended lane configuration for the proposed development under Phase 1 and Full Buildout conditions.

Background Improvements by Others (West Village Development)

Apex Barbecue Road and Kelly Road

- Construct an exclusive eastbound left-turn lane on Apex Barbecue Road with a minimum of 400 feet of storage and appropriate taper.
- Construct an exclusive westbound left-turn lane on Apex Barbecue Road with a minimum of 350 feet of storage and appropriate taper.
- Extend the exclusive northbound left-turn lane on Kelly Road to provide a minimum of 350 feet of storage and appropriate taper.
- Construct an exclusive northbound right-turn lane on Kelly Road to provide a minimum of 150 feet of storage and appropriate taper.
- Extend the exclusive southbound left-turn lane on Kelly Road to provide a minimum of 350 feet of storage and appropriate taper.
- Construct an exclusive southbound right-turn lane on Kelly Road to provide a minimum of 200 feet of storage and appropriate taper.
- Provide signal modifications to account for new lane configurations at the intersection.

Old US Hwy 1 and Kelly Road

- Restrict Kelly Road to a right-in/right-out intersection with stop control on the southbound approach of Kelly Road.
- Construct a westbound right-turn lane on Old US Hwy 1 to provide a minimum of 200 feet of storage and appropriate taper.
- Construct an additional westbound through lane on Old US Hwy 1 to extend to the intersection of Old US Hwy 1 and Southbound NC-540 Ramps.

Old US Hwy 1 / S. Salem Street and Southbound NC-540 Ramps

- Construct an additional westbound through lane on Old US Hwy 1 to begin as a free-flow southbound left-turn movement off of the southbound NC-540 Ramp.
- Provide signal modifications to account for new lane configurations at the intersection.

Recommended Improvements by Developer – Phase 1

S. Salem Street and Site Drive 1

- Provide site access via a full movement intersection with one (1) ingress lane and two (2) egress lanes (eastbound left-turn lane with a minimum of 100 feet of storage and appropriate taper and eastbound right-turn lane with full length storage).
- Provide stop control for the eastbound approach of Site Drive 1.
- Construct an exclusive northbound left-turn lane on S. Salem Street with a minimum of 200 feet of storage and appropriate taper.
- Construct an exclusive southbound right-turn lane on S. Salem Street with a minimum of 100 feet of storage and appropriate taper.

Apex Barbecue Road and Site Drive 2

- Provide site access via a full movement intersection with one (1) ingress lane and two (2) egress lanes (northbound left-turn lane with a minimum of 100 feet of storage and appropriate taper and northbound right-turn lane with full length storage).
- Provide stop control for the northbound approach of Site Drive 2.
- Construct an exclusive westbound left-turn lane on Apex Barbecue Road with a minimum of 100 feet of storage and appropriate taper.
- Construct an exclusive eastbound right-turn lane on Apex Barbecue Road with a minimum of 100 feet of storage and appropriate taper.

Recommended Improvements by Developer – Full Buildout

Old US Hwy 1 / S. Salem Street and Southbound NC-540 Ramps

(Recommended with construction of Site Drive 7)

- Extend the southbound left-turn lane to provide a minimum of 375 feet of storage and appropriate taper.
- Construct an additional westbound through lane with a minimum of 200 feet of storage and appropriate taper (subject to feasibility of constructability).
- Provide signal modifications to account for the new lane configurations at the intersection and provide signalization for the southbound right-turn movement.
- It is recommended that these improvements be reevaluated in the future if improvements are needed prior to the widening required of the West Village development and to determine if the additional westbound through lane is necessary.

S. Salem Street and Northbound NC-540 Ramps

(Recommended with construction of Site Drive 7)

- Provide signal timing modifications to account for new traffic patterns.

Apex Barbecue Road and Kelly Road

(Recommended after competition of Phase 1)

- Construct an exclusive westbound right-turn lane on Apex Barbecue Road with a minimum of 200 feet of storage and appropriate taper (subject to feasibility of right-of-way acquisition).
- Construct an exclusive eastbound right-turn lane on Apex Barbecue Road with a minimum of 175 feet of storage and appropriate taper (subject to feasibility of constructability and right-of-way acquisition).
- Provide signal modifications to account for the new lane configurations at the intersection.

S. Salem Street and Apex Barbecue Road

(Recommended with construction of Site Drives 5 and 6)

- Extend the exclusive northbound left-turn lane on S. Salem Street to provide a minimum of 300 feet of storage and appropriate taper.
- Extend the exclusive eastbound left-turn lane on Apex Barbecue Road to provide a minimum of 375 feet of storage and appropriate taper.

S. Salem Street and Site Drive 1

- Monitor for signalization and install once warranted and approved by NCDOT and Town staff.

S. Salem Street and Site Drive 3

- Provide site access via a right-in/right-out intersection with one (1) ingress lane and one (1) egress lanes.
- Provide stop control for the eastbound approach of Site Drive 3.
- Construct an exclusive southbound right-turn lane on S. Salem Street with a minimum of 100 feet of storage and appropriate taper.
- Consider a left-over access for this driveway. Per the left-over driveway at Site Drive 4, a northbound left-turn lane with approximately 150 feet of storage and appropriate taper is expected.

S. Salem Street and Site Drive 4

- Provide site access via a left-over intersection with one (1) ingress lane and one (1) egress lanes.
- Provide stop control for the eastbound approach of Site Drive 4.
- Construct an exclusive southbound right-turn lane on S. Salem Street with a minimum of 100 feet of storage and appropriate taper.
- Construct an exclusive northbound left-turn lane on S. Salem Street with a minimum of 150 feet of storage and appropriate taper.

Apex Barbecue Road and Site Drive 5

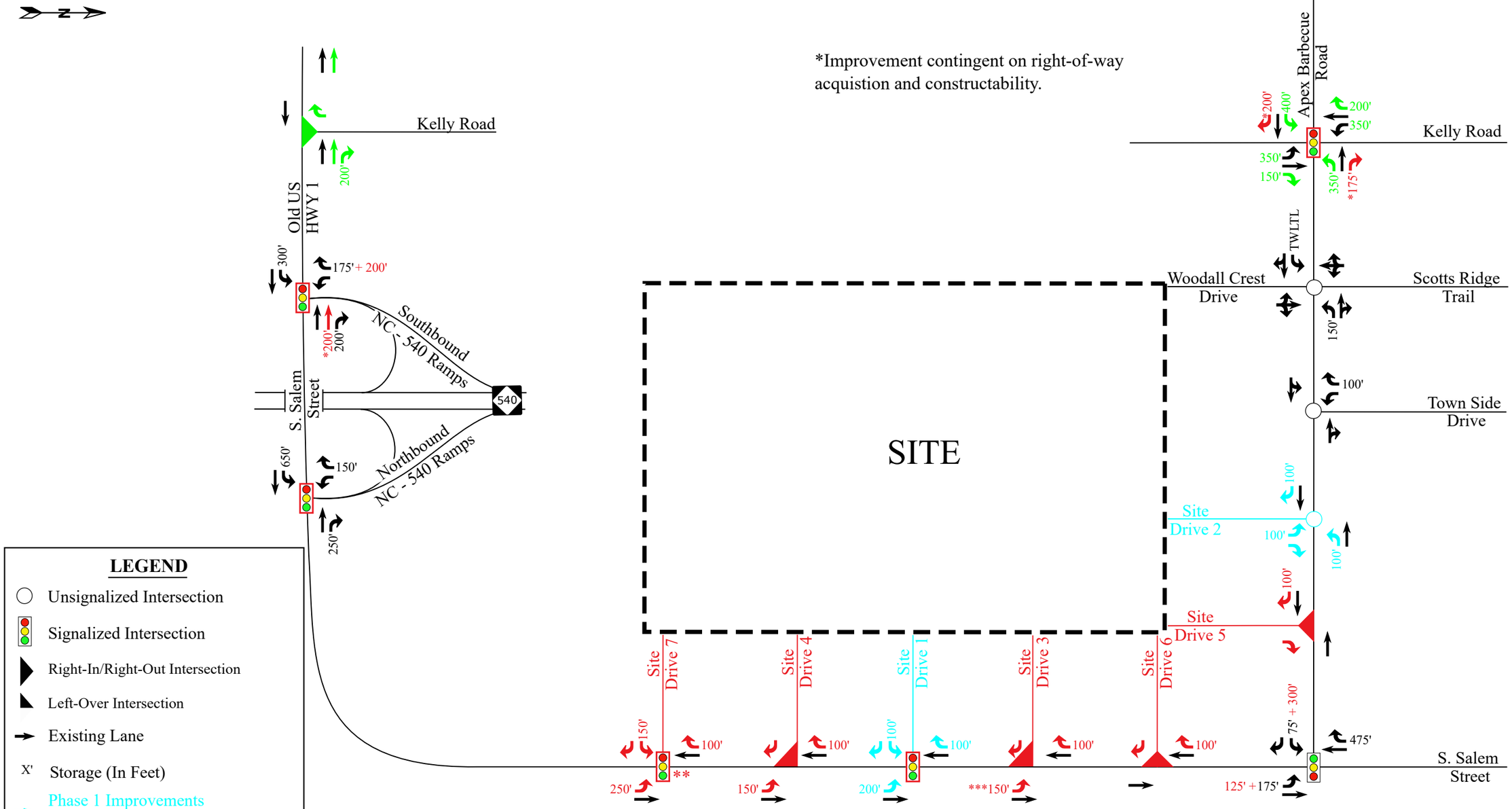
- Provide site access via a right-in/right-out intersection with one (1) ingress lane and one (1) egress lanes.
- Provide stop control for the northbound approach of Site Drive 5.
- Construct an exclusive eastbound right-turn lane on Apex Barbecue Road with a minimum of 100 feet of storage and appropriate taper.

S. Salem Street and Site Drive 6

- Provide site access via a right-in/right-out intersection with one (1) ingress lane and one (1) egress lanes.
- Provide stop control for the eastbound approach of Site Drive 6.
- Construct an exclusive southbound right-turn lane on S. Salem Street with a minimum of 100 feet of storage and appropriate taper.

S. Salem Street and Site Drive 7

- Provide site access via a full movement intersection with one (1) ingress lane and two (2) egress lanes (eastbound left-turn lane with a minimum of 150 feet of storage and appropriate taper and eastbound right-turn lane with full length storage).
- Provide stop control for the eastbound approach of Site Drive 7 until a traffic signal is warranted.
- Monitor for signalization and install once warranted and approved by NCDOT and Town staff.
- Construct an exclusive northbound left-turn lane on S. Salem Street with a minimum of 250 feet of storage and appropriate taper.
- Construct an exclusive southbound right-turn lane on S. Salem Street with a minimum of 100 feet of storage and appropriate taper.
- Reduce the speed limit of S. Salem Street, along the project frontage to 45 miles per hour (mph) to allow adequate spacing to meet NCDOT Median Crossover Guidelines.



*Improvement contingent on right-of-way acquistion and constructability.

LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- Existing Lane
- X' Storage (In Feet)
- Phase 1 Improvements By Developer
- Full Build Improvements By Developer
- Developer Monitor for Signalization / Signal Timing Modifications
- Improvements by West Village

**Recommended to reduce speed limit on S. Salem Street to 45 mph with construction of Site Drive 7 to meet NCDOT Median Crossover Guidelines.

***Although not analyzed in this study to match the approved MOU, consideration for Left-over access is recommended at this driveway.

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Recommended Lane Configurations

Scale: Not to Scale

Figure 17

RAMEY KEMP
&
ASSOCIATES

TECHNICAL APPENDIX

APPENDIX A

MEMORANDUM OF UNDERSTANDING

RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place
Raleigh, NC 27609
Phone: 919-872-5115
www.rameykemp.com

December 18, 2019

Serge Grebenshikov, PE
Town of Apex
73 Hunter Street
Apex, NC 27502
serge.grebenschikov@apexnc.gov

Reference: Depot 499 – Apex, NC

Subject: Memorandum of Understanding for TIA Report - **Revised**

Dear Mr. Grebenschikov:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions related to the Traffic Impact Analysis (TIA) for the proposed Depot 499 Development (formerly Poe Tract), to be located west of S. Salem Street (Old US Hwy 1) and south of Apex Barbecue Road in Apex, North Carolina. This revised MOU is provided to address new parcels added to the proposed site. This revision introduces increased density and three additional site accesses (two on S. Salem Street and one on Apex Barbecue Road). Refer to the attached site location map.

Phase 1 of the proposed development will be completed in 2025 and will consist of 650 townhomes. The full build out of the proposed development, anticipated to be completed in 2028, will consist of 850 apartments (a total of 1,500 low-rise multi-family units), 375,000 sq. ft. office, and 250,000 sq. ft. retail. Site access is proposed via one (1) full movement site driveway and one (1) right-in / right-out driveway along Apex Barbecue Road and five (5) site driveways along South Salem Street (two (2) right-in / right-out driveways, two (2) full movement driveways, and one (1) left-over driveway).

Study Area

Through coordination with the Town of Apex (Town) and the North Carolina Department of Transportation (NCDOT), the study area is proposed to consist of the following existing intersections:

- S. Salem Street and Apex Barbecue Road (signalized)
- S. Salem Street and Northbound NC-540 Ramps (signalized)
- S. Salem Street / Old US Hwy 1 and Southbound NC-540 Ramps (signalized)
- Old US Hwy 1 and Kelly Road (unsignalized)
- Apex Barbecue Road and Town Side Drive (unsignalized)
- Apex Barbecue Road and Scotts Ridge Trail (unsignalized)
- Apex Barbecue Road and Kelly Road (signalized)

This study area was determined during the TIA scoping meeting attended by the Town and NCDOT on October 30, 2019.

Analysis Scenarios

All capacity analyses will be performed utilizing Synchro (Version 10.3). All study intersections will be analyzed during the weekday AM and PM peak hours under the following proposed traffic scenarios:

- Existing (2019) Conditions
- Background (2025) Conditions
- Background (2028) Conditions
- Combined (2025) Conditions – Phase 1
- Combined (2028) Conditions – Full Buildout

Existing Traffic Volumes

Peak hour turning movement counts were conducted by Ramey Kemp & Associates, Inc. at the existing study intersections above in October of 2019 during typical weekday AM (7:00 to 9:00AM) and weekday PM (4:00 to 6:00PM) peak periods. Traffic volumes were balanced between study intersections, where appropriate. Refer to the attached existing (2019) traffic volumes figure. Signal information was obtained from NCDOT.

Background Traffic Volumes

Background traffic volumes will be determined by projecting existing (2019) weekday AM and PM traffic volumes to the build-out year using a 3% annual growth rate. Historical data was considered when determining the proposed annual growth rate.

Through coordination with the Town and the NCDOT, it was determined that the following adjacent developments would be included in this study:

- Buckhorn Preserve (20% built-out)
- Friendship Station – Full Buildout
- Jordan Manors (40% built-out)
- Jordan Pointe (65% built-out)
- New Hill Assembly
- Olive Ridge
- Pleasant Park
- West Village – Full Buildout
- Woodbury (25% built-out)

Buildout percentages were determined through coordination with the Town staff. Additionally, several of these developments were located outside of this study area. Trips associated with these developments were pulled through the network as appropriate. Refer to the attached adjacent development traffic volumes figure for a detailed summary of each development.

Future Roadway Improvements

Through coordination with the Town Staff, the intersection of Old US Hwy 1 and Kelly Road is expected to be restricted to a right-in / right-out intersection by the West Village development by buildout of Phase 1 of the Depot 499 development. West Village will provide additional connections to Old US Hwy 1 to the west to accommodate left-turns onto on and off Kelly Road. Additionally, West Village will be providing a free flow right-turn lane on Old US Hwy 1 at Kelly Road. Traffic will be diverted, as appropriate, to account for this new lane configuration.

Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Refer to Table 1 and 2 on the following page for a detailed breakdown of Phase 1 and Full Buildout of the proposed site trip generation, respectively.

Table 1: Trip Generation Summary – Phase 1

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220)	650 dwellings	4,870	65	217	197	115

Table 2: Trip Generation Summary – Full Buildout

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Multifamily Housing (Low-Rise) (220)	1,500 dwellings	11,300	144	481	415	243
General Office Building (710)	375,000 sq. ft.	3,820	467	64	86	392
Shopping Center (820)	250,000 sq. ft.	11,210	172	105	514	556
Total		**26,330**	**783**	**650**	**1,015**	**1,191**
Internal Capture (7% Entering AM, 8% Exiting AM, 24% Entering PM, 20% Exiting PM)			*-55*	*-52*	-244	*-238*
Total External Trips			**728**	**598**	***771***	***953***
Pass-By Trips: Shopping Center (34% PM)			*0*	*0*	*-142*	*-142*
Total Primary Trips			**728**	**598**	***629***	***811***

It is estimated that the full build out of the proposed development will generate approximately 26,330 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 1,433 trips (783 entering and 650 exiting) will occur during the weekday AM peak hour and 2,206 trips (1,015 entering and 1,191 exiting) will occur during the weekday PM peak hour.

Internal capture of trips between the residential and retail uses was considered in this study. Internal capture is the consideration for trips that will be made within the site between different land uses, so the vehicle

technically never leaves the internal site but can still be considered as a trip to that specific land use. Internal capture typically only considers trips between residential, office, entertainment, hotel and retail/restaurant land uses. Based on the NCHRP Internal Capture methodology, an AM peak hour internal capture rate of 7% entering and 8% exiting was applied to the total trips. Also, a PM peak hour internal capture rate of 24% entering and 20% exiting was applied to the total trips. The internal capture reductions are expected to account for 107 (55 entering and 52 exiting) trips during the AM peak hour and 482 (244 entering and 238 exiting) trips during the PM peak hour.

Pass-by trips were also taken into consideration in this study. Pass-by trips are made by the traffic already using the adjacent roadway, entering the site as an intermediate stop on their way to another destination. Pass-by trips are expected to account for 284 trips (142 entering and 142 exiting) anticipated to occur during the weekday PM peak hour.

The total primary site trips are the calculated site trips after the reduction for internal capture and pass-by trips. Primary site trips are expected to generate approximately 1,326 trips (728 entering and 598 exiting) will occur during the AM peak hour and 1,440 trips (629 entering and 811 exiting) will occur during the PM peak hour. Refer to the attachments for the NCHRP Internal capture spreadsheets used in these calculations.

Trip Distribution

The proposed site trip distribution is based on existing traffic patterns, population centers, and engineering judgment. A summary of the residential distribution is below:

- 30% to/from the north via NC 540
- 30% to/from the south via NC 540
- 20% to/from the north via S. Salem Street
- 10% to/from the north via Kelly Road
- 10% to/from the west via Old US Hwy 1

A summary of the commercial distribution is below:

- 25% to/from the north via S. Salem Street
- 15% to/from the north via Kelly Road
- 15% to/from the west via Apex Barbecue Road
- 15% to/from the west via Old US Hwy 1
- 10% to/from the north via NC 540
- 10% to/from the south via NC 540
- 5% to/from the north via Scotts Ridge Trail
- 5% to/from the north via Town Side Drive

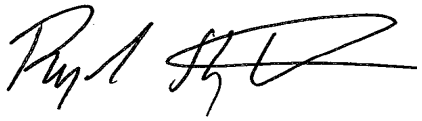
Refer to the attachments for the Phase 1 residential, full build residential, primary commercial, and pass-by site trip distribution figures.

Report

The TIA will be prepared based on the Town and NCDOT Congestion Management requirements. If you find this memorandum of understanding acceptable, please let me know so that we may include it in the Traffic Impact Analysis.

If you have any questions or concerns, please do not hesitate to contact me.

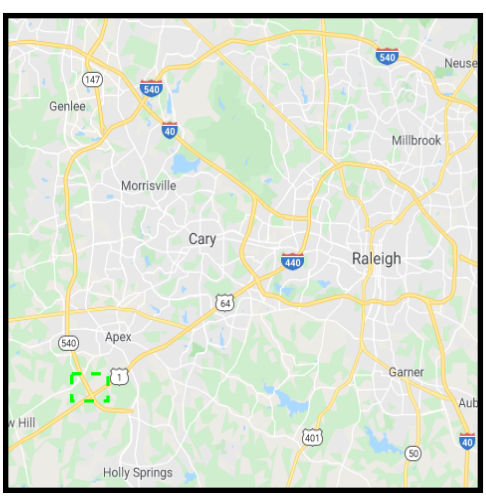
Sincerely,
Ramey Kemp & Associates, Inc.



Rynal Stephenson, P.E.
Regional Manager Manager

Attachments: Site Location Map
Preliminary Site Plans
Existing (2019) Traffic Volumes Figure
Adjacent Development Summary Figure
Site Trip Distribution Figures
Detailed Adjacent Development Information
Internal Capture Calculations
Count Data

CC: Amy Neidringhaus, PE, NCDOT District Office
Sean Brennan, PE, NCDOT District Office
Russell Dalton, PE, Town of Apex
NCDOT Congestion Management



N

LEGEND

- Proposed Site Location
- Study Intersection
- Study Area

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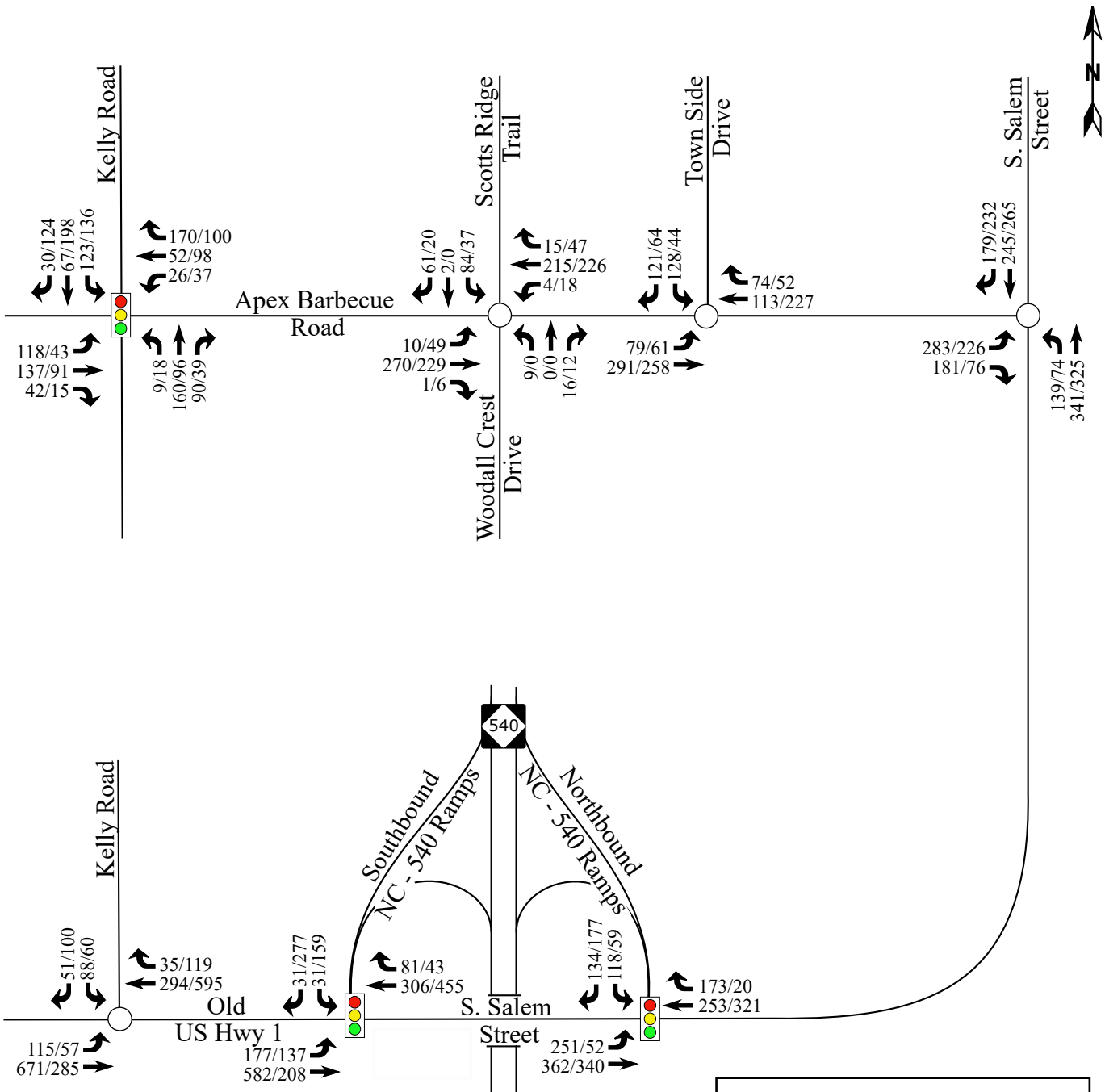
TRANSPORTATION ENGINEERS

Depot 499
Apex, NC

Site Location Map

Scale: Not to Scale



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

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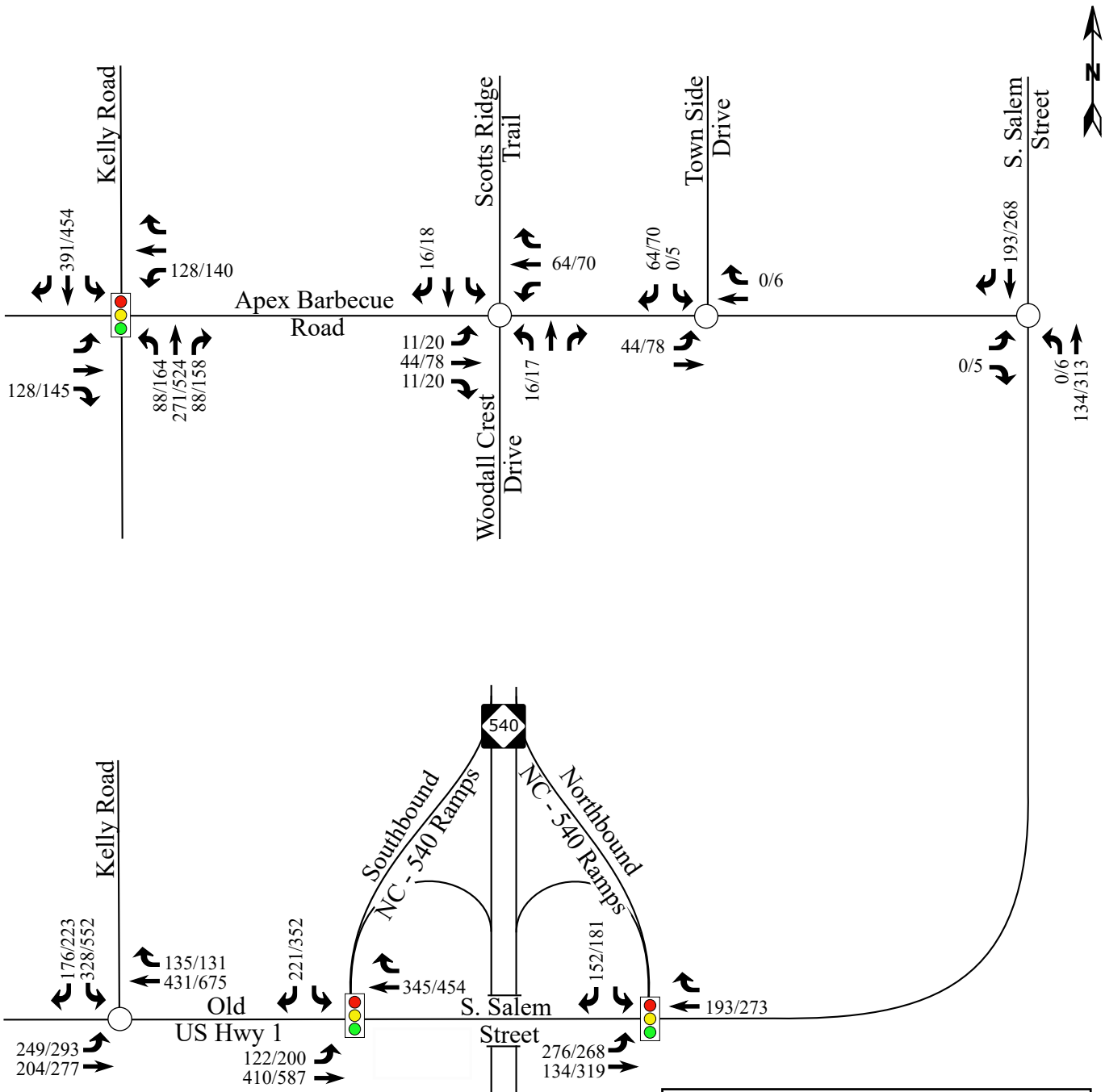
Depot 499
Apex, NC

Existing (2019)
Peak Hour Traffic

Scale: Not to Scale



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Adjacent Development Trips

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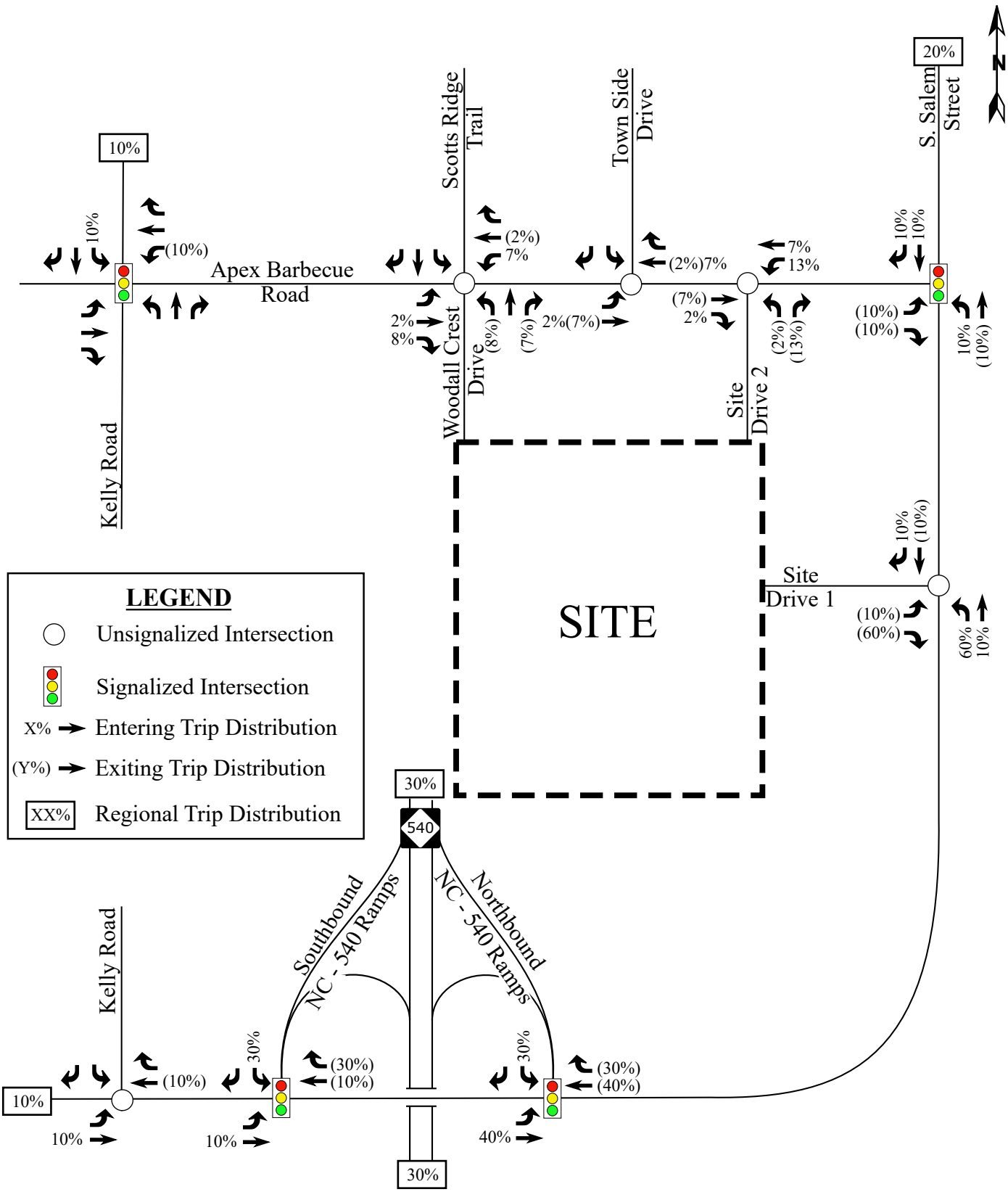
Depot 499
Apex, NC

Peak Hour Adjacent Development Trips

Scale: Not to Scale



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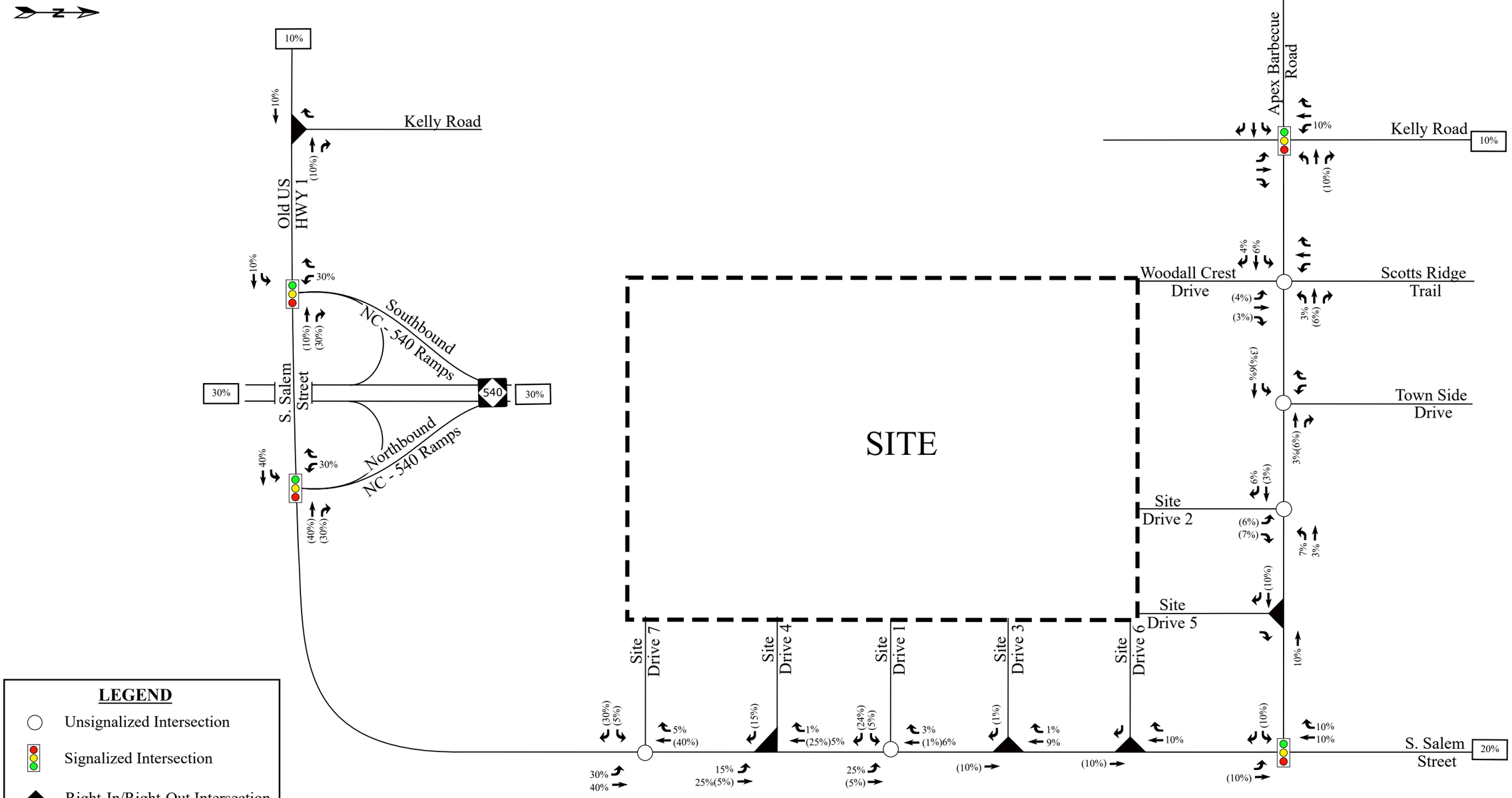
Depot 499
Apex, NC

Residential Site Trip Distribution - Phase 1

Scale: Not to Scale



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

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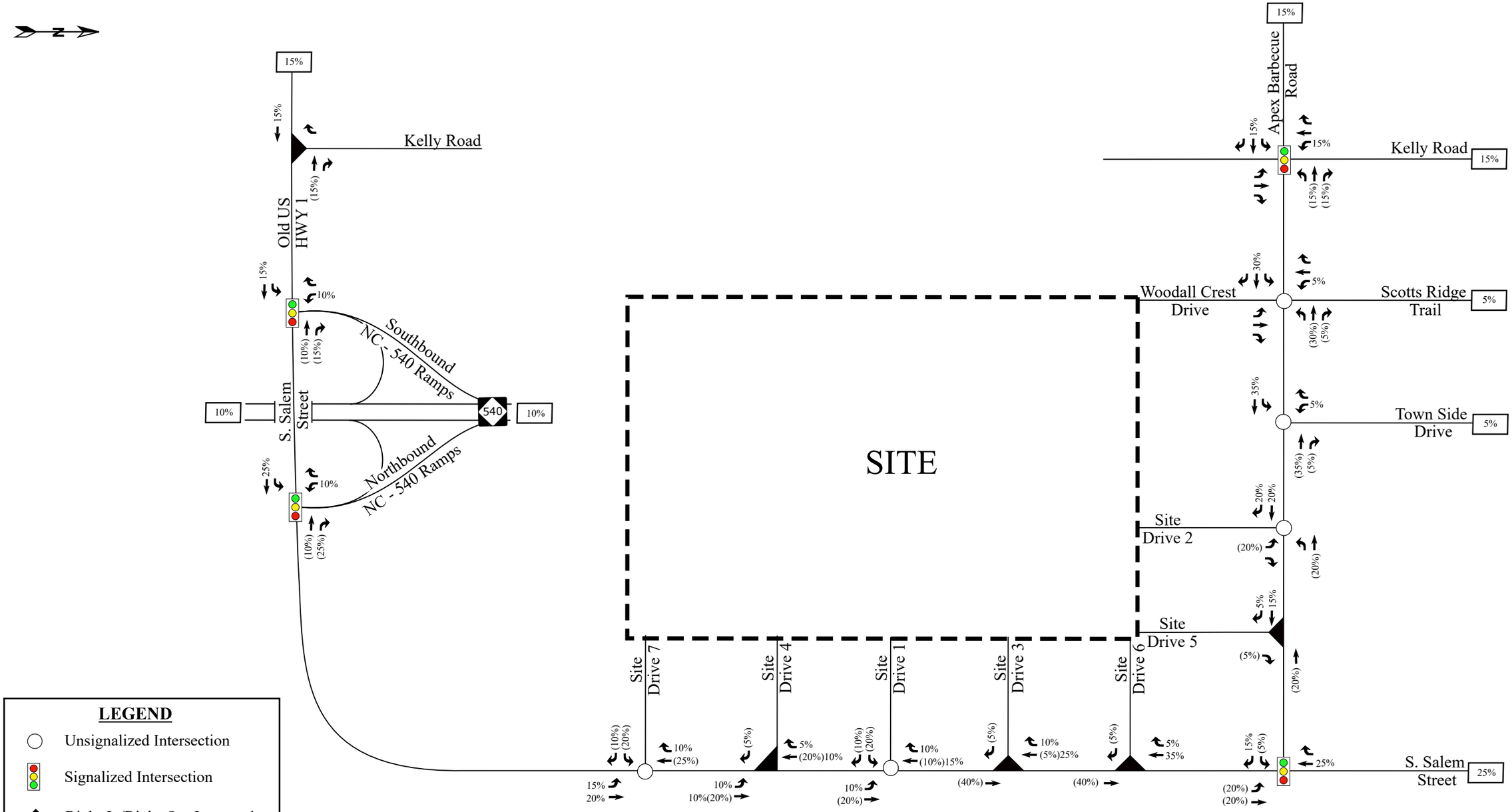
Depot 499
Apex, NC

Residential Site Trip Distribution - Full Build-Out

Scale: Not to Scale



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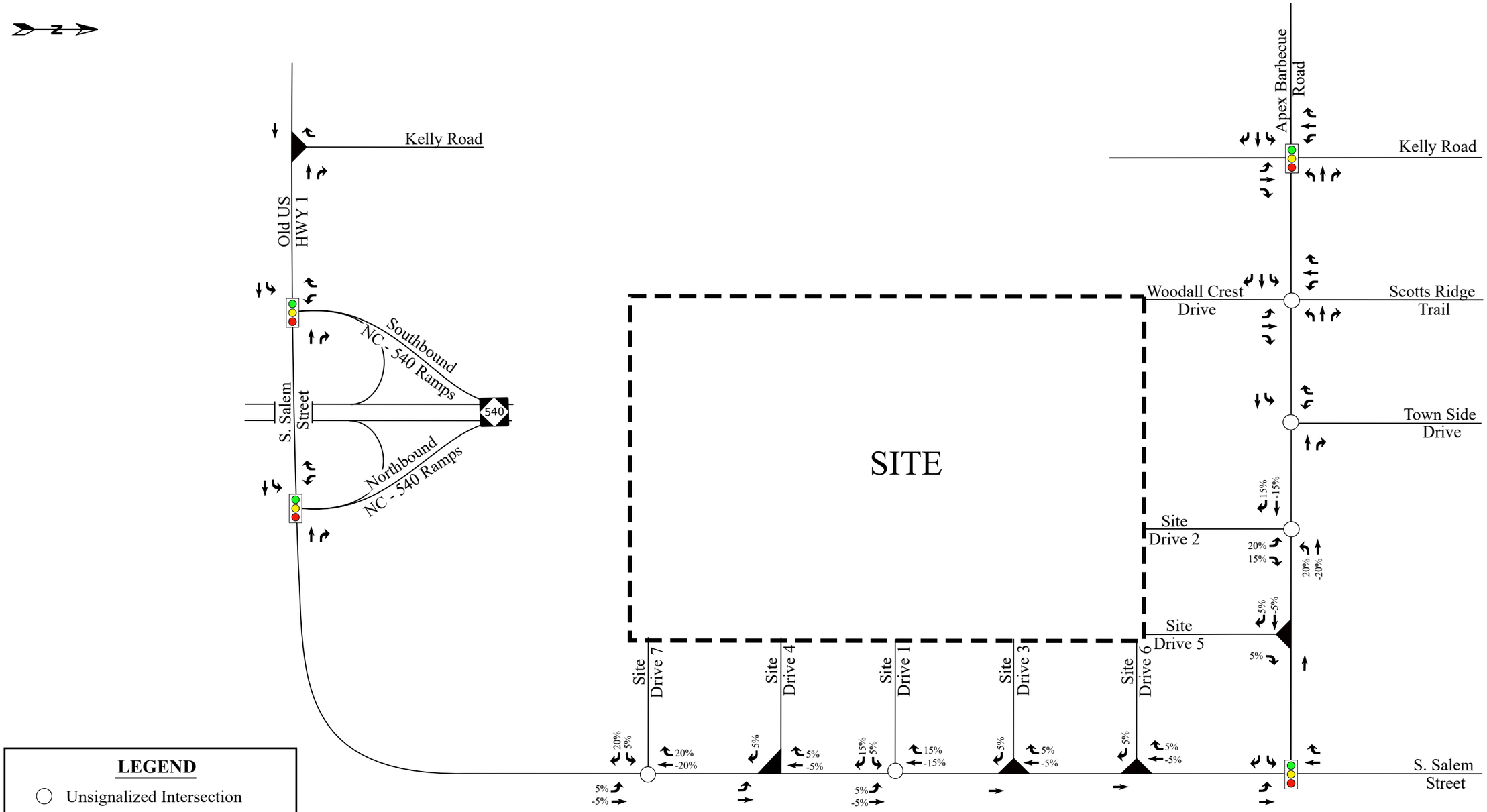
Depot 499
Apex, NC

Commercial Site Trip Distribution

Scale: Not to Scale



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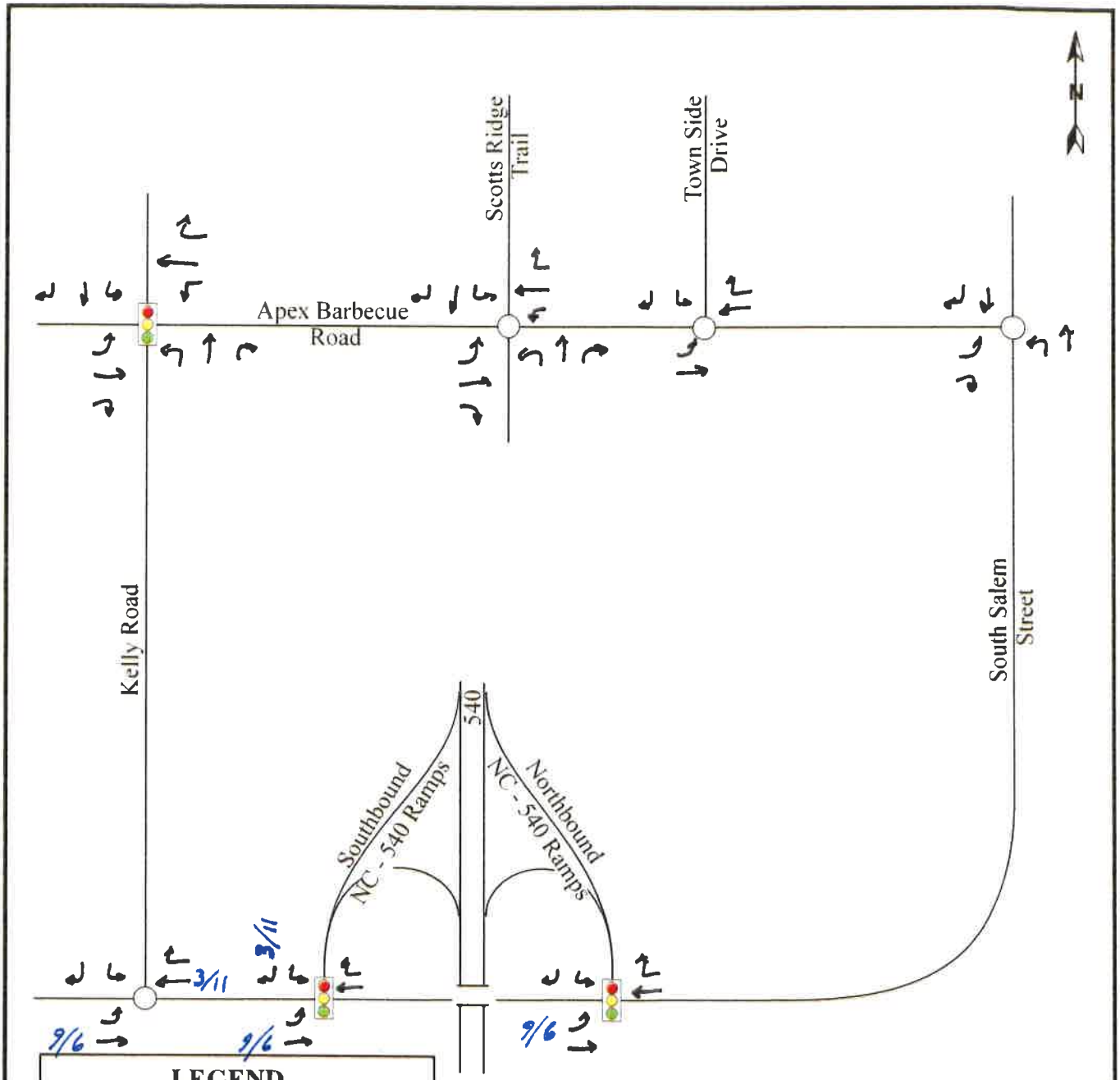
Depot 499
Apex, NC

PM Pass-By
Trip Distribution

Scale: Not to Scale



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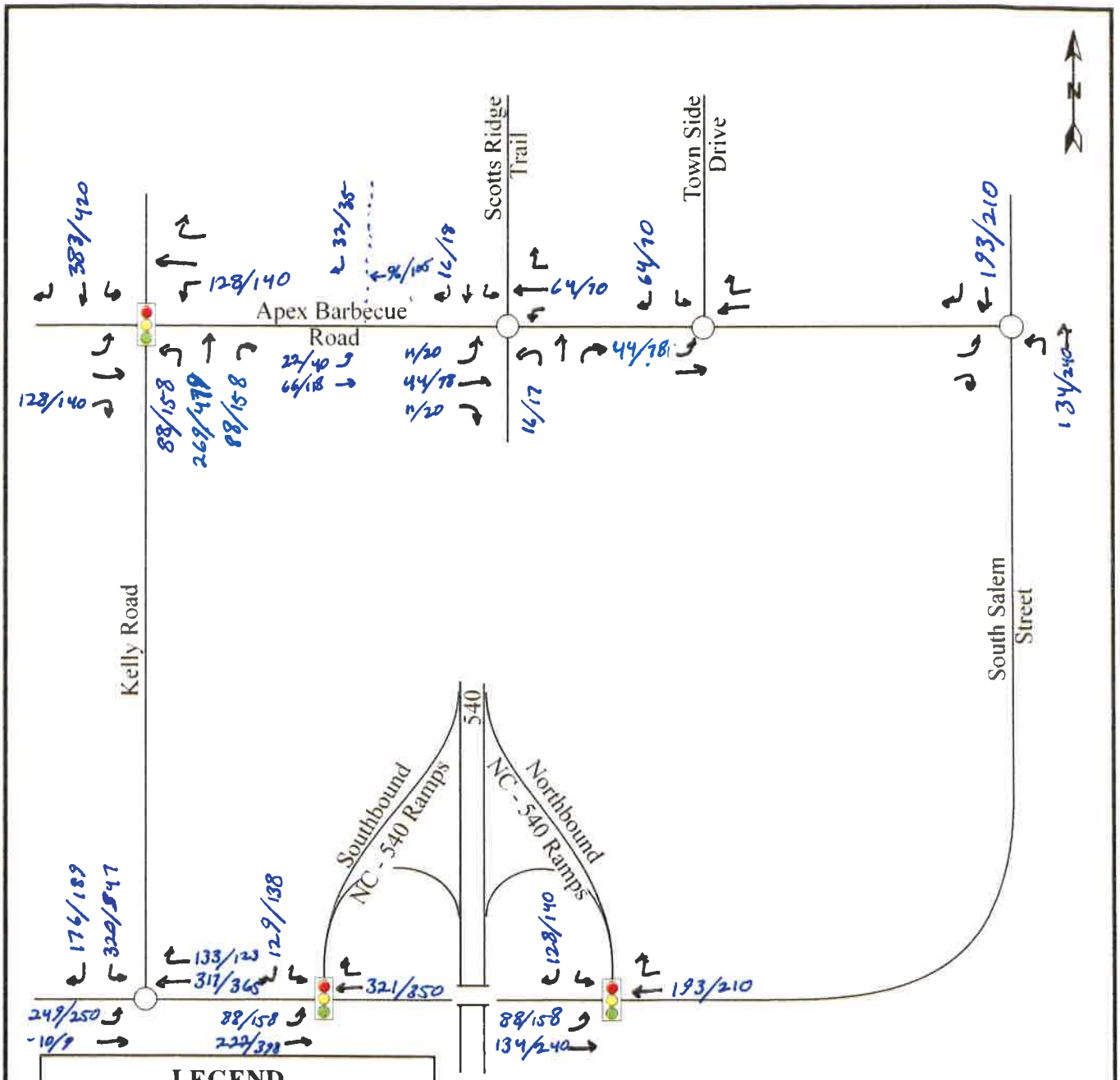
Poe Tract Mixed Use Development
Apex, NC

Olive Ridge Residential

Scale: Not to Scale

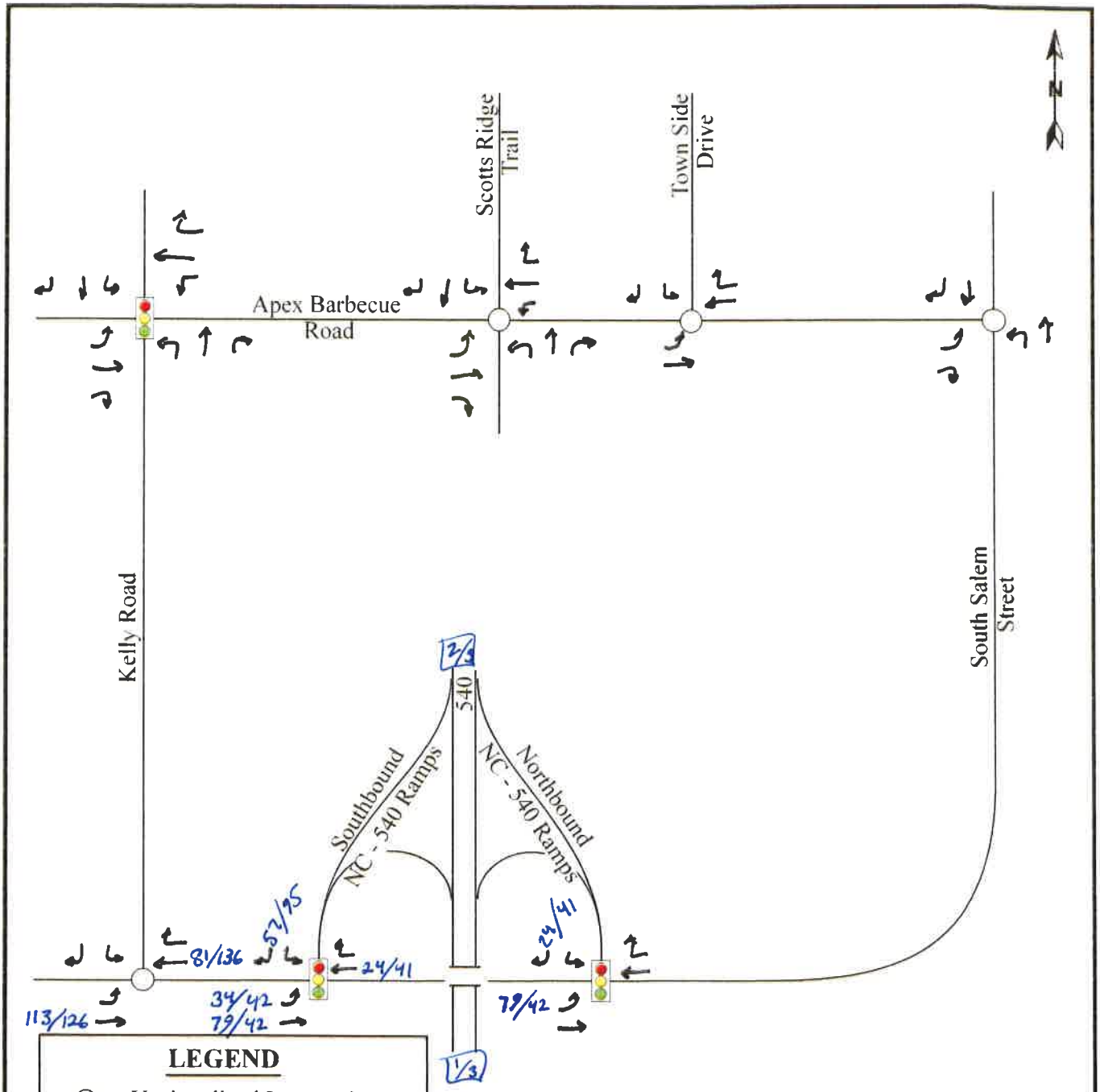


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

west village
-full Build

Scale: Not to Scale



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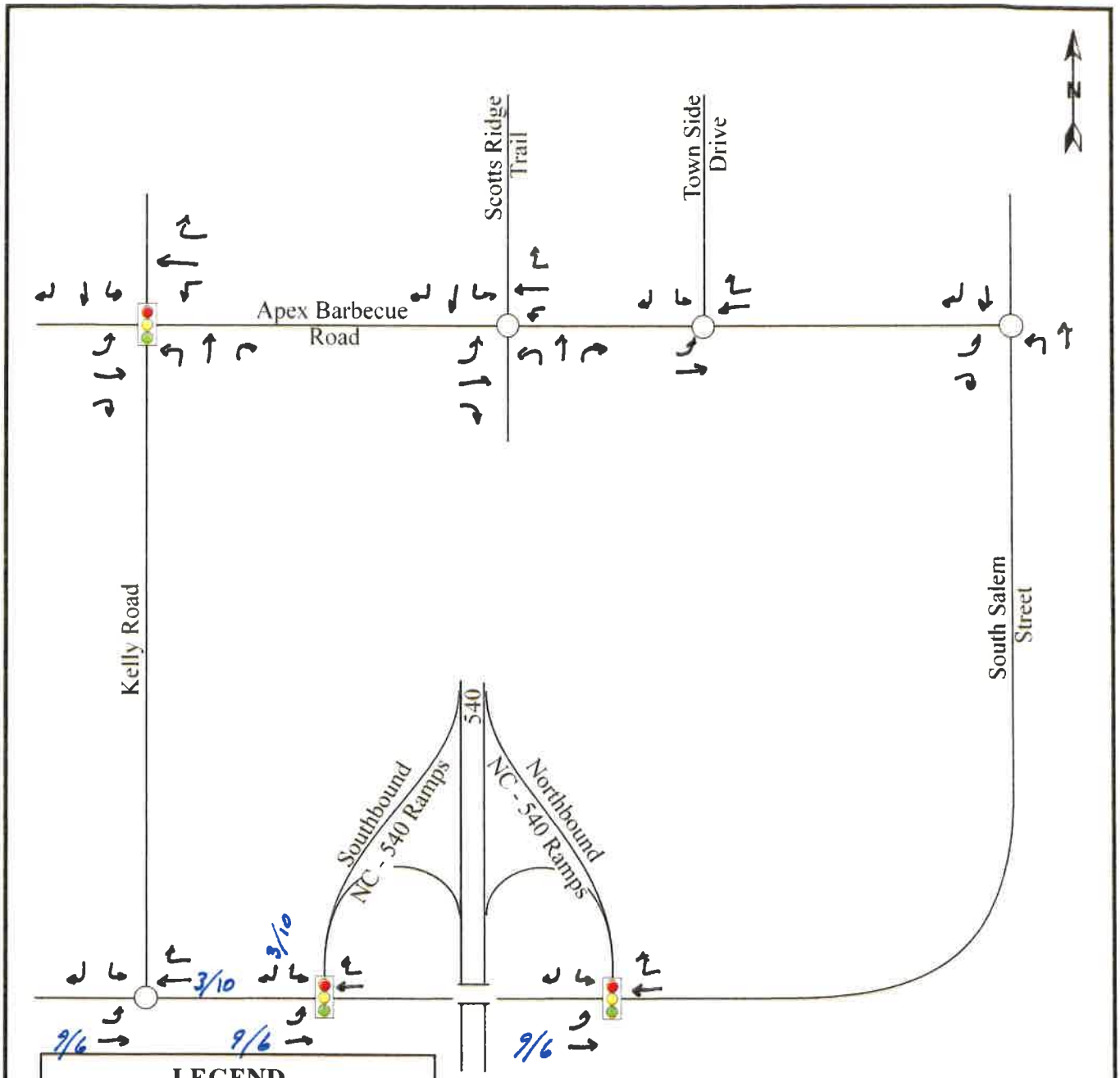
Poe Tract Mixed Use Development
Apex, NC

Friendship Station - Phase 2

Scale: Not to Scale

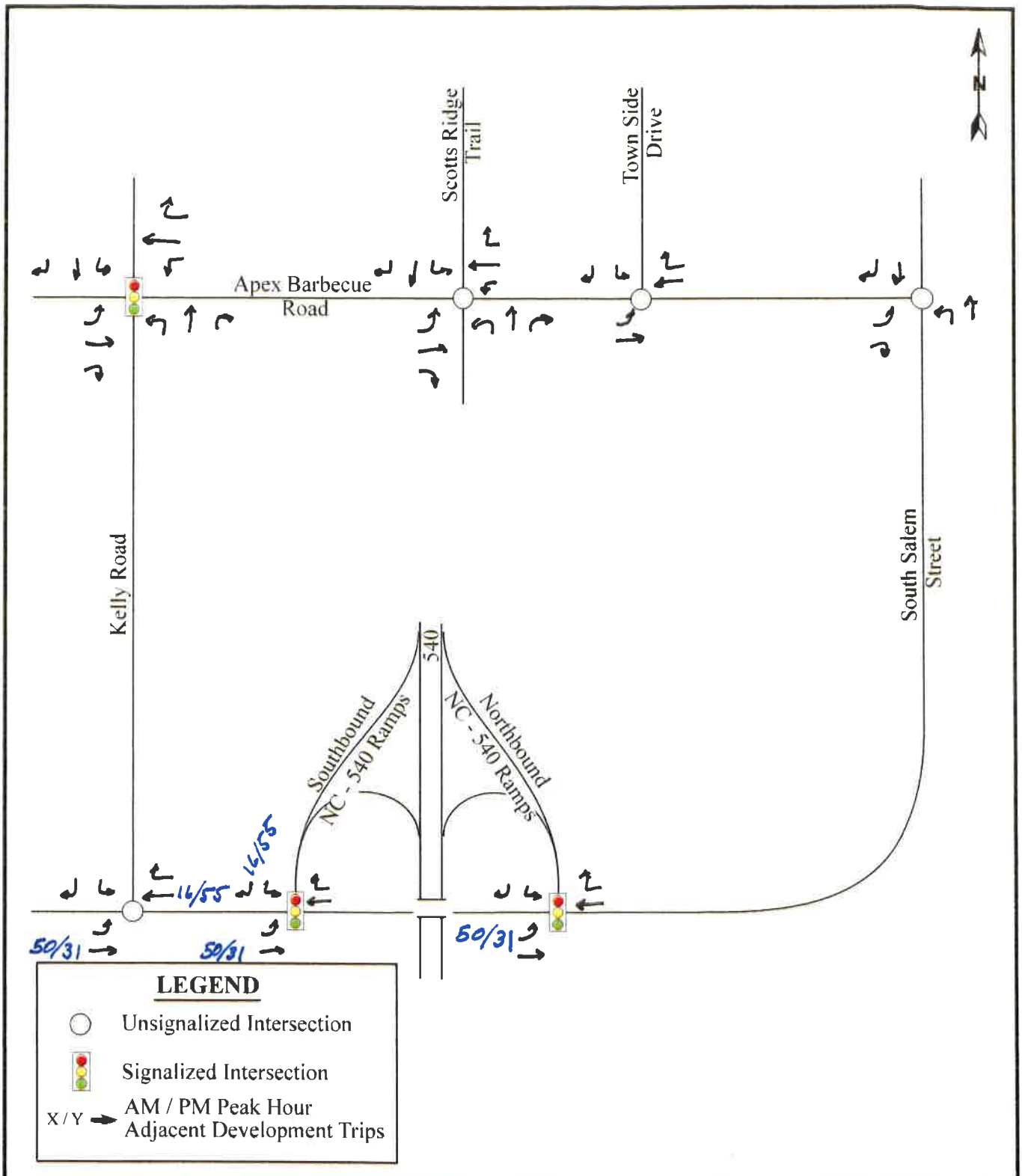


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

New Hill Assembly

Scale: Not to Scale

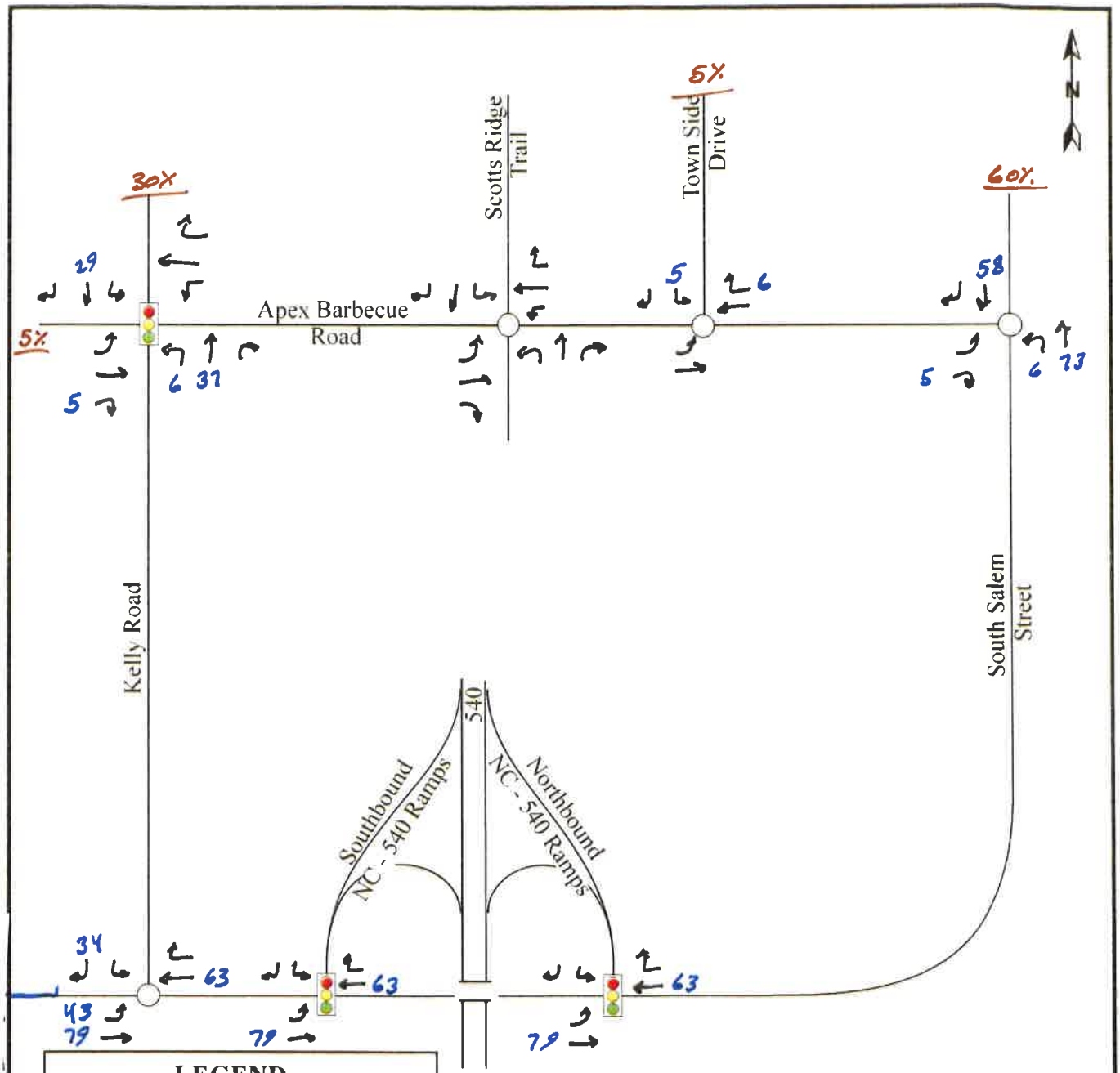


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

woodbury (25% built-out)

Scale: Not to Scale



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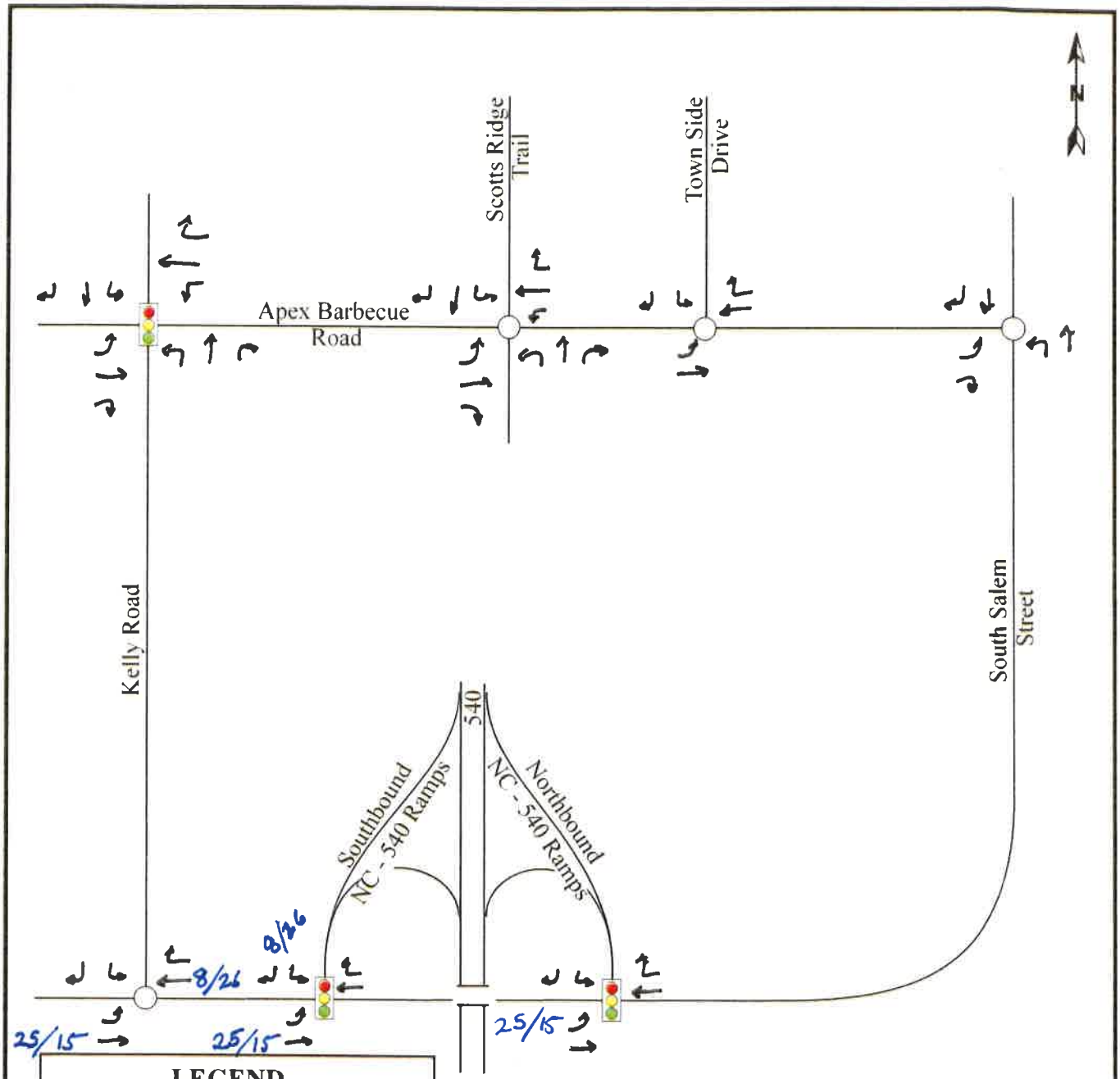
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Pleasant Park

Scale: Not to Scale

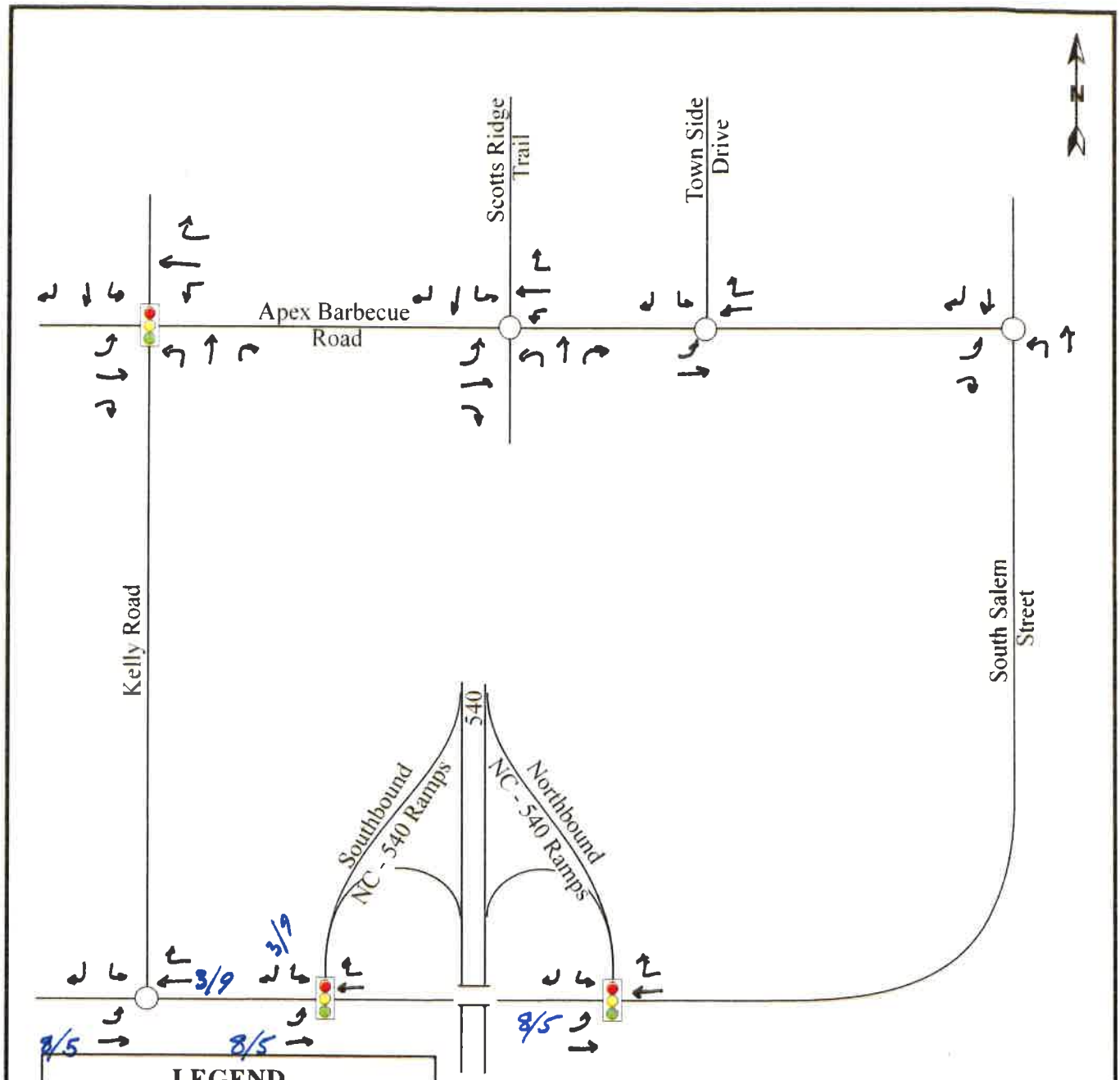


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Jordan Pointe
(65% built-out)

Scale: Not to Scale

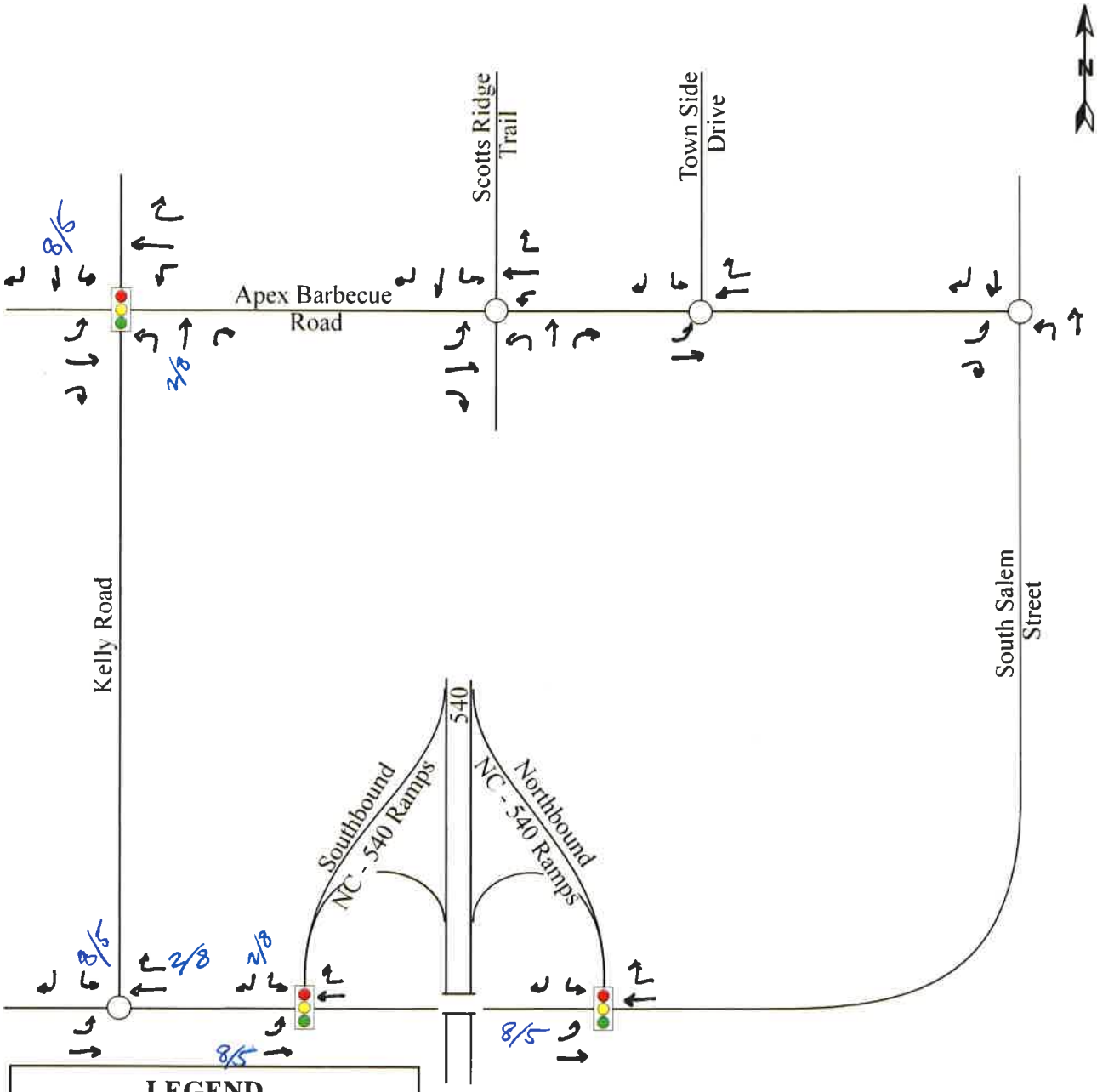


RAMEY KEMP ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Jordan Manors (40% built-out)

Scale: Not to Scale



LEGEND

- ○ Unsignalized Intersection
- Signalized Intersection
- X / Y → AM / PM Peak Hour Adjacent Development Trips

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Buckhorn (20% built-out)

Scale: Not to Scale

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Depot 499	**Organization:**	RKA
Project Location:	Apex, NC	**Performed By:**	
Scenario Description:		**Date:**	12/5/2019
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	375,000	s.f.	531	467	64
Retail	820	250,000	s.f.	277	172	105
Restaurant				0		
Cinema/Entertainment				0		
Residential	220	1,500	units	625	144	481
Hotel				0		
All Other Land Uses[2]				0		
Total				1433	783	650

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	0	0	0	0
Retail	19		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	5	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,433	783	650
Internal Capture Percentage	8%	7%	8%
External Vehicle-Trips[3]	1,323	728	595
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	6%	28%
Retail	13%	21%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Depot 499
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	467	467	1.00	64	64
Retail	1.00	172	172	1.00	105	105
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	144	144	1.00	481	481
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		18	40	0	1	0
Retail	30		14	0	15	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	5	96	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		55	0	0	0	0
Retail	19		0	0	3	0
Restaurant	65	14		0	7	0
Cinema/Entertainment	0	0	0		0	0
Residential	14	29	0	0		0
Hotel	14	7	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	29	438	467	438	0	0
Retail	23	149	172	149	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	141	144	141	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	18	46	64	46	0	0
Retail	22	83	105	83	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	15	466	481	466	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Depot 499	**Organization:**	RKA
Project Location:	Apex, NC	**Performed By:**	
Scenario Description:		**Date:**	12/5/2019
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	375,000	s.f.	478	86	392
Retail	820	250,000	s.f.	1070	514	556
Restaurant				0		
Cinema/Entertainment				0		
Residential	220	1,500	units	658	415	243
Hotel				0		
All Other Land Uses[2]				0		
Total				2206	1015	1191

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0			1000	
Retail					1000	
Restaurant						
Cinema/Entertainment						
Residential		1000				
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	7	0
Retail	11		0	0	134	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	39	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,206	1,015	1,191
Internal Capture Percentage	22%	24%	20%
External Vehicle-Trips[3]	1,722	773	949
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	24%	12%
Retail	16%	26%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	34%	20%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Depot 499
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	86	86	1.00	392	392
Retail	1.00	514	514	1.00	556	556
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	415	415	1.00	243	243
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		78	16	0	7	0
Retail	11		161	22	134	28
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	78	51	0		7
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	17	0
Retail	27		0	0	191	0
Restaurant	26	257		0	66	0
Cinema/Entertainment	5	21	0		17	0
Residential	49	39	0	0		0
Hotel	0	10	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	21	65	86	65	0	0
Retail	80	434	514	434	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	141	274	415	274	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	48	344	392	344	0	0
Retail	145	411	556	411	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	49	194	243	194	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 1

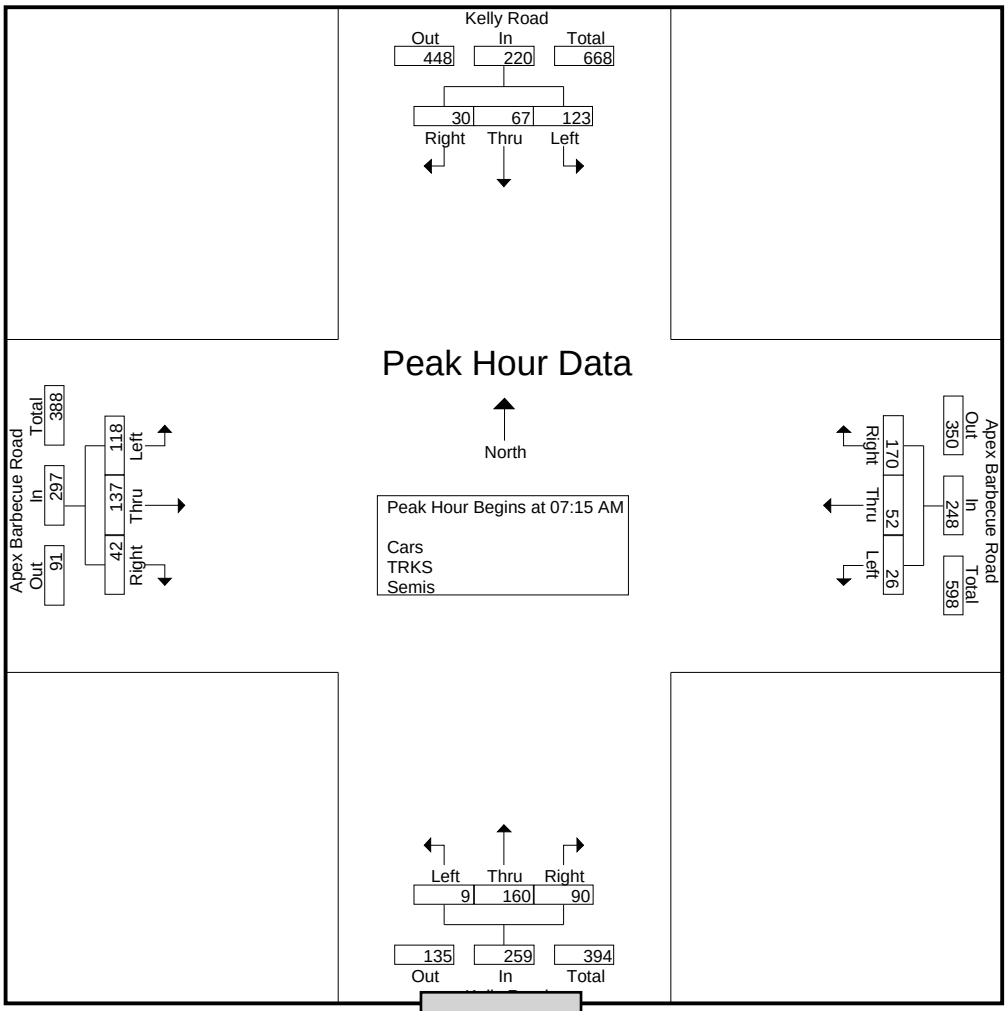
Groups Printed- Cars - TRKS - Semis

	Kelly Road From North					Apex Barbecue Road From East					Kelly Road From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	21	11	14	0	46	27	61	6	0	94	4	45	4	0	53	8	30	25	0	63	0	256	256
07:15 AM	9	8	11	0	28	34	13	6	0	53	4	41	4	0	49	7	29	29	0	65	0	195	195
07:30 AM	5	20	34	0	59	38	11	3	0	52	22	32	2	0	56	14	40	31	0	85	0	252	252
07:45 AM	7	18	46	0	71	47	22	8	0	77	30	43	2	0	75	11	41	30	0	82	0	305	305
Total	42	57	105	0	204	146	107	23	0	276	60	161	12	0	233	40	140	115	0	295	0	1008	1008
08:00 AM	9	21	32	0	62	51	6	9	1	66	34	44	1	0	79	10	27	28	0	65	1	272	273
08:15 AM	8	16	15	0	39	29	8	8	0	45	23	24	2	0	49	7	27	12	0	46	0	179	179
08:30 AM	7	11	17	0	35	26	16	8	0	50	22	18	5	0	45	3	22	32	0	57	0	187	187
08:45 AM	12	16	17	0	45	42	17	18	0	77	30	23	3	0	56	8	30	33	0	71	0	249	249
Total	36	64	81	0	181	148	47	43	1	238	109	109	11	0	229	28	106	105	0	239	1	887	888
*** BREAK ***																							
04:00 PM	25	33	28	0	86	21	30	15	0	66	4	22	6	0	32	5	19	11	0	35	0	219	219
04:15 PM	32	41	37	0	110	36	17	11	0	64	9	24	4	0	37	2	20	12	0	34	0	245	245
04:30 PM	24	60	33	0	117	22	26	9	0	57	15	25	5	0	45	5	30	8	0	43	0	262	262
04:45 PM	41	54	28	0	123	25	34	14	0	73	5	18	7	0	30	3	23	13	0	39	0	265	265
Total	122	188	126	0	436	104	107	49	0	260	33	89	22	0	144	15	92	44	0	151	0	991	991
05:00 PM	27	43	38	0	108	17	21	3	0	41	10	29	2	0	41	5	18	10	0	33	0	223	223
05:15 PM	30	27	24	1	81	11	23	8	0	42	15	31	7	0	53	3	16	10	0	29	1	205	206
05:30 PM	17	59	47	0	123	27	10	6	0	43	15	37	8	0	60	3	13	13	0	29	0	255	255
05:45 PM	28	44	34	1	106	17	17	8	0	42	11	31	4	0	46	5	26	7	0	38	1	232	233
Total	102	173	143	2	418	72	71	25	0	168	51	128	21	0	200	16	73	40	0	129	2	915	917
Grand Total	302	482	455	2	1239	470	332	140	1	942	253	487	66	0	806	99	411	304	0	814	3	3801	3804
Apprch %	24.4	38.9	36.7			49.9	35.2	14.9			31.4	60.4	8.2			12.2	50.5	37.3					
Total %	7.9	12.7	12		32.6	12.4	8.7	3.7		24.8	6.7	12.8	1.7		21.2	2.6	10.8	8		21.4	0.1	99.9	
Cars	300	476	450		1228	469	325	134		929	247	476	66		789	97	405	303		805	0	0	3751
% Cars	99.3	98.8	98.9	100	99	99.8	97.9	95.7	100	98.5	97.6	97.7	100	0	97.9	98	98.5	99.7	0	98.9	0	0	98.6
TRKS	2	5	5		12	1	7	5		13	6	10	0		16	2	6	1		9	0	0	50
% TRKS	0.7	1	1.1	0	1	0.2	2.1	3.6	0	1.4	2.4	2.1	0	0	2	2	1.5	0.3	0	1.1	0	0	1.3
Semis	0	1	0		1	0	0	1		1	0	1	0		1	0	0	0		0	0	0	3
% Semis	0	0.2	0	0	0.1	0	0	0.7	0	0.1	0	0.2	0	0	0.1	0	0	0	0	0	0	0	0.1

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 2

	Kelly Road From North				Apex Barbecue Road From East				Kelly Road From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	9	8	11	28	34	13	6	53	4	41	4	49	7	29	29	65	195
07:30 AM	5	20	34	59	38	11	3	52	22	32	2	56	14	40	31	85	252
07:45 AM	7	18	46	71	47	22	8	77	30	43	2	75	11	41	30	82	305
08:00 AM	9	21	32	62	51	6	9	66	34	44	1	79	10	27	28	65	272
Total Volume	30	67	123	220	170	52	26	248	90	160	9	259	42	137	118	297	1024
% App. Total	13.6	30.5	55.9		68.5	21	10.5		34.7	61.8	3.5		14.1	46.1	39.7		
PHF	.833	.798	.668	.775	.833	.591	.722	.805	.662	.909	.563	.820	.750	.835	.952	.874	.839



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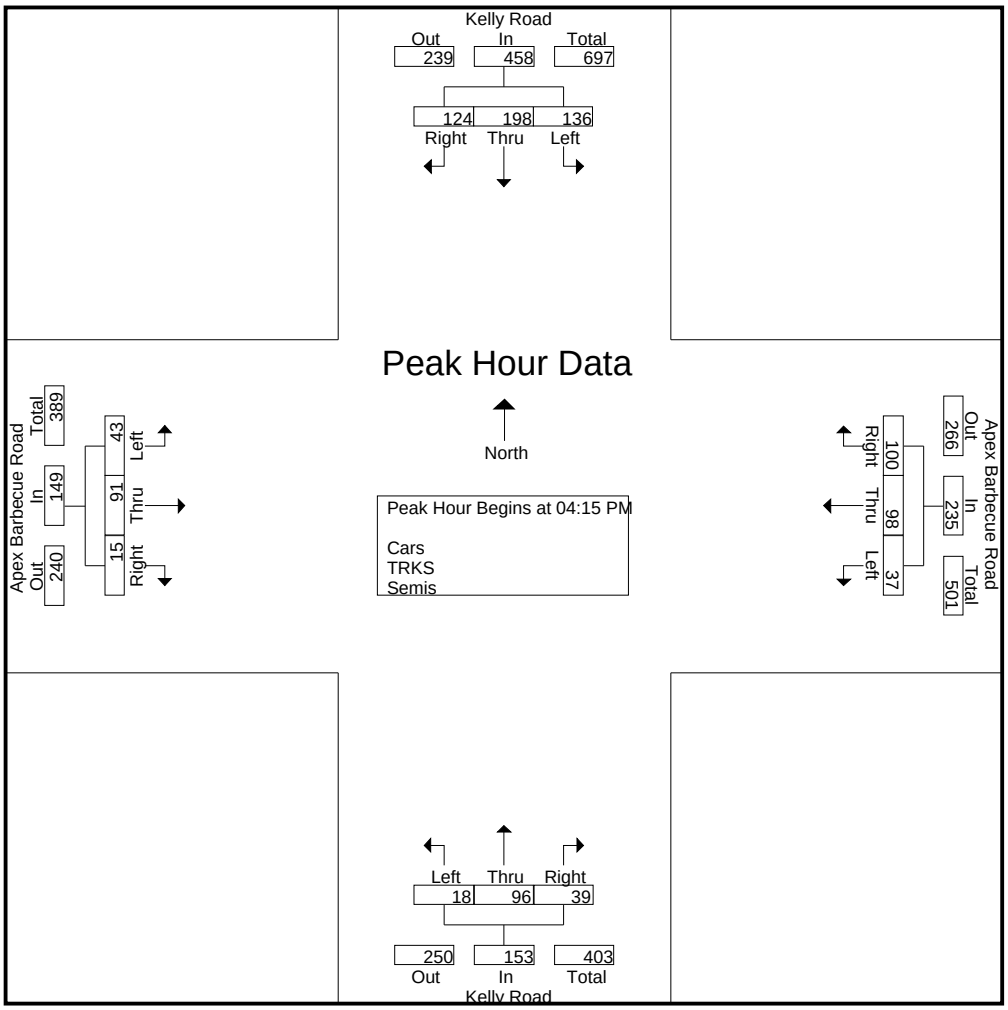
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 3

	Kelly Road From North				Apex Barbecue Road From East				Kelly Road From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	32	41	37	110	36	17	11	64	9	24	4	37	2	20	12	34	245
04:30 PM	24	60	33	117	22	26	9	57	15	25	5	45	5	30	8	43	262
04:45 PM	41	54	28	123	25	34	14	73	5	18	7	30	3	23	13	39	265
05:00 PM	27	43	38	108	17	21	3	41	10	29	2	41	5	18	10	33	223
Total Volume	124	198	136	458	100	98	37	235	39	96	18	153	15	91	43	149	995
% App. Total	27.1	43.2	29.7		42.6	41.7	15.7		25.5	62.7	11.8		10.1	61.1	28.9		
PHF	.756	.825	.895	.931	.694	.721	.661	.805	.650	.828	.643	.850	.750	.758	.827	.866	.939



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	Scotts Ridge Trail From North					Apex Barbecue Road From East					Woodall Crest Drive From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	15	0	8	0	23	2	56	0	0	58	4	0	5	0	9	0	50	4	0	54	0	144	144
07:15 AM	12	1	16	0	29	2	30	0	0	32	6	0	2	0	8	0	51	2	0	53	0	122	122
07:30 AM	13	1	25	0	39	1	43	0	0	44	3	0	0	0	3	0	92	1	0	93	0	179	179
07:45 AM	23	0	26	0	49	7	94	2	0	103	4	0	3	0	7	0	70	2	0	72	0	231	231
Total	63	2	75	0	140	12	223	2	0	237	17	0	10	0	27	0	263	9	0	272	0	676	676
08:00 AM	13	0	17	0	30	5	48	2	0	55	3	0	4	0	7	1	57	5	0	63	0	155	155
08:15 AM	9	0	13	0	22	4	36	4	0	44	1	0	3	0	4	0	52	0	0	52	0	122	122
08:30 AM	14	0	25	0	39	8	36	2	0	46	6	0	1	0	7	1	57	7	0	65	0	157	157
08:45 AM	8	0	24	0	32	9	42	3	0	54	7	1	2	1	10	3	133	4	0	140	1	236	237
Total	44	0	79	0	123	26	162	11	0	199	17	1	10	1	28	5	299	16	0	320	1	670	671
*** BREAK ***																							
04:00 PM	5	0	6	0	11	7	44	4	0	55	6	0	0	0	6	3	64	9	0	76	0	148	148
04:15 PM	8	0	15	0	23	8	52	6	0	66	3	0	0	0	3	2	61	10	0	73	0	165	165
04:30 PM	6	0	4	0	10	15	67	2	0	84	3	0	0	0	3	1	62	11	0	74	0	171	171
04:45 PM	2	0	7	0	9	11	54	5	0	70	4	0	0	0	4	1	59	9	0	69	0	152	152
Total	21	0	32	0	53	41	217	17	0	275	16	0	0	0	16	7	246	39	0	292	0	636	636
05:00 PM	4	0	11	0	15	13	53	5	0	71	2	0	0	0	2	2	47	19	0	68	0	156	156
05:15 PM	1	0	9	0	10	9	48	3	0	60	1	1	2	0	4	3	43	13	0	59	0	133	133
05:30 PM	7	0	22	0	29	18	40	7	0	65	3	0	0	0	3	1	47	12	0	60	0	157	157
05:45 PM	3	0	11	0	14	15	49	9	0	73	4	0	0	0	4	2	53	9	0	64	0	155	155
Total	15	0	53	0	68	55	190	24	0	269	10	1	2	0	13	8	190	53	0	251	0	601	601
Grand Total	143	2	239	0	384	134	792	54	0	980	60	2	22	1	84	20	998	117	0	1135	1	2583	2584
Apprch %	37.2	0.5	62.2			13.7	80.8	5.5			71.4	2.4	26.2			1.8	87.9	10.3					
Total %	5.5	0.1	9.3		14.9	5.2	30.7	2.1		37.9	2.3	0.1	0.9		3.3	0.8	38.6	4.5		43.9	0	100	
Cars	143	0	237		380	129	779	54		962	58	2	21		82	20	977	116		1113	0	0	2537
% Cars	100	0	99.2	0	99	96.3	98.4	100	0	98.2	96.7	100	95.5	100	96.5	100	97.9	99.1	0	98.1	0	0	98.2
TRKS	0	2	2		4	5	13	0		18	2	0	1		3	0	21	1		22	0	0	47
% TRKS	0	100	0.8	0	1	3.7	1.6	0	0	1.8	3.3	0	4.5	0	3.5	0	2.1	0.9	0	1.9	0	0	1.8
Semis	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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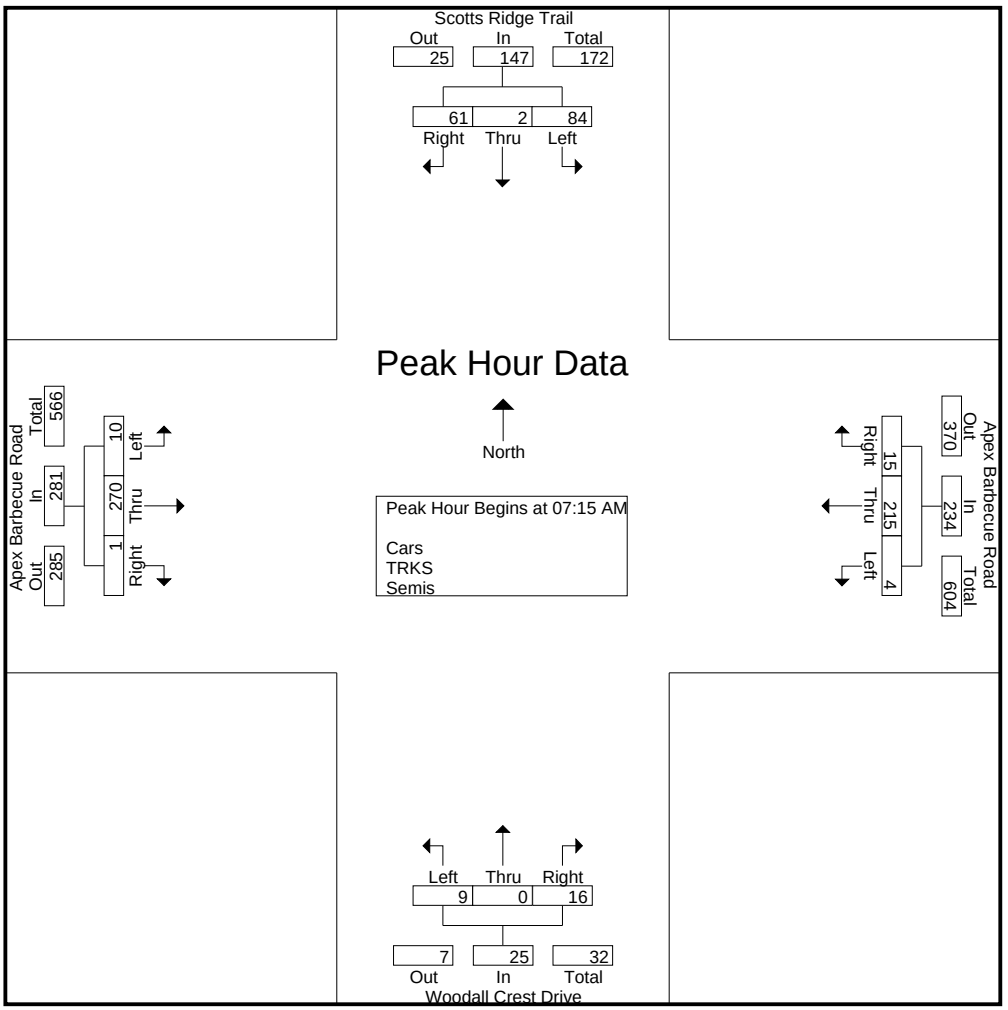
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 2

	Scotts Ridge Trail From North				Apex Barbecue Road From East				Woodall Crest Drive From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	1	16	29	2	30	0	32	6	0	2	8	0	51	2	53	122
07:30 AM	13	1	25	39	1	43	0	44	3	0	0	3	0	92	1	93	179
07:45 AM	23	0	26	49	7	94	2	103	4	0	3	7	0	70	2	72	231
08:00 AM	13	0	17	30	5	48	2	55	3	0	4	7	1	57	5	63	155
Total Volume	61	2	84	147	15	215	4	234	16	0	9	25	1	270	10	281	687
% App. Total	41.5	1.4	57.1		6.4	91.9	1.7		64	0	36		0.4	96.1	3.6		
PHF	.663	.500	.808	.750	.536	.572	.500	.568	.667	.000	.563	.781	.250	.734	.500	.755	.744



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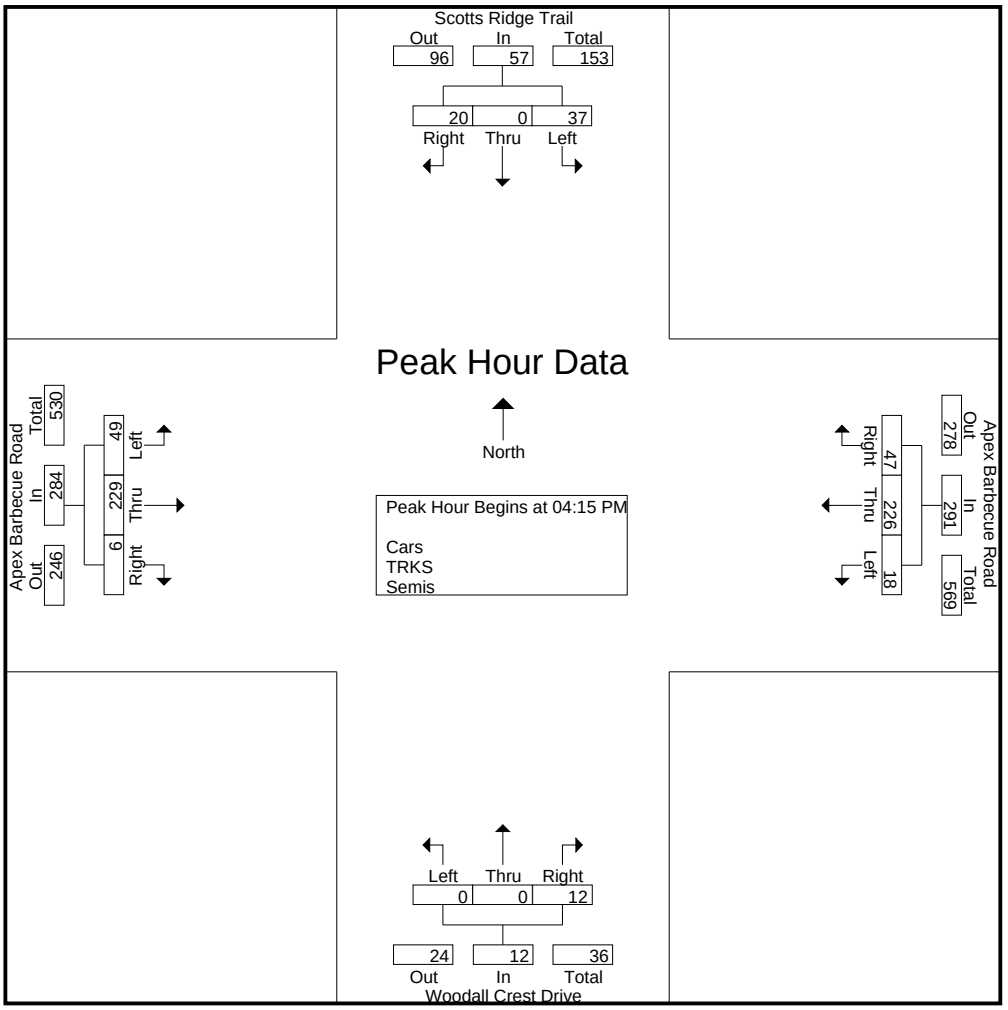
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 3

	Scotts Ridge Trail From North				Apex Barbecue Road From East				Woodall Crest Drive From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	8	0	15	23	8	52	6	66	3	0	0	3	2	61	10	73	165
04:30 PM	6	0	4	10	15	67	2	84	3	0	0	3	1	62	11	74	171
04:45 PM	2	0	7	9	11	54	5	70	4	0	0	4	1	59	9	69	152
05:00 PM	4	0	11	15	13	53	5	71	2	0	0	2	2	47	19	68	156
Total Volume	20	0	37	57	47	226	18	291	12	0	0	12	6	229	49	284	644
% App. Total	35.1	0	64.9		16.2	77.7	6.2		100	0	0		2.1	80.6	17.3		
PHF	.625	.000	.617	.620	.783	.843	.750	.866	.750	.000	.000	.750	.750	.923	.645	.959	.942



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	Town Side Drive From North					Apex Barbecue Road From East					From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	32	0	20	0	52	7	20	0	0	27	0	0	0	0	0	0	49	11	0	60	0	139	139
07:15 AM	8	0	19	0	27	12	21	0	0	33	0	0	0	0	0	0	55	17	0	72	0	132	132
07:30 AM	29	0	42	0	71	35	20	0	0	55	0	0	0	0	0	0	87	25	0	112	0	238	238
07:45 AM	58	0	47	0	105	24	36	0	0	60	0	0	0	0	0	0	76	22	0	98	0	263	263
Total	127	0	128	0	255	78	97	0	0	175	0	0	0	0	0	0	267	75	0	342	0	772	772
08:00 AM	26	0	20	0	46	3	30	0	0	33	0	0	0	0	0	0	62	15	0	77	0	156	156
08:15 AM	21	0	6	0	27	6	30	0	0	36	0	0	0	0	0	0	59	7	0	66	0	129	129
08:30 AM	20	0	20	0	40	8	23	0	0	31	0	0	0	0	0	0	75	11	0	86	0	157	157
08:45 AM	22	0	15	0	37	8	32	0	0	40	0	0	0	0	0	0	137	25	0	162	0	239	239
Total	89	0	61	0	150	25	115	0	0	140	0	0	0	0	0	0	333	58	0	391	0	681	681
*** BREAK ***																							
04:00 PM	9	0	9	0	18	7	45	0	0	52	0	0	0	0	0	0	58	19	0	77	0	147	147
04:15 PM	22	0	17	0	39	16	40	0	0	56	0	0	0	0	0	0	62	16	0	78	0	173	173
04:30 PM	16	0	10	0	26	13	75	0	0	88	0	0	0	0	0	0	55	13	0	68	0	182	182
04:45 PM	13	0	9	0	22	5	52	0	0	57	0	0	0	0	0	0	54	17	0	71	0	150	150
Total	60	0	45	0	105	41	212	0	0	253	0	0	0	0	0	0	229	65	0	294	0	652	652
05:00 PM	13	0	8	0	21	18	54	0	0	72	0	0	0	0	0	0	46	15	0	61	0	154	154
05:15 PM	14	0	5	0	19	12	48	0	0	60	0	0	0	0	0	0	41	13	0	54	0	133	133
05:30 PM	8	0	9	0	17	10	53	0	0	63	0	0	0	0	0	0	56	13	0	69	0	149	149
05:45 PM	14	0	10	0	24	14	54	0	0	68	0	0	0	0	0	0	50	10	0	60	0	152	152
Total	49	0	32	0	81	54	209	0	0	263	0	0	0	0	0	0	193	51	0	244	0	588	588
Grand Total	325	0	266	0	591	198	633	0	0	831	0	0	0	0	0	0	1022	249	0	1271	0	2693	2693
Apprch %	55	0	45			23.8	76.2	0			0	0	0			0	80.4	19.6					
Total %	12.1	0	9.9		21.9	7.4	23.5	0		30.9	0	0	0		0	0	38	9.2		47.2	0	100	
Cars	322	0	263		585	192	618	0		810	0	0	0		0	0	997	247		1244	0	0	2639
% Cars	99.1	0	98.9	0	99	97	97.6	0	0	97.5	0	0	0	0	0	0	97.6	99.2	0	97.9	0	0	98
TRKS	3	0	3		6	6	15	0		21	0	0	0		0	0	25	2		27	0	0	54
% TRKS	0.9	0	1.1	0	1	3	2.4	0	0	2.5	0	0	0	0	0	0	2.4	0.8	0	2.1	0	0	2
Semis	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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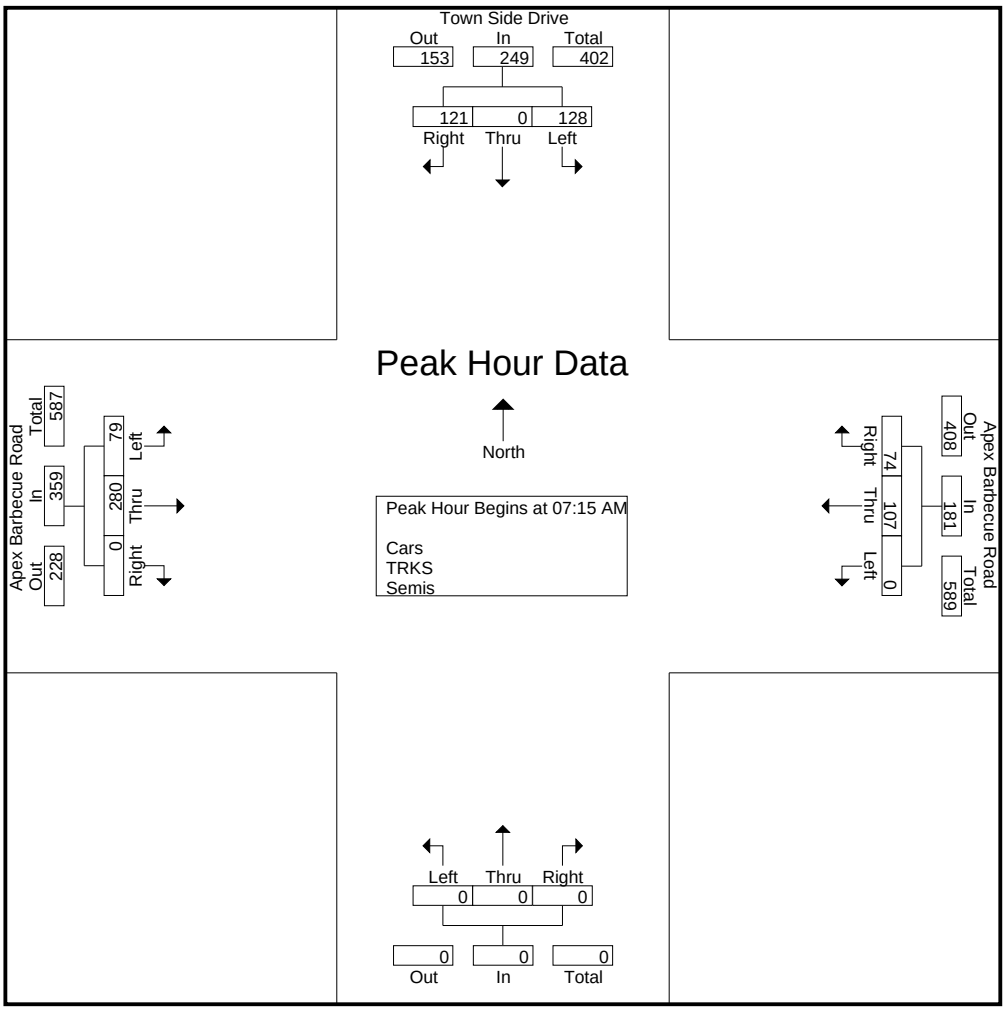
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 2

	Town Side Drive From North				Apex Barbecue Road From East				From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	0	19	27	12	21	0	33	0	0	0	0	0	55	17	72	132
07:30 AM	29	0	42	71	35	20	0	55	0	0	0	0	0	87	25	112	238
07:45 AM	58	0	47	105	24	36	0	60	0	0	0	0	0	76	22	98	263
08:00 AM	26	0	20	46	3	30	0	33	0	0	0	0	0	62	15	77	156
Total Volume	121	0	128	249	74	107	0	181	0	0	0	0	0	280	79	359	789
% App. Total	48.6	0	51.4		40.9	59.1	0		0	0	0		0	78	22		
PHF	.522	.000	.681	.593	.529	.743	.000	.754	.000	.000	.000	.000	.000	.805	.790	.801	.750



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5808 Faringdon Place, Suite 100
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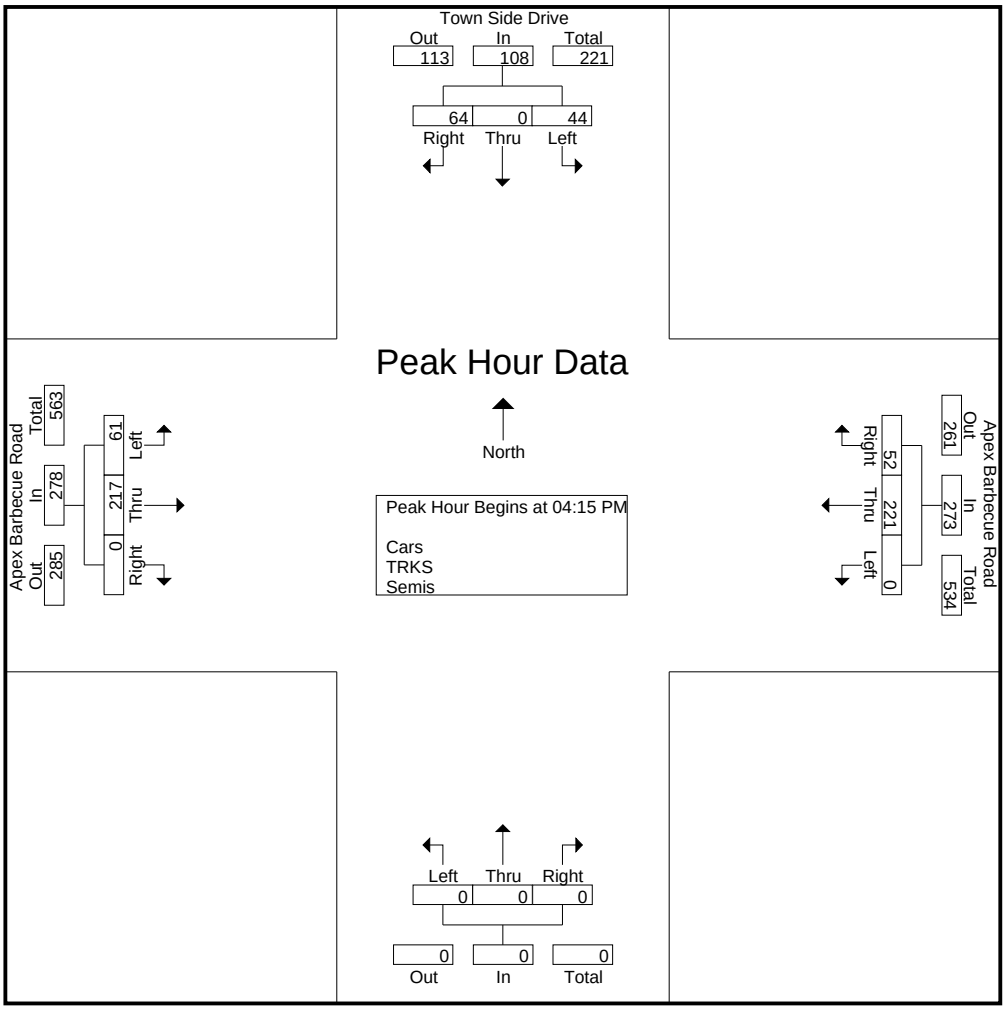
PH: 919 872-5115

File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 3

	Town Side Drive From North				Apex Barbecue Road From East				From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	22	0	17	39	16	40	0	56	0	0	0	0	0	62	16	78	173
04:30 PM	16	0	10	26	13	75	0	88	0	0	0	0	0	55	13	68	182
04:45 PM	13	0	9	22	5	52	0	57	0	0	0	0	0	54	17	71	150
05:00 PM	13	0	8	21	18	54	0	72	0	0	0	0	0	46	15	61	154
Total Volume	64	0	44	108	52	221	0	273	0	0	0	0	0	217	61	278	659
% App. Total	59.3	0	40.7		19	81	0		0	0	0		0	78.1	21.9		
PHF	.727	.000	.647	.692	.722	.737	.000	.776	.000	.000	.000	.000	.000	.875	.897	.891	.905



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 1

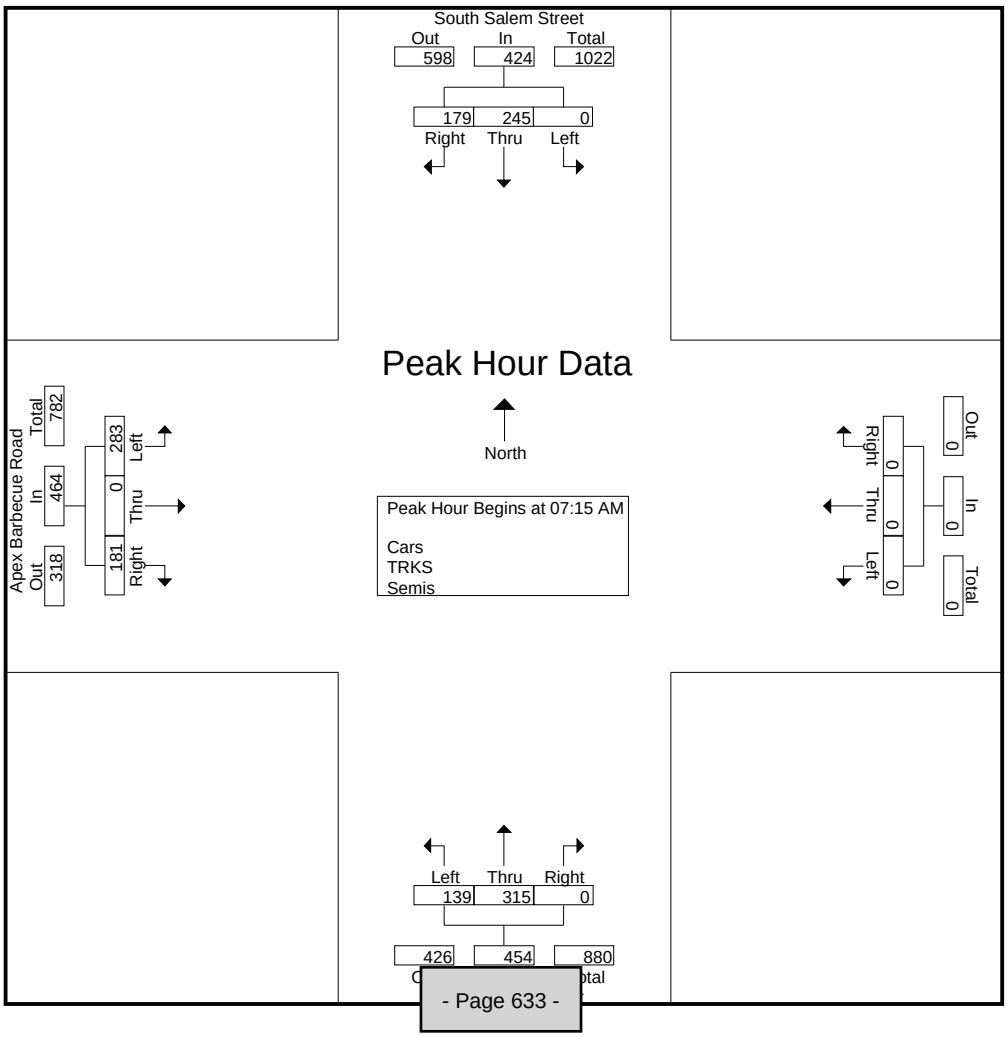
Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	26	71	0	0	97	0	0	0	0	0	0	74	13	0	87	32	0	49	0	81	0	265	265
07:15 AM	36	51	0	0	87	0	0	0	0	0	0	95	26	0	121	28	0	50	0	78	0	286	286
07:30 AM	49	71	0	0	120	0	0	0	0	0	0	76	55	0	131	48	0	59	0	107	0	358	358
07:45 AM	62	53	0	0	115	0	0	0	0	0	0	79	47	0	126	69	0	110	0	179	0	420	420
Total	173	246	0	0	419	0	0	0	0	0	0	324	141	0	465	177	0	268	0	445	0	1329	1329
08:00 AM	32	70	0	0	102	0	0	0	0	0	0	65	11	0	76	36	0	64	0	100	0	278	278
08:15 AM	34	46	0	0	80	0	0	0	0	0	0	62	5	0	67	19	0	55	0	74	0	221	221
08:30 AM	25	53	0	0	78	0	0	0	0	0	0	66	4	0	70	40	0	65	0	105	0	253	253
08:45 AM	31	63	0	0	94	0	0	0	0	0	0	75	10	0	85	51	0	89	0	140	0	319	319
Total	122	232	0	0	354	0	0	0	0	0	0	268	30	0	298	146	0	273	0	419	0	1071	1071
*** BREAK ***																							
04:00 PM	49	68	0	0	117	0	0	0	0	0	0	57	9	0	66	20	0	56	0	76	0	259	259
04:15 PM	53	60	0	0	113	0	0	0	0	0	0	63	19	0	82	28	0	64	0	92	0	287	287
04:30 PM	69	55	0	0	124	0	0	0	0	0	0	74	26	0	100	16	0	67	0	83	0	307	307
04:45 PM	49	75	0	0	124	0	0	0	0	0	0	64	10	0	74	16	0	53	0	69	0	267	267
Total	220	258	0	0	478	0	0	0	0	0	0	258	64	0	322	80	0	240	0	320	0	1120	1120
05:00 PM	61	75	0	0	136	0	0	0	0	0	0	86	19	0	105	16	0	42	0	58	0	299	299
05:15 PM	47	74	0	0	121	0	0	0	0	0	0	73	19	0	92	6	0	41	0	47	0	260	260
05:30 PM	50	55	0	0	105	0	0	0	0	0	0	86	18	0	104	14	0	57	0	71	0	280	280
05:45 PM	62	61	0	0	123	0	0	0	0	0	0	73	16	0	89	13	0	53	0	66	0	278	278
Total	220	265	0	0	485	0	0	0	0	0	0	318	72	0	390	49	0	193	0	242	0	1117	1117
Grand Total	735	1001	0	0	1736	0	0	0	0	0	0	1168	307	0	1475	452	0	974	0	1426	0	4637	4637
Apprch %	42.3	57.7	0			0	0	0			0	79.2	20.8			31.7	0	68.3					
Total %	15.9	21.6	0		37.4	0	0	0		0	0	25.2	6.6		31.8	9.7	0	21		30.8	0	100	
Cars	716	972	0		1688	0	0	0		0	0	1139	305		1444	445	0	955		1400	0	0	4532
% Cars	97.4	97.1	0	0	97.2	0	0	0	0	0	0	97.5	99.3	0	97.9	98.5	0	98	0	98.2	0	0	97.7
TRKS	18	27	0		45	0	0	0		0	0	26	2		28	7	0	19		26	0	0	99
% TRKS	2.4	2.7	0	0	2.6	0	0	0	0	0	0	2.2	0.7	0	1.9	1.5	0	2	0	1.8	0	0	2.1
Semis	1	2	0		3	0	0	0		0	0	3	0		3	0	0	0		0	0	0	6
% Semis	0.1	0.2	0	0	0.2	0	0	0	0	0	0	0.3	0	0	0.2	0	0	0	0	0	0	0	0.1

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 2

	South Salem Street From North				From East				South Salem Street From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	36	51	0	87	0	0	0	0	0	95	26	121	28	0	50	78	286
07:30 AM	49	71	0	120	0	0	0	0	0	76	55	131	48	0	59	107	358
07:45 AM	62	53	0	115	0	0	0	0	0	79	47	126	69	0	110	179	420
08:00 AM	32	70	0	102	0	0	0	0	0	65	11	76	36	0	64	100	278
Total Volume	179	245	0	424	0	0	0	0	0	315	139	454	181	0	283	464	1342
% App. Total	42.2	57.8	0		0	0	0		0	69.4	30.6		39	0	61		
PHF	.722	.863	.000	.883	.000	.000	.000	.000	.000	.829	.632	.866	.656	.000	.643	.648	.799



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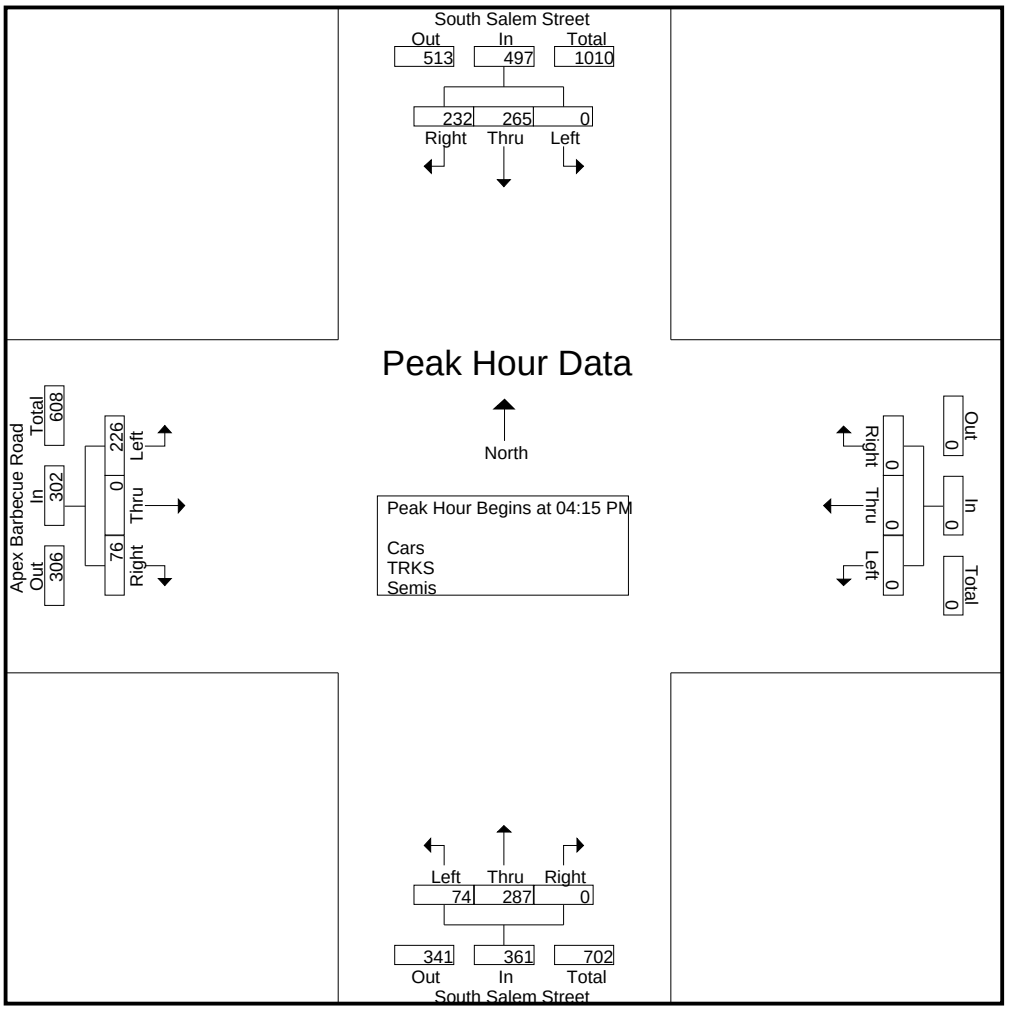
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	53	60	0	113	0	0	0	0	0	63	19	82	28	0	64	92	287
04:30 PM	69	55	0	124	0	0	0	0	0	74	26	100	16	0	67	83	307
04:45 PM	49	75	0	124	0	0	0	0	0	64	10	74	16	0	53	69	267
05:00 PM	61	75	0	136	0	0	0	0	0	86	19	105	16	0	42	58	299
Total Volume	232	265	0	497	0	0	0	0	0	287	74	361	76	0	226	302	1160
% App. Total	46.7	53.3	0		0	0	0		0	79.5	20.5		25.2	0	74.8		
PHF	.841	.883	.000	.914	.000	.000	.000	.000	.000	.834	.712	.860	.679	.000	.843	.821	.945



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					Kelly Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	9	131	0	0	140	0	0	0	0	0	0	144	19	0	163	11	0	20	0	31	0	334	334
07:15 AM	4	48	0	0	52	0	0	0	0	0	0	182	28	0	210	6	0	16	0	22	0	284	284
07:30 AM	10	56	0	0	66	0	0	0	0	0	0	143	23	0	166	14	0	31	0	45	0	277	277
07:45 AM	12	59	0	0	71	0	0	0	0	0	0	189	45	0	234	20	0	21	0	41	0	346	346
Total	35	294	0	0	329	0	0	0	0	0	0	658	115	0	773	51	0	88	0	139	0	1241	1241
08:00 AM	8	62	0	0	70	0	0	0	0	0	0	127	33	0	160	10	0	25	0	35	0	265	265
08:15 AM	9	51	0	0	60	0	0	0	0	0	0	117	18	0	135	8	0	27	0	35	0	230	230
08:30 AM	13	59	0	0	72	0	0	0	0	0	0	104	27	0	131	3	0	23	0	26	0	229	229
08:45 AM	10	55	0	0	65	0	0	0	0	0	0	141	22	0	163	12	0	27	0	39	0	267	267
Total	40	227	0	0	267	0	0	0	0	0	0	489	100	0	589	33	0	102	0	135	0	991	991
*** BREAK ***																							
04:00 PM	22	111	0	0	133	0	0	0	0	0	0	66	14	0	80	25	0	17	0	42	0	255	255
04:15 PM	23	113	0	0	136	0	0	0	0	0	0	74	13	0	87	28	0	15	0	43	0	266	266
04:30 PM	20	102	0	0	122	0	0	0	0	0	0	71	17	0	88	34	0	19	0	53	0	263	263
04:45 PM	16	137	0	0	153	0	0	0	0	0	0	67	9	0	76	36	0	12	0	48	0	277	277
Total	81	463	0	0	544	0	0	0	0	0	0	278	53	0	331	123	0	63	0	186	0	1061	1061
05:00 PM	17	156	0	0	173	0	0	0	0	0	0	86	14	0	100	22	0	13	0	35	0	308	308
05:15 PM	30	162	0	0	192	0	0	0	0	0	0	62	17	0	79	22	0	8	0	30	0	301	301
05:30 PM	38	137	0	0	175	0	0	0	0	0	0	71	14	0	85	35	0	23	0	58	0	318	318
05:45 PM	34	140	0	0	174	0	0	0	0	0	0	66	12	0	78	21	0	16	0	37	0	289	289
Total	119	595	0	0	714	0	0	0	0	0	0	285	57	0	342	100	0	60	0	160	0	1216	1216
Grand Total	275	1579	0	0	1854	0	0	0	0	0	0	1710	325	0	2035	307	0	313	0	620	0	4509	4509
Apprch %	14.8	85.2	0			0	0	0			0	84	16			49.5	0	50.5					
Total %	6.1	35	0		41.1	0	0	0		0	0	37.9	7.2		45.1	6.8	0	6.9		13.8	0	100	
Cars	269	1513	0		1782	0	0	0		0	0	1647	315		1962	296	0	304		600	0	0	4344
% Cars	97.8	95.8	0	0	96.1	0	0	0	0	0	0	96.3	96.9	0	96.4	96.4	0	97.1	0	96.8	0	0	96.3
TRKS	6	63	0		69	0	0	0		0	0	61	9		70	10	0	8		18	0	0	157
% TRKS	2.2	4	0	0	3.7	0	0	0	0	0	0	3.6	2.8	0	3.4	3.3	0	2.6	0	2.9	0	0	3.5
Semis	0	3	0		3	0	0	0		0	0	2	1		3	1	0	1		2	0	0	8
% Semis	0	0.2	0	0	0.2	0	0	0	0	0	0	0.1	0.3	0	0.1	0.3	0	0.3	0	0.3	0	0	0.2

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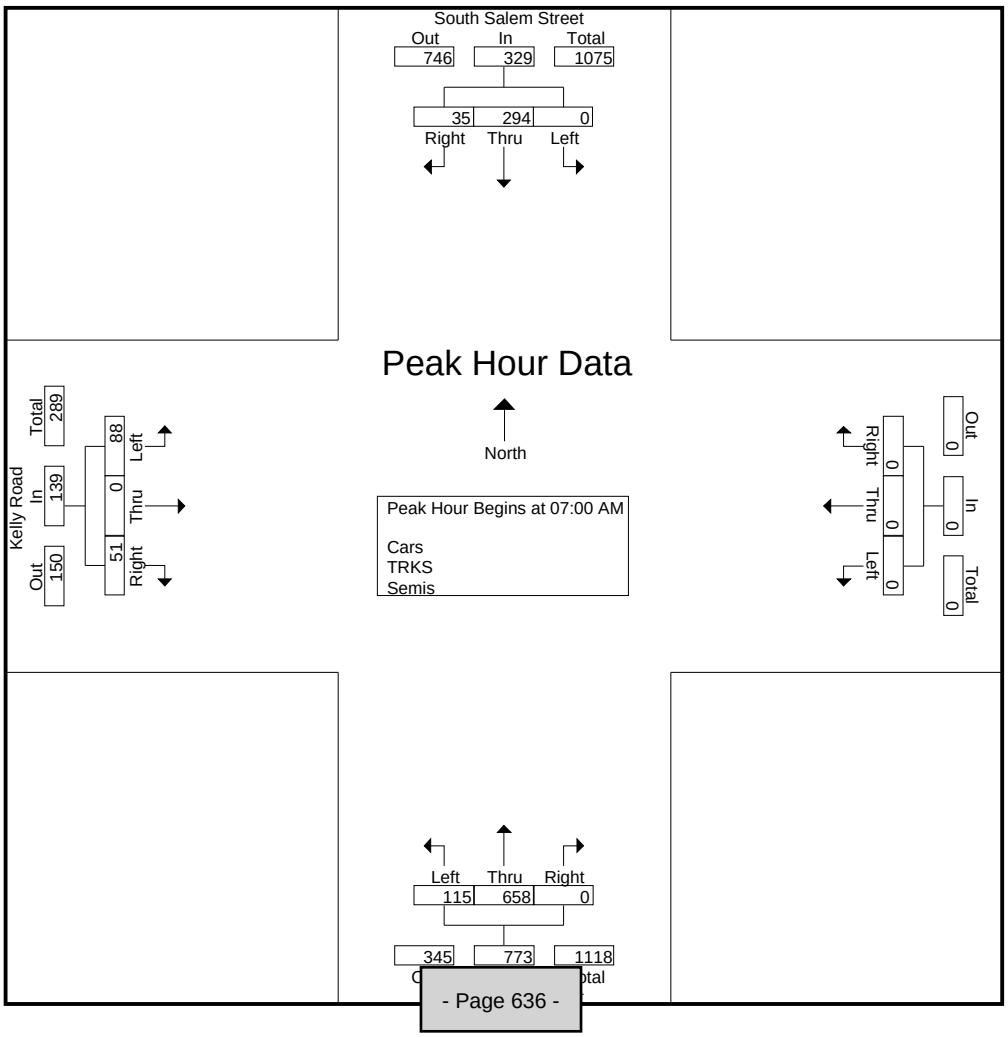
File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 2

	South Salem Street From North				From East				South Salem Street From South				Kelly Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	9	131	0	140	0	0	0	0	0	144	19	163	11	0	20	31	334
07:15 AM	4	48	0	52	0	0	0	0	0	182	28	210	6	0	16	22	284
07:30 AM	10	56	0	66	0	0	0	0	0	143	23	166	14	0	31	45	277
07:45 AM	12	59	0	71	0	0	0	0	0	189	45	234	20	0	21	41	346
Total Volume	35	294	0	329	0	0	0	0	0	658	115	773	51	0	88	139	1241
% App. Total	10.6	89.4	0		0	0	0		0	85.1	14.9		36.7	0	63.3		
PHF	.729	.561	.000	.588	.000	.000	.000	.000	.000	.870	.639	.826	.638	.000	.710	.772	.897



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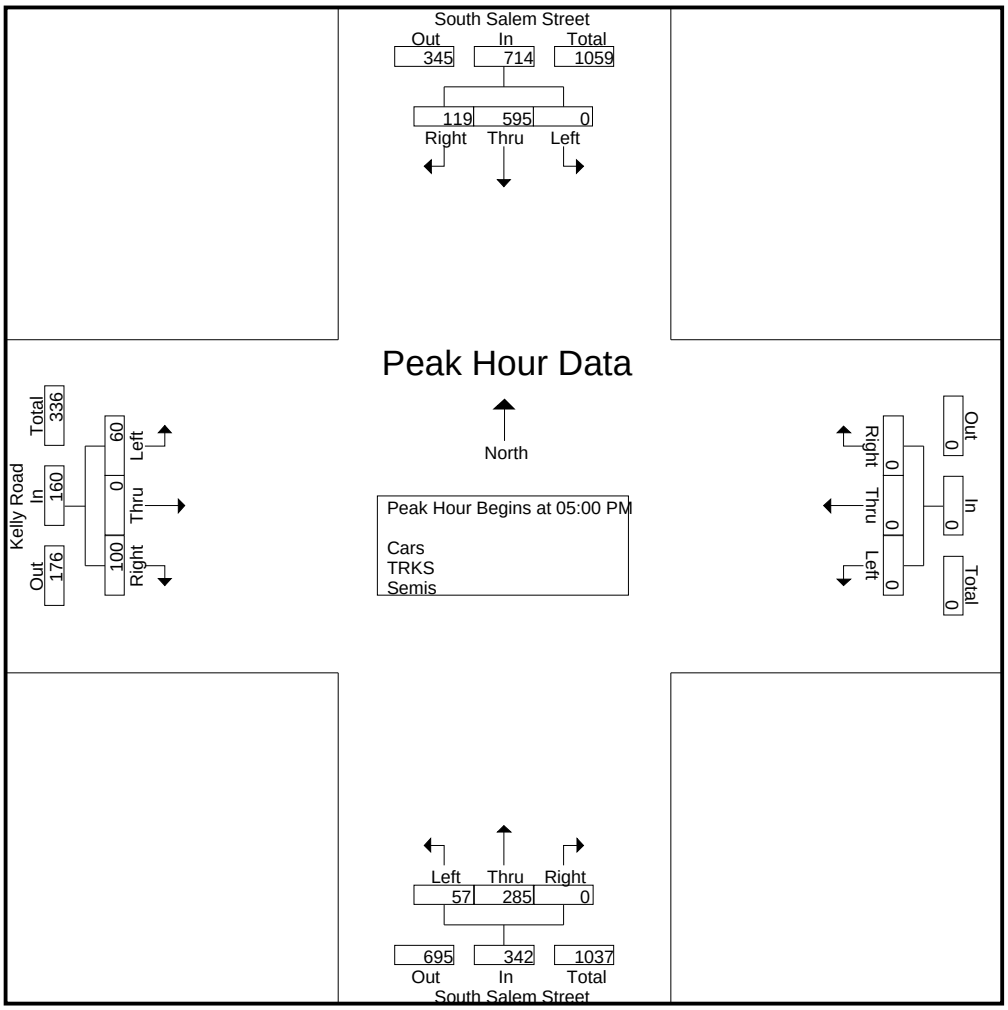
File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				Kelly Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	17	156	0	173	0	0	0	0	0	86	14	100	22	0	13	35	308
05:15 PM	30	162	0	192	0	0	0	0	0	62	17	79	22	0	8	30	301
05:30 PM	38	137	0	175	0	0	0	0	0	71	14	85	35	0	23	58	318
05:45 PM	34	140	0	174	0	0	0	0	0	66	12	78	21	0	16	37	289
Total Volume	119	595	0	714	0	0	0	0	0	285	57	342	100	0	60	160	1216
% App. Total	16.7	83.3	0		0	0	0		0	83.3	16.7		62.5	0	37.5		
PHF	.783	.918	.000	.930	.000	.000	.000	.000	.000	.828	.838	.855	.714	.000	.652	.690	.956



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File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					I-540 Northbound Ramps From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	33	74	0	0	107	0	0	0	0	0	0	79	42	0	121	63	0	11	0	74	0	302	302
07:15 AM	35	41	0	0	76	0	0	0	0	0	0	91	64	0	155	19	0	35	0	54	0	285	285
07:30 AM	53	63	0	0	116	0	0	0	0	0	0	91	65	0	156	25	0	46	0	71	0	343	343
07:45 AM	52	65	0	0	117	0	0	0	0	0	0	101	80	0	181	27	0	26	0	53	0	351	351
Total	173	243	0	0	416	0	0	0	0	0	0	362	251	0	613	134	0	118	0	252	0	1281	1281
08:00 AM	50	59	0	0	109	0	0	0	0	0	0	62	54	0	116	27	0	8	0	35	0	260	260
08:15 AM	21	33	0	0	54	0	0	0	0	0	0	56	43	0	99	26	0	10	0	36	0	189	189
08:30 AM	49	48	0	0	97	0	0	0	0	0	0	63	35	0	98	34	0	11	0	45	0	240	240
08:45 AM	49	62	0	0	111	0	0	0	0	0	0	73	41	0	114	26	0	12	0	38	0	263	263
Total	169	202	0	0	371	0	0	0	0	0	0	254	173	0	427	113	0	41	0	154	0	952	952
*** BREAK ***																							
04:00 PM	9	86	0	0	95	0	0	0	0	0	0	60	20	0	80	42	0	7	0	49	0	224	224
04:15 PM	5	84	0	0	89	0	0	0	0	0	0	68	11	0	79	36	0	13	0	49	0	217	217
04:30 PM	8	67	0	0	75	0	0	0	0	0	0	77	9	0	86	36	0	24	0	60	0	221	221
04:45 PM	6	85	0	0	91	0	0	0	0	0	0	64	13	0	77	40	0	9	0	49	0	217	217
Total	28	322	0	0	350	0	0	0	0	0	0	269	53	0	322	154	0	53	0	207	0	879	879
05:00 PM	3	76	0	0	79	0	0	0	0	0	0	93	9	0	102	40	0	19	0	59	0	240	240
05:15 PM	6	75	0	0	81	0	0	0	0	0	0	73	14	0	87	53	0	18	0	71	0	239	239
05:30 PM	5	71	0	0	76	0	0	0	0	0	0	95	16	0	111	44	0	13	0	57	0	244	244
05:45 PM	3	67	0	0	70	0	0	0	0	0	0	72	10	0	82	46	0	16	0	62	0	214	214
Total	17	289	0	0	306	0	0	0	0	0	0	333	49	0	382	183	0	66	0	249	0	937	937
Grand Total	387	1056	0	0	1443	0	0	0	0	0	0	1218	526	0	1744	584	0	278	0	862	0	4049	4049
Apprch %	26.8	73.2	0			0	0	0			0	69.8	30.2			67.7	0	32.3					
Total %	9.6	26.1	0		35.6	0	0	0		0	0	30.1	13		43.1	14.4	0	6.9		21.3	0	100	
Cars	385	1028	0		1413	0	0	0		0	0	1191	509		1700	560	0	275		835	0	0	3948
% Cars	99.5	97.3	0	0	97.9	0	0	0	0	0	0	97.8	96.8	0	97.5	95.9	0	98.9	0	96.9	0	0	97.5
TRKS	2	28	0		30	0	0	0		0	0	27	16		43	22	0	2		24	0	0	97
% TRKS	0.5	2.7	0	0	2.1	0	0	0	0	0	0	2.2	3	0	2.5	3.8	0	0.7	0	2.8	0	0	2.4
Semis	0	0	0		0	0	0	0		0	0	0	1		1	2	0	1		3	0	0	4
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0.3	0	0.4	0	0.3	0	0	0.1

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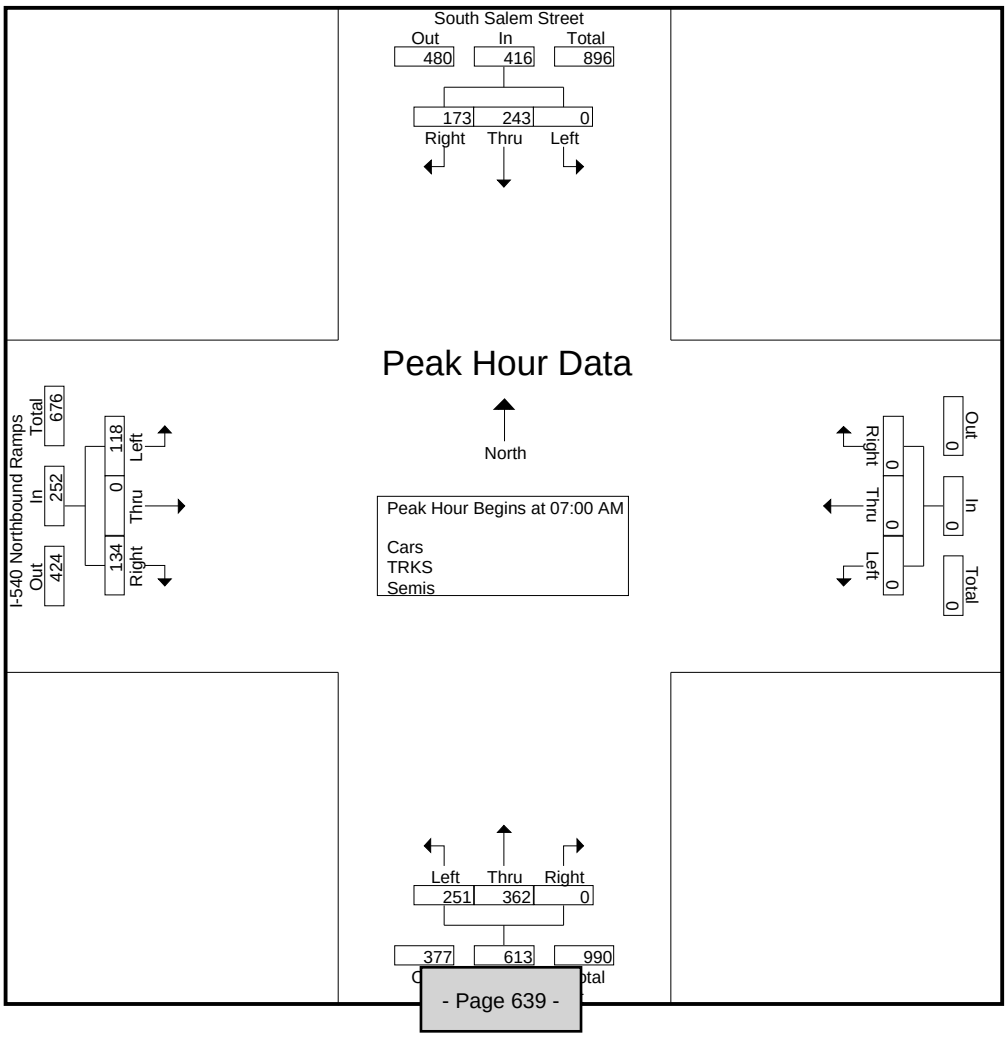
File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 2

	South Salem Street From North				From East				South Salem Street From South				I-540 Northbound Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	33	74	0	107	0	0	0	0	0	79	42	121	63	0	11	74	302
07:15 AM	35	41	0	76	0	0	0	0	0	91	64	155	19	0	35	54	285
07:30 AM	53	63	0	116	0	0	0	0	0	91	65	156	25	0	46	71	343
07:45 AM	52	65	0	117	0	0	0	0	0	101	80	181	27	0	26	53	351
Total Volume	173	243	0	416	0	0	0	0	0	362	251	613	134	0	118	252	1281
% App. Total	41.6	58.4	0		0	0	0		0	59.1	40.9		53.2	0	46.8		
PHF	.816	.821	.000	.889	.000	.000	.000	.000	.000	.896	.784	.847	.532	.000	.641	.851	.912



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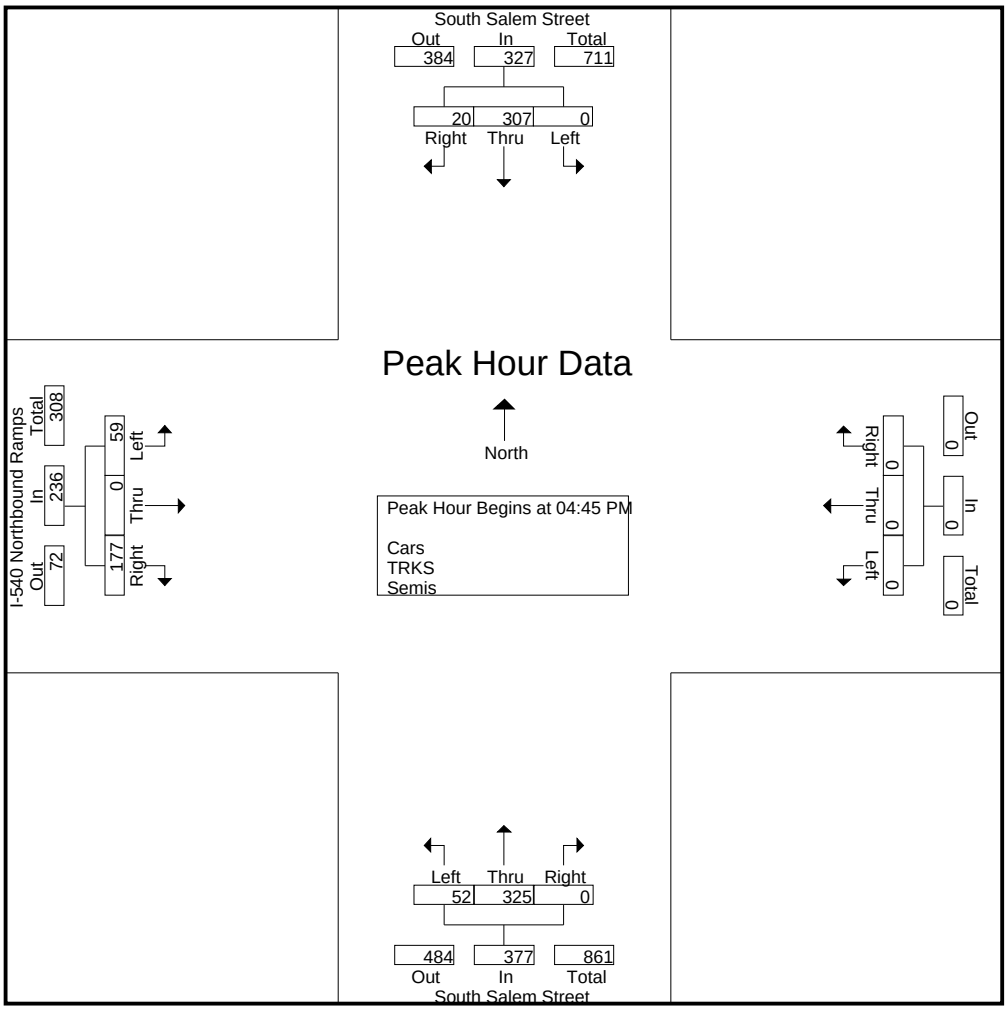
File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				I-540 Northbound Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	6	85	0	91	0	0	0	0	0	64	13	77	40	0	9	49	217
05:00 PM	3	76	0	79	0	0	0	0	0	93	9	102	40	0	19	59	240
05:15 PM	6	75	0	81	0	0	0	0	0	73	14	87	53	0	18	71	239
05:30 PM	5	71	0	76	0	0	0	0	0	95	16	111	44	0	13	57	244
Total Volume	20	307	0	327	0	0	0	0	0	325	52	377	177	0	59	236	940
% App. Total	6.1	93.9	0		0	0	0		0	86.2	13.8		75	0	25		
PHF	.833	.903	.000	.898	.000	.000	.000	.000	.000	.855	.813	.849	.835	.000	.776	.831	.963



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File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	I-540 Southbound Ramps From North					South Salem Street From East					From South					South Salem Street From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	13	0	5	0	18	12	105	0	0	117	0	0	0	0	0	0	118	47	0	165	0	300	300
07:15 AM	5	0	4	0	9	15	44	0	0	59	0	0	0	0	0	0	156	36	0	192	0	260	260
07:30 AM	8	0	12	0	20	20	64	0	0	84	0	0	0	0	0	0	139	46	0	185	0	289	289
07:45 AM	5	0	10	0	15	34	56	0	0	90	0	0	0	0	0	0	157	48	0	205	0	310	310
Total	31	0	31	0	62	81	269	0	0	350	0	0	0	0	0	0	570	177	0	747	0	1159	1159
08:00 AM	12	0	2	0	14	18	63	0	0	81	0	0	0	0	0	0	106	53	0	159	0	254	254
08:15 AM	11	0	4	0	15	12	51	0	0	63	0	0	0	0	0	0	84	55	0	139	0	217	217
08:30 AM	9	0	7	0	16	15	56	0	0	71	0	0	0	0	0	0	96	33	0	129	0	216	216
08:45 AM	4	0	8	0	12	19	65	0	1	84	0	0	0	0	0	0	97	61	0	158	1	254	255
Total	36	0	21	0	57	64	235	0	1	299	0	0	0	0	0	0	383	202	0	585	1	941	942
*** BREAK ***																							
04:00 PM	22	0	18	0	40	17	105	0	0	122	0	0	0	0	0	0	60	31	0	91	0	253	253
04:15 PM	29	0	25	0	54	20	98	0	0	118	0	0	0	0	0	0	55	34	0	89	0	261	261
04:30 PM	21	0	32	0	53	11	94	0	0	105	0	0	0	0	0	0	54	37	0	91	0	249	249
04:45 PM	32	0	24	0	56	14	111	0	0	125	0	0	0	0	0	0	47	30	0	77	0	258	258
Total	104	0	99	0	203	62	408	0	0	470	0	0	0	0	0	0	216	132	0	348	0	1021	1021
05:00 PM	62	0	43	0	105	13	101	0	0	114	0	0	0	0	0	1	60	43	0	104	0	323	323
05:15 PM	74	0	39	0	113	8	115	0	0	123	0	0	0	0	0	0	43	25	0	68	0	304	304
05:30 PM	76	0	48	0	124	10	103	0	0	113	0	0	0	0	0	0	53	41	0	94	0	331	331
05:45 PM	65	0	29	0	94	12	92	0	0	104	0	0	0	0	0	0	52	23	0	75	0	273	273
Total	277	0	159	0	436	43	411	0	0	454	0	0	0	0	0	1	208	132	0	341	0	1231	1231
Grand Total	448	0	310	0	758	250	1323	0	1	1573	0	0	0	0	0	1	1377	643	0	2021	1	4352	4353
Apprch %	59.1	0	40.9			15.9	84.1	0			0	0	0			0	68.1	31.8					
Total %	10.3	0	7.1		17.4	5.7	30.4	0		36.1	0	0	0		0	0	31.6	14.8		46.4	0	100	
Cars	433	0	305		738	247	1272	0		1520	0	0	0		0	0	1339	612		1951	0	0	4209
% Cars	96.7	0	98.4	0	97.4	98.8	96.1	0	100	96.6	0	0	0	0	0	0	97.2	95.2	0	96.5	0	0	96.7
TRKS	14	0	5		19	2	49	0		51	0	0	0		0	1	38	30		69	0	0	139
% TRKS	3.1	0	1.6	0	2.5	0.8	3.7	0	0	3.2	0	0	0	0	0	100	2.8	4.7	0	3.4	0	0	3.2
Semis	1	0	0		1	1	2	0		3	0	0	0		0	0	0	1		1	0	0	5
% Semis	0.2	0	0	0	0.1	0.4	0.2	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0.1

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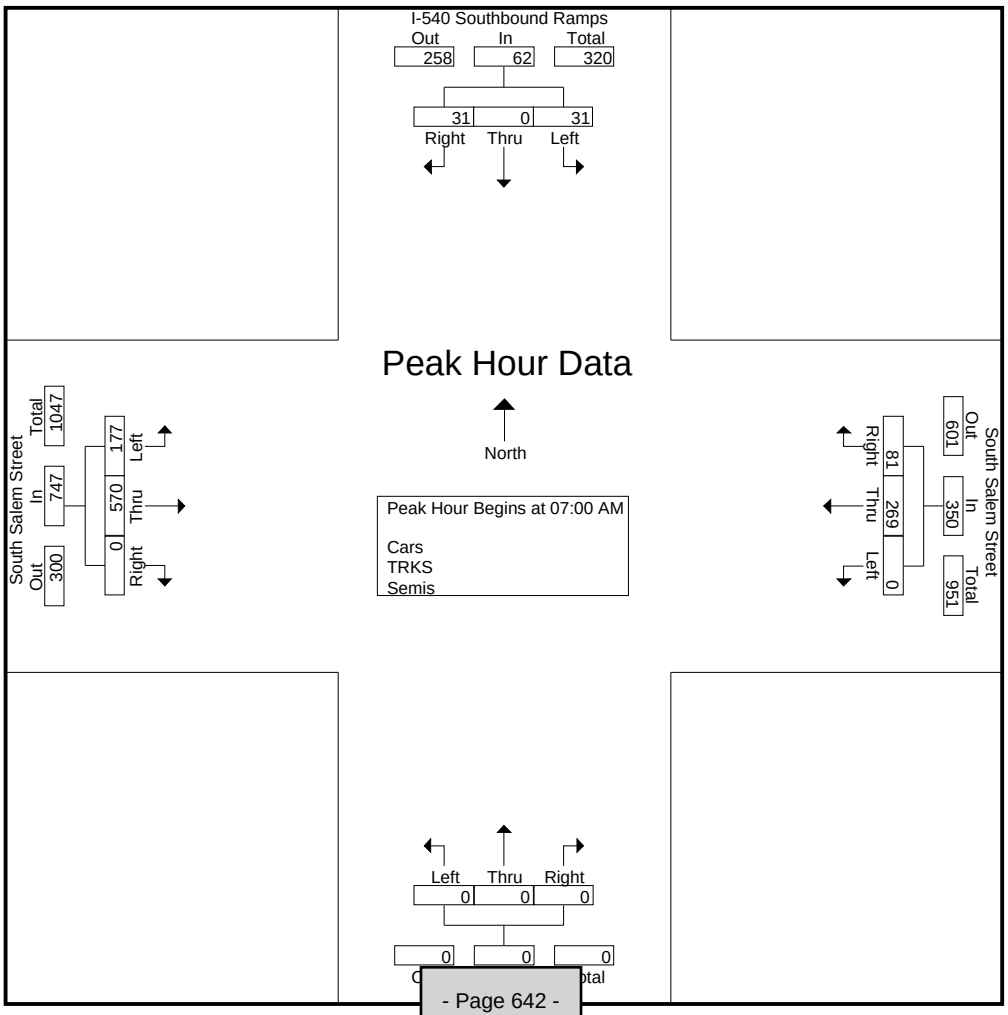
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 2

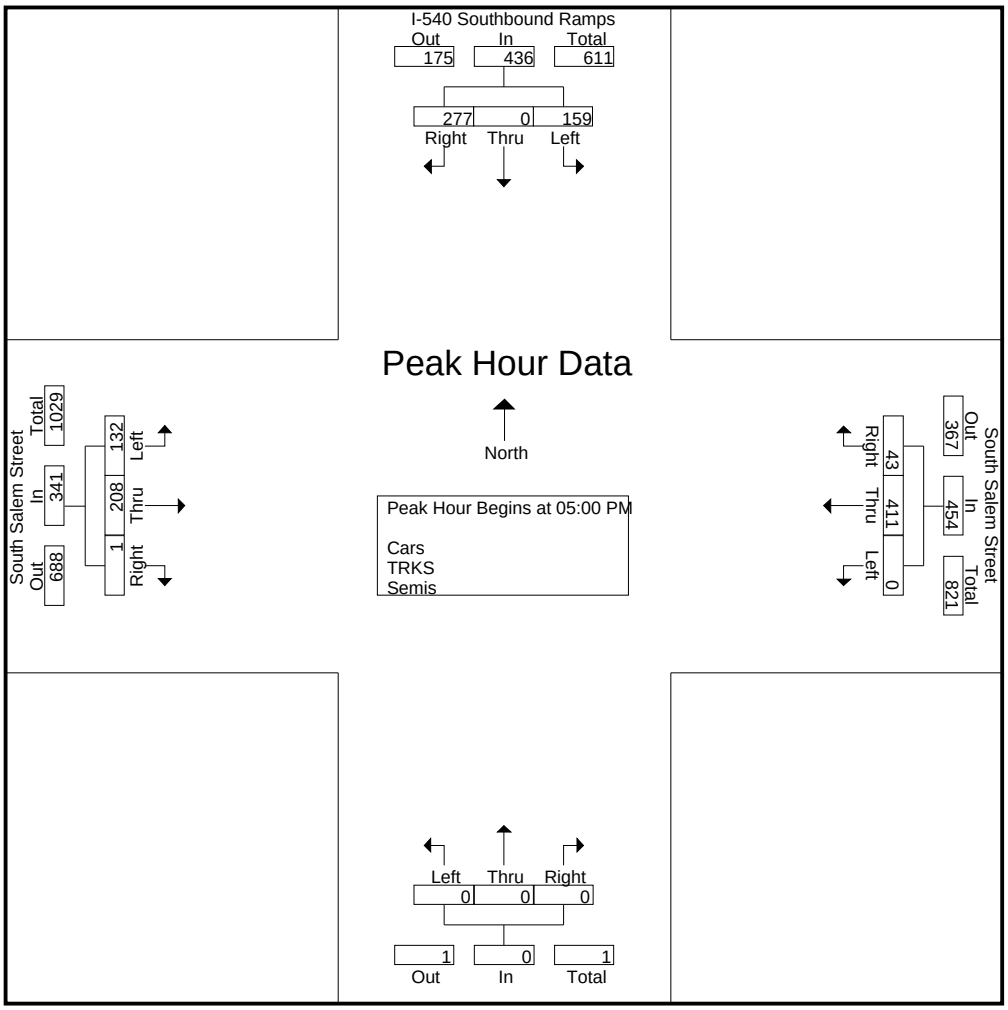
	I-540 Southbound Ramps From North				South Salem Street From East				From South				South Salem Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	13	0	5	18	12	105	0	117	0	0	0	0	0	118	47	165	300
07:15 AM	5	0	4	9	15	44	0	59	0	0	0	0	0	156	36	192	260
07:30 AM	8	0	12	20	20	64	0	84	0	0	0	0	0	139	46	185	289
07:45 AM	5	0	10	15	34	56	0	90	0	0	0	0	0	157	48	205	310
Total Volume	31	0	31	62	81	269	0	350	0	0	0	0	0	570	177	747	1159
% App. Total	50	0	50		23.1	76.9	0		0	0	0		0	76.3	23.7		
PHF	.596	.000	.646	.775	.596	.640	.000	.748	.000	.000	.000	.000	.000	.908	.922	.911	.935



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 3

	I-540 Southbound Ramps From North				South Salem Street From East				From South				South Salem Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	62	0	43	105	13	101	0	114	0	0	0	0	1	60	43	104	323
05:15 PM	74	0	39	113	8	115	0	123	0	0	0	0	0	43	25	68	304
05:30 PM	76	0	48	124	10	103	0	113	0	0	0	0	0	53	41	94	331
05:45 PM	65	0	29	94	12	92	0	104	0	0	0	0	0	52	23	75	273
Total Volume	277	0	159	436	43	411	0	454	0	0	0	0	1	208	132	341	1231
% App. Total	63.5	0	36.5		9.5	90.5	0		0	0	0		0.3	61	38.7		
PHF	.911	.000	.828	.879	.827	.893	.000	.923	.000	.000	.000	.000	.250	.867	.767	.820	.930



Nate Bouquin

From: Brennan, Sean P <spbrennan@ncdot.gov>
Sent: Friday, December 20, 2019 4:23 PM
To: Nate Bouquin; Serge Grebenschikov; Neidringhaus, Amy N; Fenner, Edwin F; Russell Dalton
Cc: Joshua Reinke; Ishak, Doumit Y; Bunting, Clarence B; Walker, Braden M; Rynal Stephenson
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

Nate,

I'm good with the MOU, but I wanted to note that there is a typo on page 7 that shows the second driveway from the north to be a left-over; however, this should be shown as a right-in/right-out.

Regards,
Sean Brennan, PE
Senior Assistant District Engineer
Division 5/District 1
Department of Transportation

919-733-3213 office
919-715-5778 fax
spbrennan@ncdot.gov

4009 District Drive (Physical Address)
Raleigh, NC 27607

1575 Mail Service Center (Mailing Address)
Raleigh, NC 27699-1575

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Nate Bouquin <nbouquin@rameykemp.com>
Sent: Wednesday, December 18, 2019 3:47 PM
To: Serge Grebenschikov <Serge.Grebenschikov@apexnc.org>; Brennan, Sean P <spbrennan@ncdot.gov>; Neidringhaus, Amy N <anneidringhaus@ncdot.gov>; Fenner, Edwin F <effenner@ncdot.gov>; Russell Dalton <Russell.Dalton@apexnc.org>
Cc: Joshua Reinke <jreinke@rameykemp.com>; Ishak, Doumit Y <dishak@ncdot.gov>; Bunting, Clarence B <cbunting@ncdot.gov>; Walker, Braden M <bmwalker1@ncdot.gov>; Rynal Stephenson <rstephenson@rameykemp.com>
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

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Thanks for the quick review Serge! Yes, with the proposed two (2) full movements we would meet the 1,200 feet spacing. The site has ~3,800 feet of frontage, so it seems like a lot at first but the spacing should meet their guidelines.

Have you have a happy and safe Holidays!

Nate Bouquin, EI
Transportation Associate

RAMEY KEMP & ASSOCIATES

919-872-5115 (Office)
919-987-1301 (Direct)

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From: Serge Grebenschikov <Serge.Grebenschikov@apexnc.org>
Sent: Wednesday, December 18, 2019 3:42 PM
To: Brennan, Sean P <spbrennan@ncdot.gov>; Nate Bouquin <nbouquin@rameykemp.com>; Neidringhaus, Amy N <anneidringhaus@ncdot.gov>; Fenner, Edwin F <effenner@ncdot.gov>; Russell Dalton <Russell.Dalton@apexnc.org>
Cc: Joshua Reinke <jreinke@rameykemp.com>; Ishak, Doumit Y <dishak@ncdot.gov>; Bunting, Clarence B <cbunting@ncdot.gov>; Walker, Braden M <bmwalker1@ncdot.gov>; Rynal Stephenson <rstephenson@rameykemp.com>
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

Hi Nate,

I reviewed the MOU and I have no issues with your proposed distributions and trip assignments. I saw you are proposing 7 site driveways into the site with 5 along Old US 1. Does the spacing work out per NCDOT guidance (1200 feet between full access movements) on Old US 1. If so, then I don't think there are any issues.

Kind regards.

Serge Grebenschikov, PE
Traffic Engineer
Public Works & Transportation – Traffic
73 Hunter Street, 3rd Fl
PO Box 250
Apex, NC 27502
P: (919) 372-7448
E: Serge.Grebenschikov@apexnc.org

Nate Bouquin

From: Serge Grebenschikov <Serge.Grebenschikov@apexnc.org>
Sent: Wednesday, December 18, 2019 3:42 PM
To: Brennan, Sean P; Nate Bouquin; Neidringhaus, Amy N; Fenner, Edwin F; Russell Dalton
Cc: Joshua Reinke; Ishak, Doumit Y; Bunting, Clarence B; Walker, Braden M; Rynal Stephenson
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

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Kind regards.

Serge Grebenschikov, PE
Traffic Engineer
Public Works & Transportation – Traffic
73 Hunter Street, 3rd Fl
PO Box 250
Apex, NC 27502
P: (919) 372-7448
E: Serge.Grebenschikov@apexnc.org

From: Brennan, Sean P [mailto:spbrennan@ncdot.gov]
Sent: Wednesday, December 18, 2019 1:26 PM
To: Nate Bouquin <nbouquin@rameykemp.com>; Neidringhaus, Amy N <anneidringhaus@ncdot.gov>; Fenner, Edwin F <effenner@ncdot.gov>; Serge Grebenschikov <Serge.Grebenschikov@apexnc.org>; Russell Dalton <Russell.Dalton@apexnc.org>
Cc: Joshua Reinke <jreinke@rameykemp.com>; Ishak, Doumit Y <dishak@ncdot.gov>; Bunting, Clarence B <cbunting@ncdot.gov>; Walker, Braden M <bmwalker1@ncdot.gov>; Rynal Stephenson <rstephenson@rameykemp.com>
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

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Yes.

Regards,
Sean Brennan, PE
Senior Assistant District Engineer
Division 5/District 1
Department of Transportation

919-733-3213 office
919-715-5778 fax
spbrennan@ncdot.gov

4009 District Drive (Physical Address)
Raleigh, NC 27607

1575 Mail Service Center (Mailing Address)
Raleigh, NC 27699-1575

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From: Nate Bouquin <nbouquin@rameykemp.com>
Sent: Wednesday, December 18, 2019 1:23 PM
To: Brennan, Sean P <spbrennan@ncdot.gov>; Neidringhaus, Amy N <anneidringhaus@ncdot.gov>; Fenner, Edwin F <effenner@ncdot.gov>; Serge Grebenschikov <Serge.Grebenschikov@apexnc.org>; Russell Dalton <Russell.Dalton@apexnc.org>
Cc: Joshua Reinke <jreinke@rameykemp.com>; Ishak, Doumit Y <dishak@ncdot.gov>; Bunting, Clarence B <cbunting@ncdot.gov>; Walker, Braden M <bmwalker1@ncdot.gov>; Rynal Stephenson <rstephenson@rameykemp.com>
Subject: RE: [External] RE: Poe Property Apex - TIA Scoping Meeting

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Would it be acceptable if we submit that concurrently with the TIA and then just indicate that our southern access is contingent upon approval of the speed limit reduction?

Thanks!

Nate Bouquin, EI
Transportation Associate

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APPENDIX B

COUNT DATA

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 1

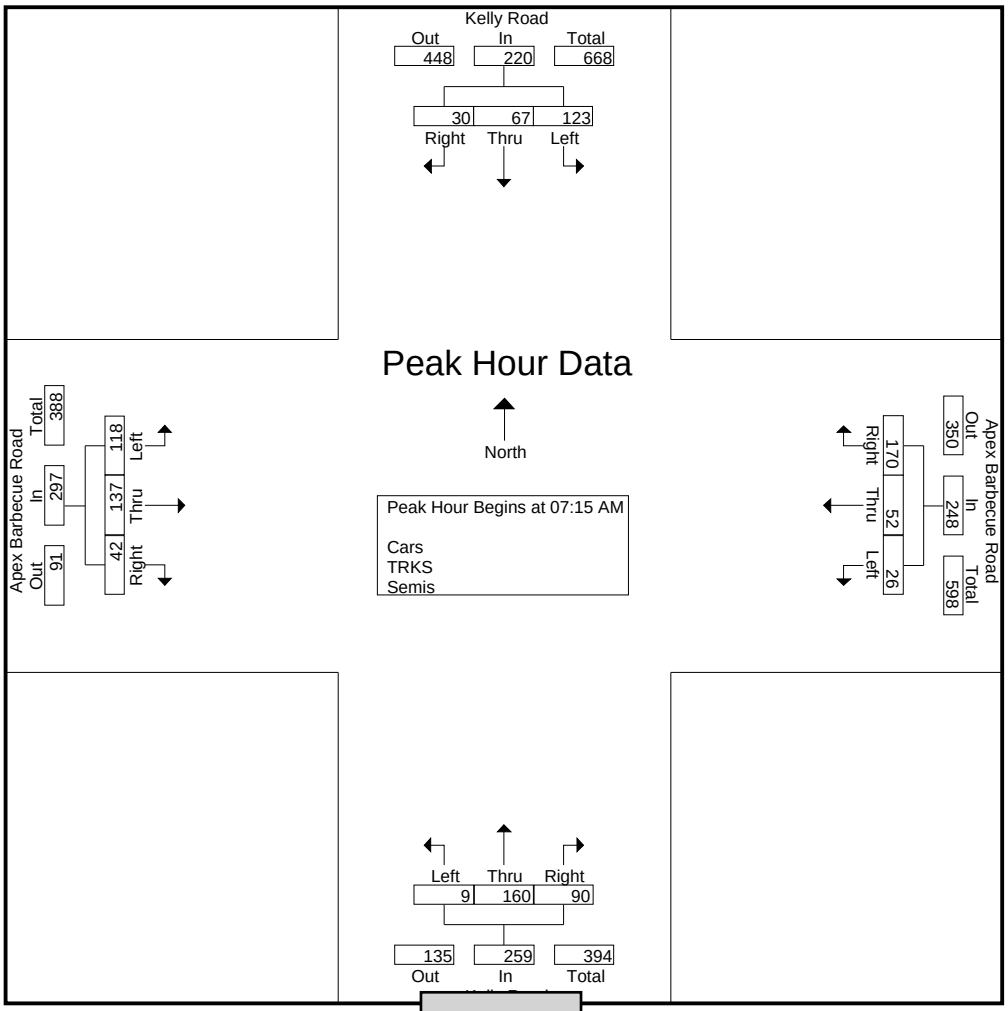
Groups Printed- Cars - TRKS - Semis

	Kelly Road From North					Apex Barbecue Road From East					Kelly Road From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	21	11	14	0	46	27	61	6	0	94	4	45	4	0	53	8	30	25	0	63	0	256	256
07:15 AM	9	8	11	0	28	34	13	6	0	53	4	41	4	0	49	7	29	29	0	65	0	195	195
07:30 AM	5	20	34	0	59	38	11	3	0	52	22	32	2	0	56	14	40	31	0	85	0	252	252
07:45 AM	7	18	46	0	71	47	22	8	0	77	30	43	2	0	75	11	41	30	0	82	0	305	305
Total	42	57	105	0	204	146	107	23	0	276	60	161	12	0	233	40	140	115	0	295	0	1008	1008
08:00 AM	9	21	32	0	62	51	6	9	1	66	34	44	1	0	79	10	27	28	0	65	1	272	273
08:15 AM	8	16	15	0	39	29	8	8	0	45	23	24	2	0	49	7	27	12	0	46	0	179	179
08:30 AM	7	11	17	0	35	26	16	8	0	50	22	18	5	0	45	3	22	32	0	57	0	187	187
08:45 AM	12	16	17	0	45	42	17	18	0	77	30	23	3	0	56	8	30	33	0	71	0	249	249
Total	36	64	81	0	181	148	47	43	1	238	109	109	11	0	229	28	106	105	0	239	1	887	888
*** BREAK ***																							
04:00 PM	25	33	28	0	86	21	30	15	0	66	4	22	6	0	32	5	19	11	0	35	0	219	219
04:15 PM	32	41	37	0	110	36	17	11	0	64	9	24	4	0	37	2	20	12	0	34	0	245	245
04:30 PM	24	60	33	0	117	22	26	9	0	57	15	25	5	0	45	5	30	8	0	43	0	262	262
04:45 PM	41	54	28	0	123	25	34	14	0	73	5	18	7	0	30	3	23	13	0	39	0	265	265
Total	122	188	126	0	436	104	107	49	0	260	33	89	22	0	144	15	92	44	0	151	0	991	991
05:00 PM	27	43	38	0	108	17	21	3	0	41	10	29	2	0	41	5	18	10	0	33	0	223	223
05:15 PM	30	27	24	1	81	11	23	8	0	42	15	31	7	0	53	3	16	10	0	29	1	205	206
05:30 PM	17	59	47	0	123	27	10	6	0	43	15	37	8	0	60	3	13	13	0	29	0	255	255
05:45 PM	28	44	34	1	106	17	17	8	0	42	11	31	4	0	46	5	26	7	0	38	1	232	233
Total	102	173	143	2	418	72	71	25	0	168	51	128	21	0	200	16	73	40	0	129	2	915	917
Grand Total	302	482	455	2	1239	470	332	140	1	942	253	487	66	0	806	99	411	304	0	814	3	3801	3804
Apprch %	24.4	38.9	36.7			49.9	35.2	14.9			31.4	60.4	8.2			12.2	50.5	37.3					
Total %	7.9	12.7	12		32.6	12.4	8.7	3.7		24.8	6.7	12.8	1.7		21.2	2.6	10.8	8		21.4	0.1	99.9	
Cars	300	476	450		1228	469	325	134		929	247	476	66		789	97	405	303		805	0	0	3751
% Cars	99.3	98.8	98.9	100	99	99.8	97.9	95.7	100	98.5	97.6	97.7	100	0	97.9	98	98.5	99.7	0	98.9	0	0	98.6
TRKS	2	5	5		12	1	7	5		13	6	10	0		16	2	6	1		9	0	0	50
% TRKS	0.7	1	1.1	0	1	0.2	2.1	3.6	0	1.4	2.4	2.1	0	0	2	2	1.5	0.3	0	1.1	0	0	1.3
Semis	0	1	0		1	0	0	1		1	0	1	0		1	0	0	0		0	0	0	3
% Semis	0	0.2	0	0	0.1	0	0	0.7	0	0.1	0	0.2	0	0	0.1	0	0	0	0	0	0	0	0.1

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 2

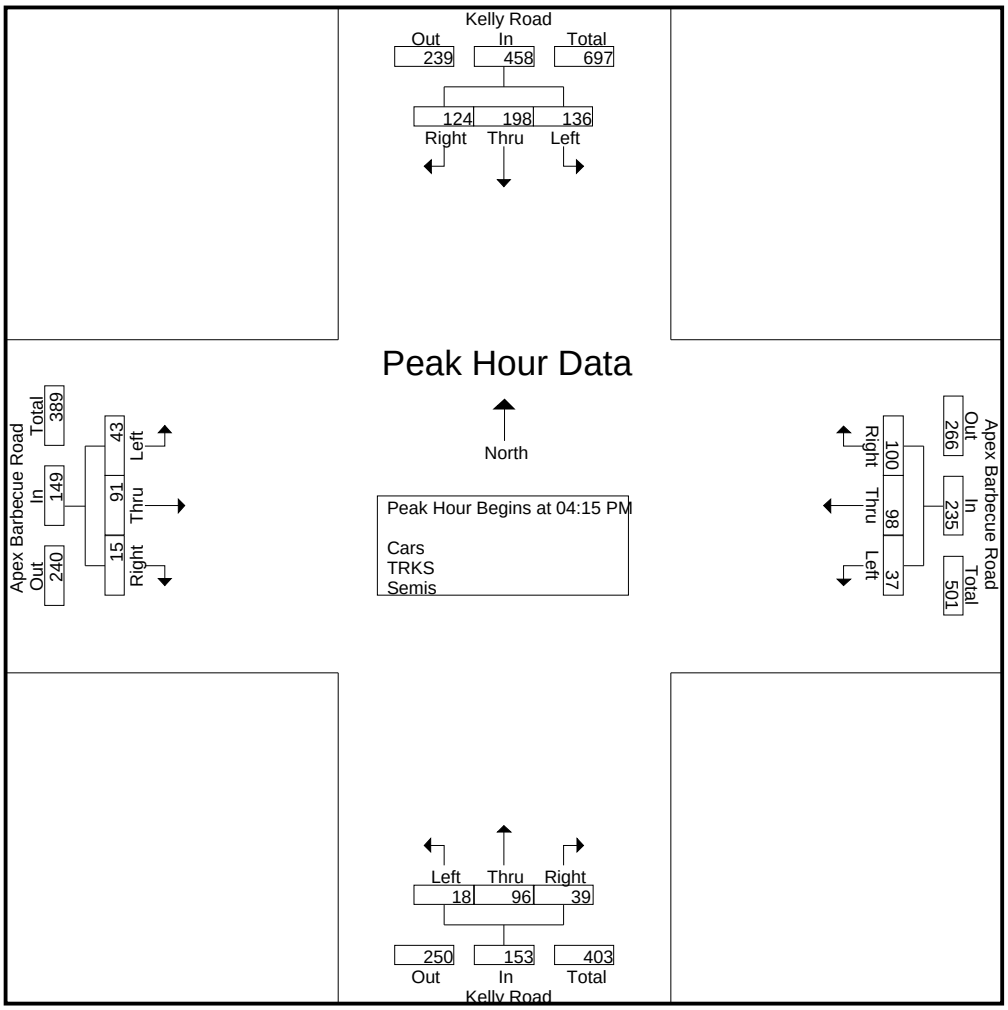
	Kelly Road From North				Apex Barbecue Road From East				Kelly Road From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	9	8	11	28	34	13	6	53	4	41	4	49	7	29	29	65	195
07:30 AM	5	20	34	59	38	11	3	52	22	32	2	56	14	40	31	85	252
07:45 AM	7	18	46	71	47	22	8	77	30	43	2	75	11	41	30	82	305
08:00 AM	9	21	32	62	51	6	9	66	34	44	1	79	10	27	28	65	272
Total Volume	30	67	123	220	170	52	26	248	90	160	9	259	42	137	118	297	1024
% App. Total	13.6	30.5	55.9		68.5	21	10.5		34.7	61.8	3.5		14.1	46.1	39.7		
PHF	.833	.798	.668	.775	.833	.591	.722	.805	.662	.909	.563	.820	.750	.835	.952	.874	.839



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Kelly Road
Site Code : 00000007
Start Date : 10/22/2019
Page No : 3

	Kelly Road From North				Apex Barbecue Road From East				Kelly Road From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	32	41	37	110	36	17	11	64	9	24	4	37	2	20	12	34	245
04:30 PM	24	60	33	117	22	26	9	57	15	25	5	45	5	30	8	43	262
04:45 PM	41	54	28	123	25	34	14	73	5	18	7	30	3	23	13	39	265
05:00 PM	27	43	38	108	17	21	3	41	10	29	2	41	5	18	10	33	223
Total Volume	124	198	136	458	100	98	37	235	39	96	18	153	15	91	43	149	995
% App. Total	27.1	43.2	29.7		42.6	41.7	15.7		25.5	62.7	11.8		10.1	61.1	28.9		
PHF	.756	.825	.895	.931	.694	.721	.661	.805	.650	.828	.643	.850	.750	.758	.827	.866	.939



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 1

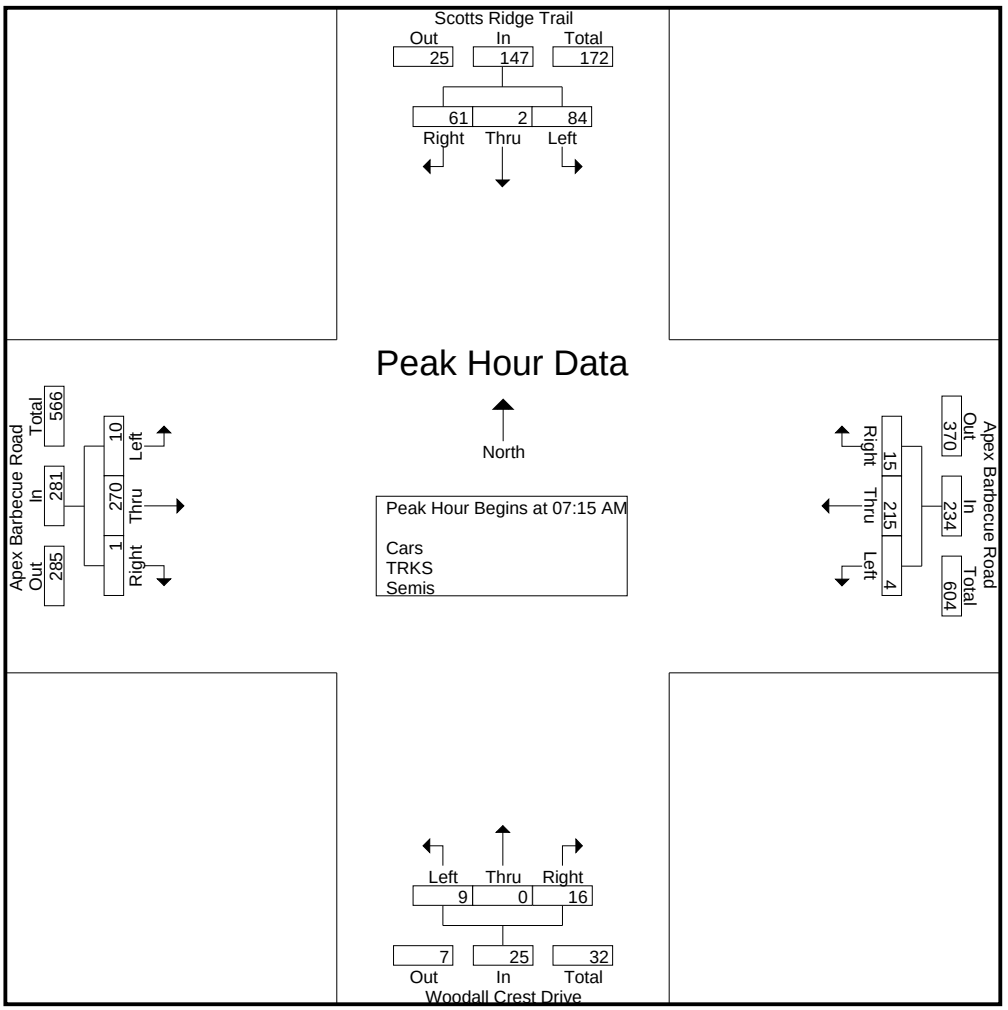
Groups Printed- Cars - TRKS - Semis

	Scotts Ridge Trail From North					Apex Barbecue Road From East					Woodall Crest Drive From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	15	0	8	0	23	2	56	0	0	58	4	0	5	0	9	0	50	4	0	54	0	144	144
07:15 AM	12	1	16	0	29	2	30	0	0	32	6	0	2	0	8	0	51	2	0	53	0	122	122
07:30 AM	13	1	25	0	39	1	43	0	0	44	3	0	0	0	3	0	92	1	0	93	0	179	179
07:45 AM	23	0	26	0	49	7	94	2	0	103	4	0	3	0	7	0	70	2	0	72	0	231	231
Total	63	2	75	0	140	12	223	2	0	237	17	0	10	0	27	0	263	9	0	272	0	676	676
08:00 AM	13	0	17	0	30	5	48	2	0	55	3	0	4	0	7	1	57	5	0	63	0	155	155
08:15 AM	9	0	13	0	22	4	36	4	0	44	1	0	3	0	4	0	52	0	0	52	0	122	122
08:30 AM	14	0	25	0	39	8	36	2	0	46	6	0	1	0	7	1	57	7	0	65	0	157	157
08:45 AM	8	0	24	0	32	9	42	3	0	54	7	1	2	1	10	3	133	4	0	140	1	236	237
Total	44	0	79	0	123	26	162	11	0	199	17	1	10	1	28	5	299	16	0	320	1	670	671
*** BREAK ***																							
04:00 PM	5	0	6	0	11	7	44	4	0	55	6	0	0	0	6	3	64	9	0	76	0	148	148
04:15 PM	8	0	15	0	23	8	52	6	0	66	3	0	0	0	3	2	61	10	0	73	0	165	165
04:30 PM	6	0	4	0	10	15	67	2	0	84	3	0	0	0	3	1	62	11	0	74	0	171	171
04:45 PM	2	0	7	0	9	11	54	5	0	70	4	0	0	0	4	1	59	9	0	69	0	152	152
Total	21	0	32	0	53	41	217	17	0	275	16	0	0	0	16	7	246	39	0	292	0	636	636
05:00 PM	4	0	11	0	15	13	53	5	0	71	2	0	0	0	2	2	47	19	0	68	0	156	156
05:15 PM	1	0	9	0	10	9	48	3	0	60	1	1	2	0	4	3	43	13	0	59	0	133	133
05:30 PM	7	0	22	0	29	18	40	7	0	65	3	0	0	0	3	1	47	12	0	60	0	157	157
05:45 PM	3	0	11	0	14	15	49	9	0	73	4	0	0	0	4	2	53	9	0	64	0	155	155
Total	15	0	53	0	68	55	190	24	0	269	10	1	2	0	13	8	190	53	0	251	0	601	601
Grand Total	143	2	239	0	384	134	792	54	0	980	60	2	22	1	84	20	998	117	0	1135	1	2583	2584
Apprch %	37.2	0.5	62.2			13.7	80.8	5.5			71.4	2.4	26.2			1.8	87.9	10.3					
Total %	5.5	0.1	9.3		14.9	5.2	30.7	2.1		37.9	2.3	0.1	0.9		3.3	0.8	38.6	4.5		43.9	0	100	
Cars	143	0	237		380	129	779	54		962	58	2	21		82	20	977	116		1113	0	0	2537
% Cars	100	0	99.2	0	99	96.3	98.4	100	0	98.2	96.7	100	95.5	100	96.5	100	97.9	99.1	0	98.1	0	0	98.2
TRKS	0	2	2		4	5	13	0		18	2	0	1		3	0	21	1		22	0	0	47
% TRKS	0	100	0.8	0	1	3.7	1.6	0	0	1.8	3.3	0	4.5	0	3.5	0	2.1	0.9	0	1.9	0	0	1.8
Semis	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 2

	Scotts Ridge Trail From North				Apex Barbecue Road From East				Woodall Crest Drive From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	1	16	29	2	30	0	32	6	0	2	8	0	51	2	53	122
07:30 AM	13	1	25	39	1	43	0	44	3	0	0	3	0	92	1	93	179
07:45 AM	23	0	26	49	7	94	2	103	4	0	3	7	0	70	2	72	231
08:00 AM	13	0	17	30	5	48	2	55	3	0	4	7	1	57	5	63	155
Total Volume	61	2	84	147	15	215	4	234	16	0	9	25	1	270	10	281	687
% App. Total	41.5	1.4	57.1		6.4	91.9	1.7		64	0	36		0.4	96.1	3.6		
PHF	.663	.500	.808	.750	.536	.572	.500	.568	.667	.000	.563	.781	.250	.734	.500	.755	.744



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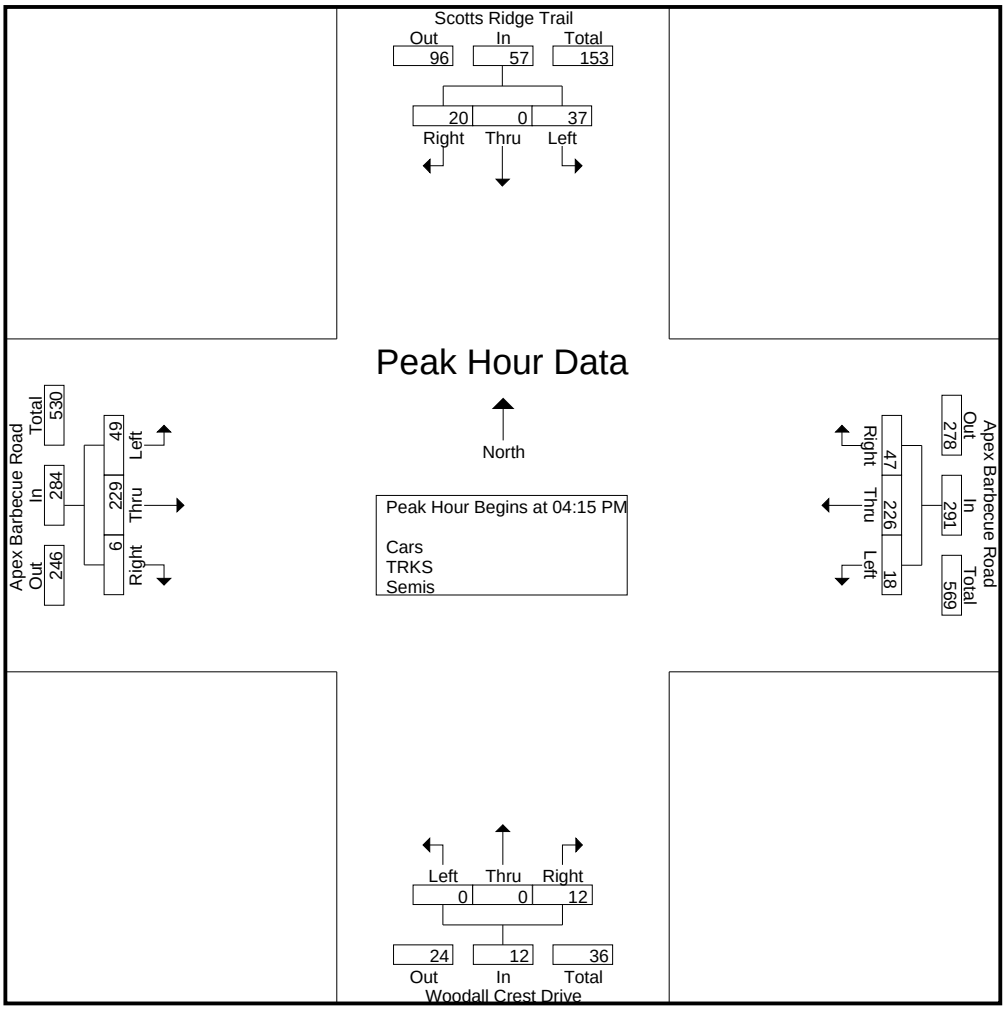
File Name : Apex Barbecue Road and Scotts Ridge Trail
Site Code : 00000006
Start Date : 10/22/2019
Page No : 3

	Scotts Ridge Trail From North				Apex Barbecue Road From East				Woodall Crest Drive From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	8	0	15	23	8	52	6	66	3	0	0	3	2	61	10	73	165
04:30 PM	6	0	4	10	15	67	2	84	3	0	0	3	1	62	11	74	171
04:45 PM	2	0	7	9	11	54	5	70	4	0	0	4	1	59	9	69	152
05:00 PM	4	0	11	15	13	53	5	71	2	0	0	2	2	47	19	68	156
Total Volume	20	0	37	57	47	226	18	291	12	0	0	12	6	229	49	284	644
% App. Total	35.1	0	64.9		16.2	77.7	6.2		100	0	0		2.1	80.6	17.3		
PHF	.625	.000	.617	.620	.783	.843	.750	.866	.750	.000	.000	.750	.750	.923	.645	.959	.942



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	Town Side Drive From North					Apex Barbecue Road From East					From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	32	0	20	0	52	7	20	0	0	27	0	0	0	0	0	0	49	11	0	60	0	139	139
07:15 AM	8	0	19	0	27	12	21	0	0	33	0	0	0	0	0	0	55	17	0	72	0	132	132
07:30 AM	29	0	42	0	71	35	20	0	0	55	0	0	0	0	0	0	87	25	0	112	0	238	238
07:45 AM	58	0	47	0	105	24	36	0	0	60	0	0	0	0	0	0	76	22	0	98	0	263	263
Total	127	0	128	0	255	78	97	0	0	175	0	0	0	0	0	0	267	75	0	342	0	772	772
08:00 AM	26	0	20	0	46	3	30	0	0	33	0	0	0	0	0	0	62	15	0	77	0	156	156
08:15 AM	21	0	6	0	27	6	30	0	0	36	0	0	0	0	0	0	59	7	0	66	0	129	129
08:30 AM	20	0	20	0	40	8	23	0	0	31	0	0	0	0	0	0	75	11	0	86	0	157	157
08:45 AM	22	0	15	0	37	8	32	0	0	40	0	0	0	0	0	0	137	25	0	162	0	239	239
Total	89	0	61	0	150	25	115	0	0	140	0	0	0	0	0	0	333	58	0	391	0	681	681
*** BREAK ***																							
04:00 PM	9	0	9	0	18	7	45	0	0	52	0	0	0	0	0	0	58	19	0	77	0	147	147
04:15 PM	22	0	17	0	39	16	40	0	0	56	0	0	0	0	0	0	62	16	0	78	0	173	173
04:30 PM	16	0	10	0	26	13	75	0	0	88	0	0	0	0	0	0	55	13	0	68	0	182	182
04:45 PM	13	0	9	0	22	5	52	0	0	57	0	0	0	0	0	0	54	17	0	71	0	150	150
Total	60	0	45	0	105	41	212	0	0	253	0	0	0	0	0	0	229	65	0	294	0	652	652
05:00 PM	13	0	8	0	21	18	54	0	0	72	0	0	0	0	0	0	46	15	0	61	0	154	154
05:15 PM	14	0	5	0	19	12	48	0	0	60	0	0	0	0	0	0	41	13	0	54	0	133	133
05:30 PM	8	0	9	0	17	10	53	0	0	63	0	0	0	0	0	0	56	13	0	69	0	149	149
05:45 PM	14	0	10	0	24	14	54	0	0	68	0	0	0	0	0	0	50	10	0	60	0	152	152
Total	49	0	32	0	81	54	209	0	0	263	0	0	0	0	0	0	193	51	0	244	0	588	588
Grand Total	325	0	266	0	591	198	633	0	0	831	0	0	0	0	0	0	1022	249	0	1271	0	2693	2693
Apprch %	55	0	45			23.8	76.2	0			0	0	0			0	80.4	19.6					
Total %	12.1	0	9.9		21.9	7.4	23.5	0		30.9	0	0	0		0	0	38	9.2		47.2	0	100	
Cars	322	0	263		585	192	618	0		810	0	0	0		0	0	997	247		1244	0	0	2639
% Cars	99.1	0	98.9	0	99	97	97.6	0	0	97.5	0	0	0	0	0	0	97.6	99.2	0	97.9	0	0	98
TRKS	3	0	3		6	6	15	0		21	0	0	0		0	0	25	2		27	0	0	54
% TRKS	0.9	0	1.1	0	1	3	2.4	0	0	2.5	0	0	0	0	0	0	2.4	0.8	0	2.1	0	0	2
Semis	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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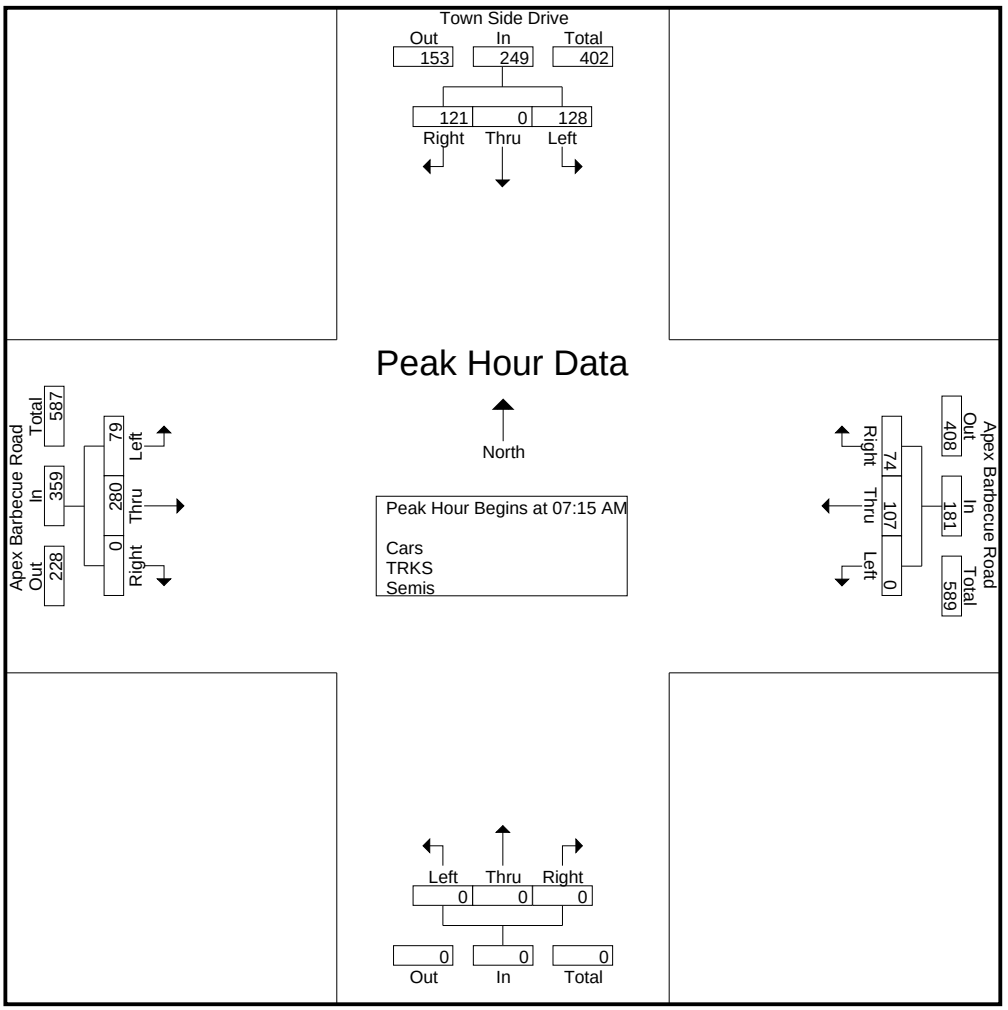
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 2

	Town Side Drive From North				Apex Barbecue Road From East				From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	0	19	27	12	21	0	33	0	0	0	0	0	55	17	72	132
07:30 AM	29	0	42	71	35	20	0	55	0	0	0	0	0	87	25	112	238
07:45 AM	58	0	47	105	24	36	0	60	0	0	0	0	0	76	22	98	263
08:00 AM	26	0	20	46	3	30	0	33	0	0	0	0	0	62	15	77	156
Total Volume	121	0	128	249	74	107	0	181	0	0	0	0	0	280	79	359	789
% App. Total	48.6	0	51.4		40.9	59.1	0		0	0	0		0	78	22		
PHF	.522	.000	.681	.593	.529	.743	.000	.754	.000	.000	.000	.000	.000	.805	.790	.801	.750



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5808 Faringdon Place, Suite 100
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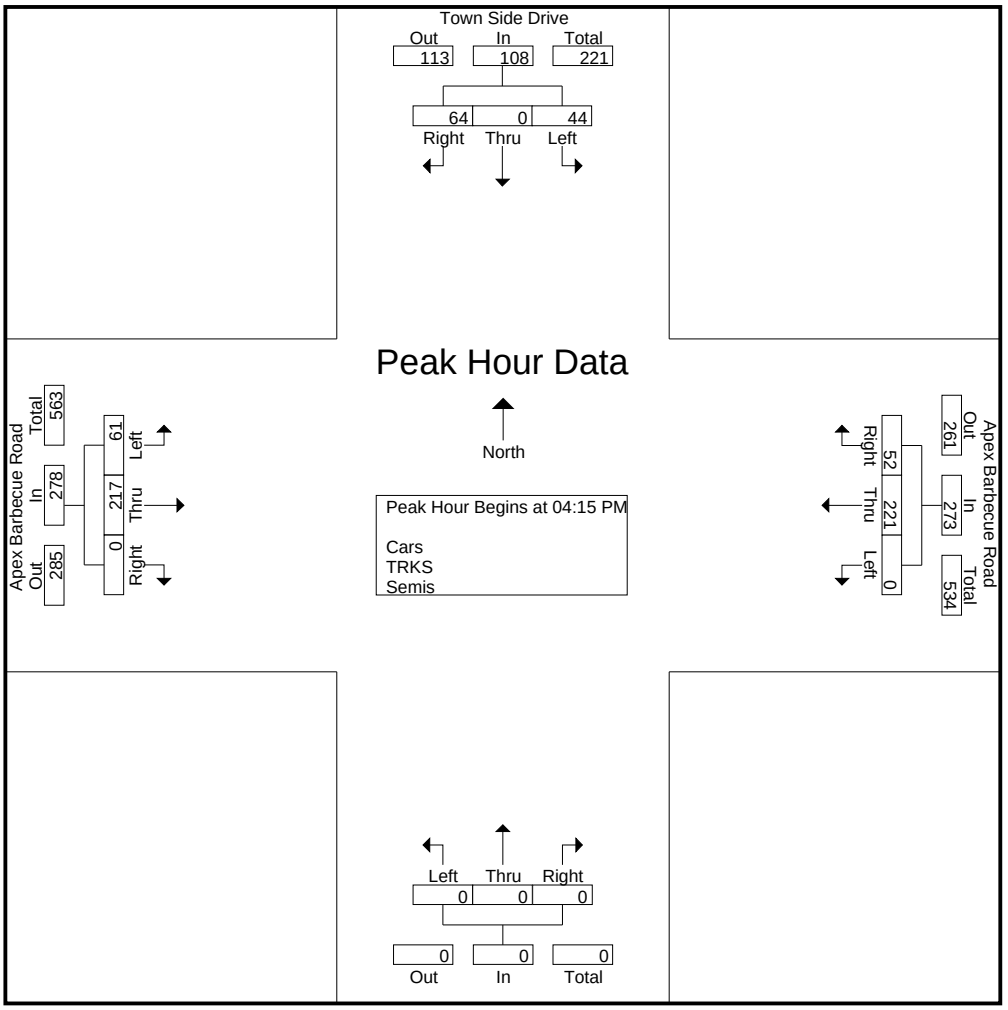
File Name : Apex Barbecue Road and Town Side Drive
Site Code : 00000005
Start Date : 10/22/2019
Page No : 3

	Town Side Drive From North				Apex Barbecue Road From East				From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	22	0	17	39	16	40	0	56	0	0	0	0	0	62	16	78	173
04:30 PM	16	0	10	26	13	75	0	88	0	0	0	0	0	55	13	68	182
04:45 PM	13	0	9	22	5	52	0	57	0	0	0	0	0	54	17	71	150
05:00 PM	13	0	8	21	18	54	0	72	0	0	0	0	0	46	15	61	154
Total Volume	64	0	44	108	52	221	0	273	0	0	0	0	0	217	61	278	659
% App. Total	59.3	0	40.7		19	81	0		0	0	0		0	78.1	21.9		
PHF	.727	.000	.647	.692	.722	.737	.000	.776	.000	.000	.000	.000	.000	.875	.897	.891	.905



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 1

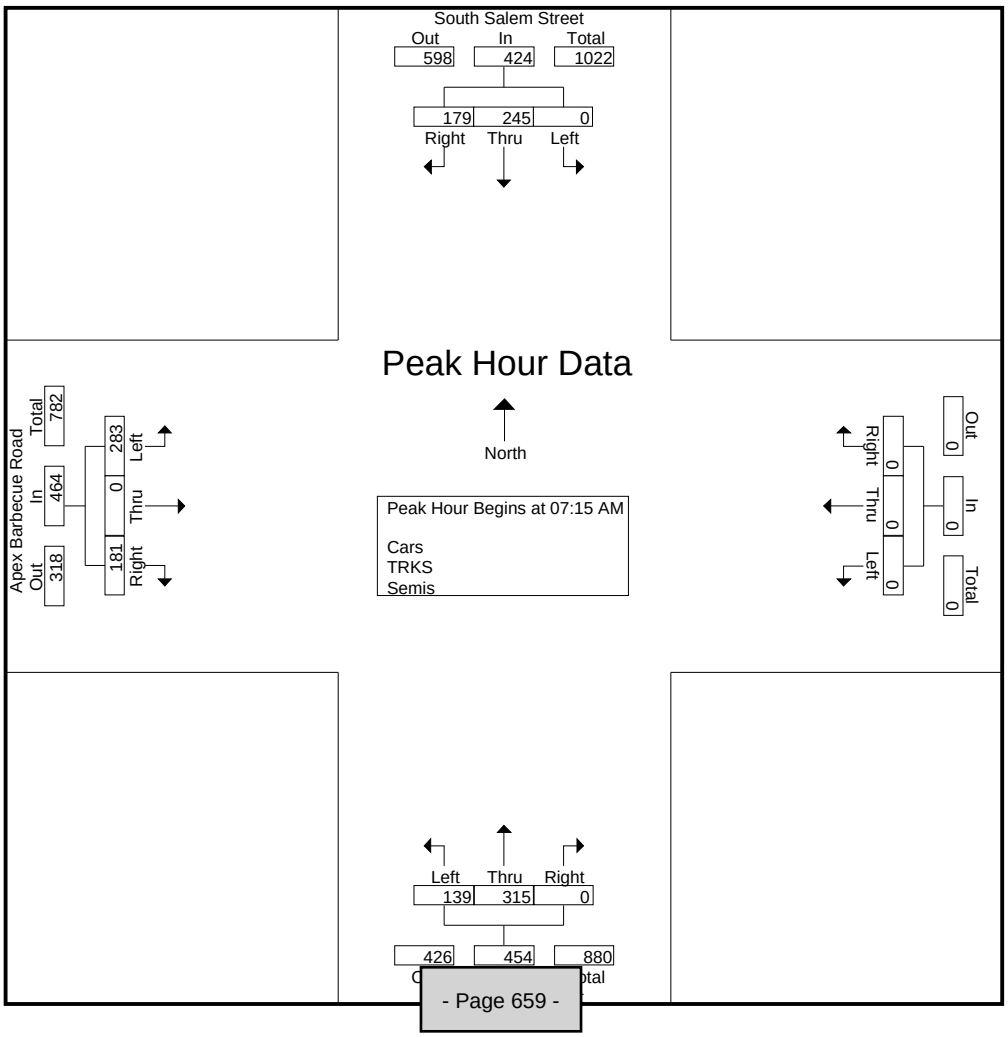
Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					Apex Barbecue Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	26	71	0	0	97	0	0	0	0	0	0	74	13	0	87	32	0	49	0	81	0	265	265
07:15 AM	36	51	0	0	87	0	0	0	0	0	0	95	26	0	121	28	0	50	0	78	0	286	286
07:30 AM	49	71	0	0	120	0	0	0	0	0	0	76	55	0	131	48	0	59	0	107	0	358	358
07:45 AM	62	53	0	0	115	0	0	0	0	0	0	79	47	0	126	69	0	110	0	179	0	420	420
Total	173	246	0	0	419	0	0	0	0	0	0	324	141	0	465	177	0	268	0	445	0	1329	1329
08:00 AM	32	70	0	0	102	0	0	0	0	0	0	65	11	0	76	36	0	64	0	100	0	278	278
08:15 AM	34	46	0	0	80	0	0	0	0	0	0	62	5	0	67	19	0	55	0	74	0	221	221
08:30 AM	25	53	0	0	78	0	0	0	0	0	0	66	4	0	70	40	0	65	0	105	0	253	253
08:45 AM	31	63	0	0	94	0	0	0	0	0	0	75	10	0	85	51	0	89	0	140	0	319	319
Total	122	232	0	0	354	0	0	0	0	0	0	268	30	0	298	146	0	273	0	419	0	1071	1071
*** BREAK ***																							
04:00 PM	49	68	0	0	117	0	0	0	0	0	0	57	9	0	66	20	0	56	0	76	0	259	259
04:15 PM	53	60	0	0	113	0	0	0	0	0	0	63	19	0	82	28	0	64	0	92	0	287	287
04:30 PM	69	55	0	0	124	0	0	0	0	0	0	74	26	0	100	16	0	67	0	83	0	307	307
04:45 PM	49	75	0	0	124	0	0	0	0	0	0	64	10	0	74	16	0	53	0	69	0	267	267
Total	220	258	0	0	478	0	0	0	0	0	0	258	64	0	322	80	0	240	0	320	0	1120	1120
05:00 PM	61	75	0	0	136	0	0	0	0	0	0	86	19	0	105	16	0	42	0	58	0	299	299
05:15 PM	47	74	0	0	121	0	0	0	0	0	0	73	19	0	92	6	0	41	0	47	0	260	260
05:30 PM	50	55	0	0	105	0	0	0	0	0	0	86	18	0	104	14	0	57	0	71	0	280	280
05:45 PM	62	61	0	0	123	0	0	0	0	0	0	73	16	0	89	13	0	53	0	66	0	278	278
Total	220	265	0	0	485	0	0	0	0	0	0	318	72	0	390	49	0	193	0	242	0	1117	1117
Grand Total	735	1001	0	0	1736	0	0	0	0	0	0	1168	307	0	1475	452	0	974	0	1426	0	4637	4637
Apprch %	42.3	57.7	0			0	0	0			0	79.2	20.8			31.7	0	68.3					
Total %	15.9	21.6	0		37.4	0	0	0		0	0	25.2	6.6		31.8	9.7	0	21		30.8	0	100	
Cars	716	972	0		1688	0	0	0		0	0	1139	305		1444	445	0	955		1400	0	0	4532
% Cars	97.4	97.1	0	0	97.2	0	0	0	0	0	0	97.5	99.3	0	97.9	98.5	0	98	0	98.2	0	0	97.7
TRKS	18	27	0		45	0	0	0		0	0	26	2		28	7	0	19		26	0	0	99
% TRKS	2.4	2.7	0	0	2.6	0	0	0	0	0	0	2.2	0.7	0	1.9	1.5	0	2	0	1.8	0	0	2.1
Semis	1	2	0		3	0	0	0		0	0	3	0		3	0	0	0		0	0	0	6
% Semis	0.1	0.2	0	0	0.2	0	0	0	0	0	0	0.3	0	0	0.2	0	0	0	0	0	0	0	0.1

RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 2

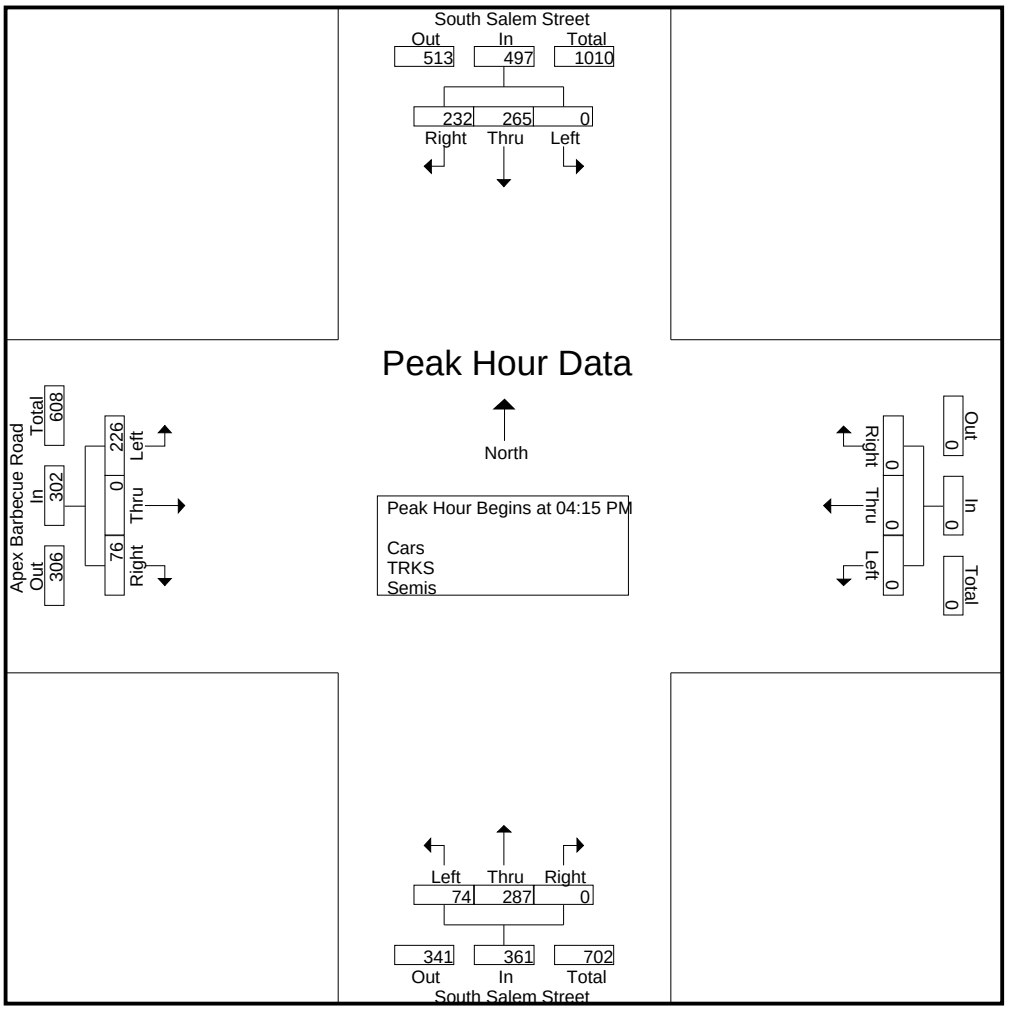
	South Salem Street From North				From East				South Salem Street From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	36	51	0	87	0	0	0	0	0	95	26	121	28	0	50	78	286
07:30 AM	49	71	0	120	0	0	0	0	0	76	55	131	48	0	59	107	358
07:45 AM	62	53	0	115	0	0	0	0	0	79	47	126	69	0	110	179	420
08:00 AM	32	70	0	102	0	0	0	0	0	65	11	76	36	0	64	100	278
Total Volume	179	245	0	424	0	0	0	0	0	315	139	454	181	0	283	464	1342
% App. Total	42.2	57.8	0		0	0	0		0	69.4	30.6		39	0	61		
PHF	.722	.863	.000	.883	.000	.000	.000	.000	.000	.829	.632	.866	.656	.000	.643	.648	.799



RAMEY KEMP & ASSOCIATES
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Apex Barbecue Road
Site Code : 00000001
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				Apex Barbecue Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	53	60	0	113	0	0	0	0	0	63	19	82	28	0	64	92	287
04:30 PM	69	55	0	124	0	0	0	0	0	74	26	100	16	0	67	83	307
04:45 PM	49	75	0	124	0	0	0	0	0	64	10	74	16	0	53	69	267
05:00 PM	61	75	0	136	0	0	0	0	0	86	19	105	16	0	42	58	299
Total Volume	232	265	0	497	0	0	0	0	0	287	74	361	76	0	226	302	1160
% App. Total	46.7	53.3	0		0	0	0		0	79.5	20.5		25.2	0	74.8		
PHF	.841	.883	.000	.914	.000	.000	.000	.000	.000	.834	.712	.860	.679	.000	.843	.821	.945



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5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					Kelly Road From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	9	131	0	0	140	0	0	0	0	0	0	144	19	0	163	11	0	20	0	31	0	334	334
07:15 AM	4	48	0	0	52	0	0	0	0	0	0	182	28	0	210	6	0	16	0	22	0	284	284
07:30 AM	10	56	0	0	66	0	0	0	0	0	0	143	23	0	166	14	0	31	0	45	0	277	277
07:45 AM	12	59	0	0	71	0	0	0	0	0	0	189	45	0	234	20	0	21	0	41	0	346	346
Total	35	294	0	0	329	0	0	0	0	0	0	658	115	0	773	51	0	88	0	139	0	1241	1241
08:00 AM	8	62	0	0	70	0	0	0	0	0	0	127	33	0	160	10	0	25	0	35	0	265	265
08:15 AM	9	51	0	0	60	0	0	0	0	0	0	117	18	0	135	8	0	27	0	35	0	230	230
08:30 AM	13	59	0	0	72	0	0	0	0	0	0	104	27	0	131	3	0	23	0	26	0	229	229
08:45 AM	10	55	0	0	65	0	0	0	0	0	0	141	22	0	163	12	0	27	0	39	0	267	267
Total	40	227	0	0	267	0	0	0	0	0	0	489	100	0	589	33	0	102	0	135	0	991	991
*** BREAK ***																							
04:00 PM	22	111	0	0	133	0	0	0	0	0	0	66	14	0	80	25	0	17	0	42	0	255	255
04:15 PM	23	113	0	0	136	0	0	0	0	0	0	74	13	0	87	28	0	15	0	43	0	266	266
04:30 PM	20	102	0	0	122	0	0	0	0	0	0	71	17	0	88	34	0	19	0	53	0	263	263
04:45 PM	16	137	0	0	153	0	0	0	0	0	0	67	9	0	76	36	0	12	0	48	0	277	277
Total	81	463	0	0	544	0	0	0	0	0	0	278	53	0	331	123	0	63	0	186	0	1061	1061
05:00 PM	17	156	0	0	173	0	0	0	0	0	0	86	14	0	100	22	0	13	0	35	0	308	308
05:15 PM	30	162	0	0	192	0	0	0	0	0	0	62	17	0	79	22	0	8	0	30	0	301	301
05:30 PM	38	137	0	0	175	0	0	0	0	0	0	71	14	0	85	35	0	23	0	58	0	318	318
05:45 PM	34	140	0	0	174	0	0	0	0	0	0	66	12	0	78	21	0	16	0	37	0	289	289
Total	119	595	0	0	714	0	0	0	0	0	0	285	57	0	342	100	0	60	0	160	0	1216	1216
Grand Total	275	1579	0	0	1854	0	0	0	0	0	0	1710	325	0	2035	307	0	313	0	620	0	4509	4509
Apprch %	14.8	85.2	0			0	0	0			0	84	16			49.5	0	50.5					
Total %	6.1	35	0		41.1	0	0	0		0	0	37.9	7.2		45.1	6.8	0	6.9		13.8	0	100	
Cars	269	1513	0		1782	0	0	0		0	0	1647	315		1962	296	0	304		600	0	0	4344
% Cars	97.8	95.8	0	0	96.1	0	0	0	0	0	0	96.3	96.9	0	96.4	96.4	0	97.1	0	96.8	0	0	96.3
TRKS	6	63	0		69	0	0	0		0	0	61	9		70	10	0	8		18	0	0	157
% TRKS	2.2	4	0	0	3.7	0	0	0	0	0	0	3.6	2.8	0	3.4	3.3	0	2.6	0	2.9	0	0	3.5
Semis	0	3	0		3	0	0	0		0	0	2	1		3	1	0	1		2	0	0	8
% Semis	0	0.2	0	0	0.2	0	0	0	0	0	0	0.1	0.3	0	0.1	0.3	0	0.3	0	0.3	0	0	0.2

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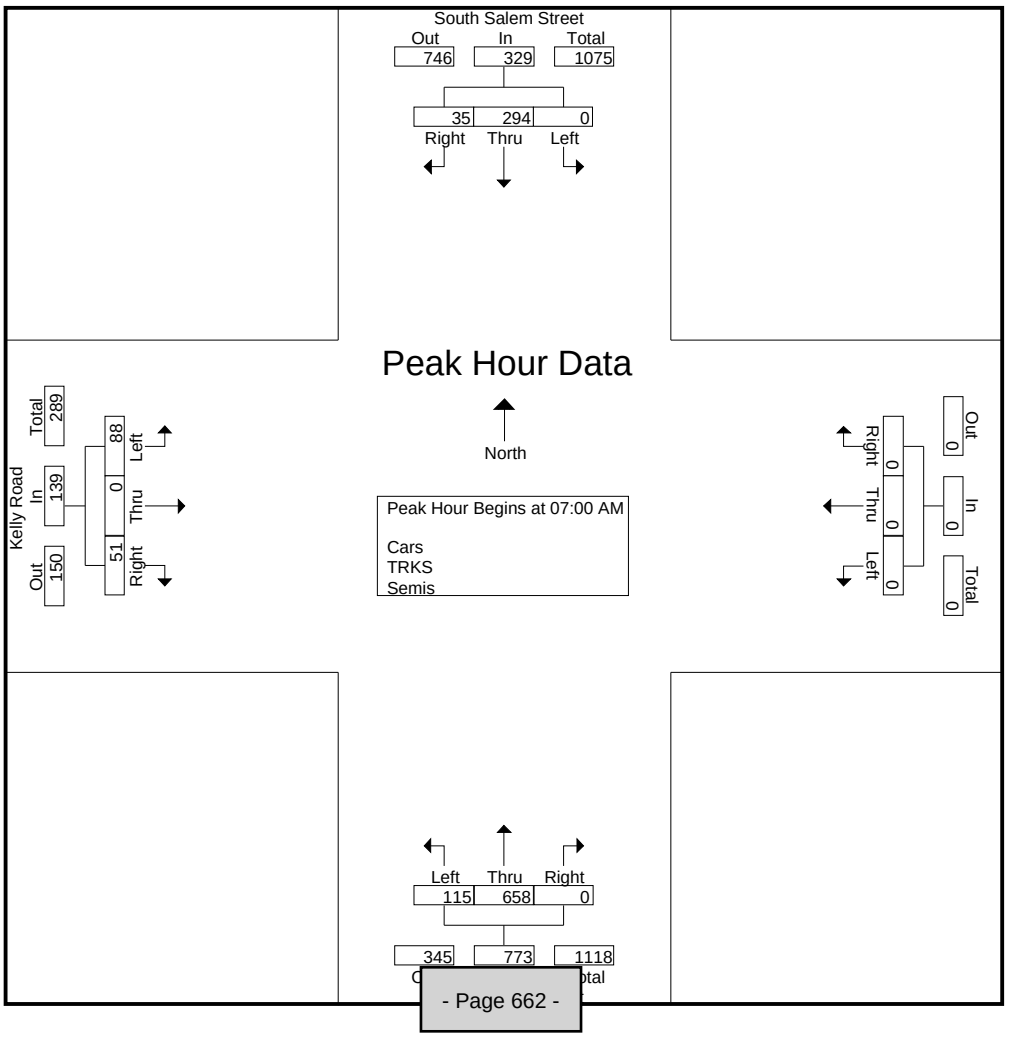
File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 2

	South Salem Street From North				From East				South Salem Street From South				Kelly Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	9	131	0	140	0	0	0	0	0	144	19	163	11	0	20	31	334
07:15 AM	4	48	0	52	0	0	0	0	0	182	28	210	6	0	16	22	284
07:30 AM	10	56	0	66	0	0	0	0	0	143	23	166	14	0	31	45	277
07:45 AM	12	59	0	71	0	0	0	0	0	189	45	234	20	0	21	41	346
Total Volume	35	294	0	329	0	0	0	0	0	658	115	773	51	0	88	139	1241
% App. Total	10.6	89.4	0		0	0	0		0	85.1	14.9		36.7	0	63.3		
PHF	.729	.561	.000	.588	.000	.000	.000	.000	.000	.870	.639	.826	.638	.000	.710	.772	.897



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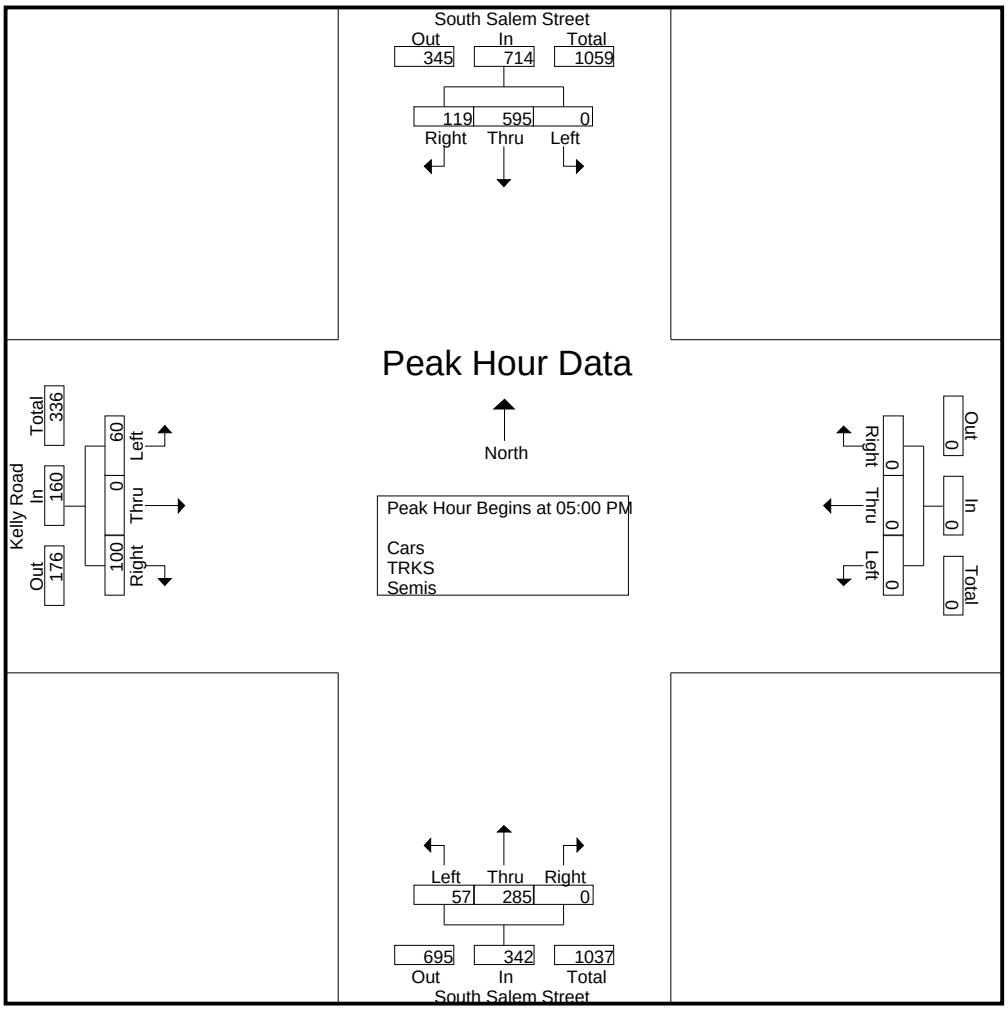
File Name : South Salem Street and Kelly Road
Site Code : 00000004
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				Kelly Road From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	17	156	0	173	0	0	0	0	0	86	14	100	22	0	13	35	308
05:15 PM	30	162	0	192	0	0	0	0	0	62	17	79	22	0	8	30	301
05:30 PM	38	137	0	175	0	0	0	0	0	71	14	85	35	0	23	58	318
05:45 PM	34	140	0	174	0	0	0	0	0	66	12	78	21	0	16	37	289
Total Volume	119	595	0	714	0	0	0	0	0	285	57	342	100	0	60	160	1216
% App. Total	16.7	83.3	0		0	0	0		0	83.3	16.7		62.5	0	37.5		
PHF	.783	.918	.000	.930	.000	.000	.000	.000	.000	.828	.838	.855	.714	.000	.652	.690	.956



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File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	South Salem Street From North					From East					South Salem Street From South					I-540 Northbound Ramps From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	33	74	0	0	107	0	0	0	0	0	0	79	42	0	121	63	0	11	0	74	0	302	302
07:15 AM	35	41	0	0	76	0	0	0	0	0	0	91	64	0	155	19	0	35	0	54	0	285	285
07:30 AM	53	63	0	0	116	0	0	0	0	0	0	91	65	0	156	25	0	46	0	71	0	343	343
07:45 AM	52	65	0	0	117	0	0	0	0	0	0	101	80	0	181	27	0	26	0	53	0	351	351
Total	173	243	0	0	416	0	0	0	0	0	0	362	251	0	613	134	0	118	0	252	0	1281	1281
08:00 AM	50	59	0	0	109	0	0	0	0	0	0	62	54	0	116	27	0	8	0	35	0	260	260
08:15 AM	21	33	0	0	54	0	0	0	0	0	0	56	43	0	99	26	0	10	0	36	0	189	189
08:30 AM	49	48	0	0	97	0	0	0	0	0	0	63	35	0	98	34	0	11	0	45	0	240	240
08:45 AM	49	62	0	0	111	0	0	0	0	0	0	73	41	0	114	26	0	12	0	38	0	263	263
Total	169	202	0	0	371	0	0	0	0	0	0	254	173	0	427	113	0	41	0	154	0	952	952
*** BREAK ***																							
04:00 PM	9	86	0	0	95	0	0	0	0	0	0	60	20	0	80	42	0	7	0	49	0	224	224
04:15 PM	5	84	0	0	89	0	0	0	0	0	0	68	11	0	79	36	0	13	0	49	0	217	217
04:30 PM	8	67	0	0	75	0	0	0	0	0	0	77	9	0	86	36	0	24	0	60	0	221	221
04:45 PM	6	85	0	0	91	0	0	0	0	0	0	64	13	0	77	40	0	9	0	49	0	217	217
Total	28	322	0	0	350	0	0	0	0	0	0	269	53	0	322	154	0	53	0	207	0	879	879
05:00 PM	3	76	0	0	79	0	0	0	0	0	0	93	9	0	102	40	0	19	0	59	0	240	240
05:15 PM	6	75	0	0	81	0	0	0	0	0	0	73	14	0	87	53	0	18	0	71	0	239	239
05:30 PM	5	71	0	0	76	0	0	0	0	0	0	95	16	0	111	44	0	13	0	57	0	244	244
05:45 PM	3	67	0	0	70	0	0	0	0	0	0	72	10	0	82	46	0	16	0	62	0	214	214
Total	17	289	0	0	306	0	0	0	0	0	0	333	49	0	382	183	0	66	0	249	0	937	937
Grand Total	387	1056	0	0	1443	0	0	0	0	0	0	1218	526	0	1744	584	0	278	0	862	0	4049	4049
Apprch %	26.8	73.2	0			0	0	0			0	69.8	30.2			67.7	0	32.3					
Total %	9.6	26.1	0		35.6	0	0	0		0	0	30.1	13		43.1	14.4	0	6.9		21.3	0	100	
Cars	385	1028	0		1413	0	0	0		0	0	1191	509		1700	560	0	275		835	0	0	3948
% Cars	99.5	97.3	0	0	97.9	0	0	0	0	0	0	97.8	96.8	0	97.5	95.9	0	98.9	0	96.9	0	0	97.5
TRKS	2	28	0		30	0	0	0		0	0	27	16		43	22	0	2		24	0	0	97
% TRKS	0.5	2.7	0	0	2.1	0	0	0	0	0	0	2.2	3	0	2.5	3.8	0	0.7	0	2.8	0	0	2.4
Semis	0	0	0		0	0	0	0		0	0	0	1		1	2	0	1		3	0	0	4
% Semis	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0.3	0	0.4	0	0.3	0	0	0.1

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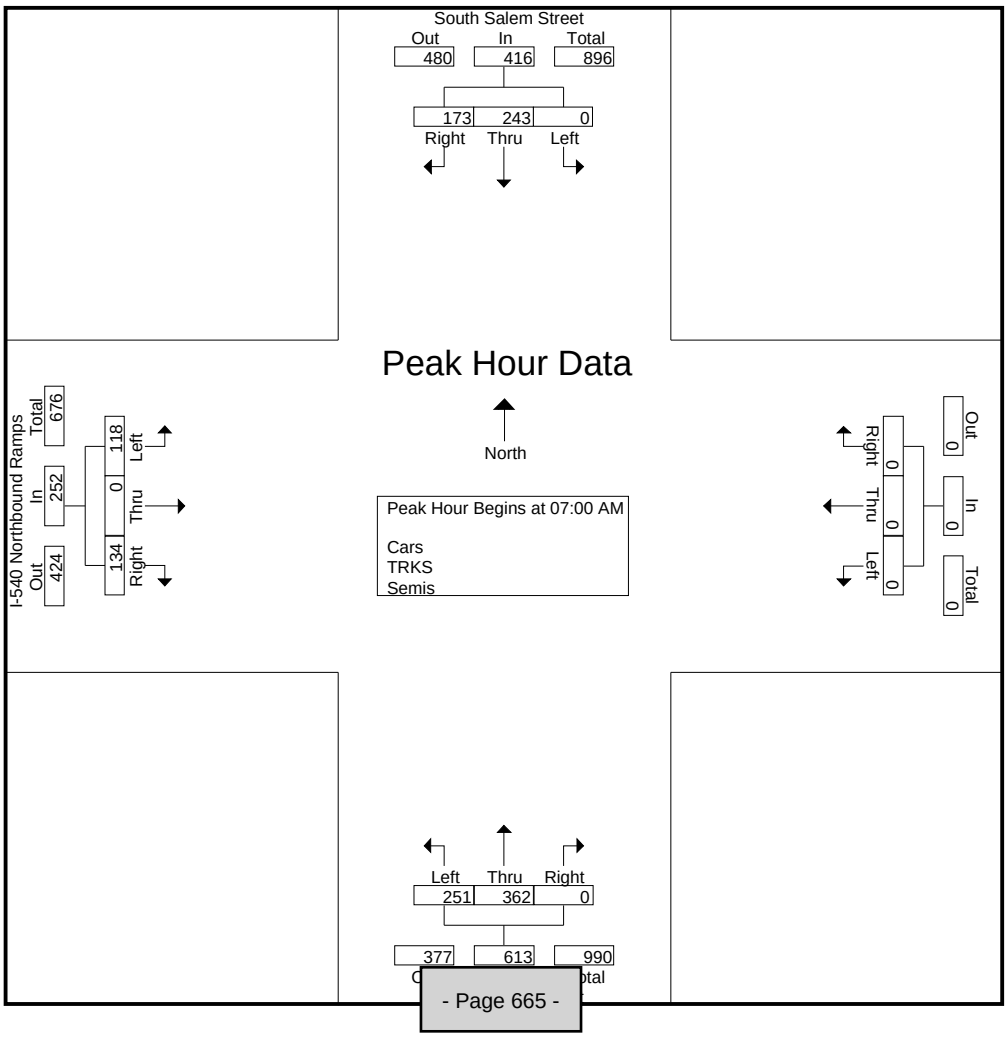
File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 2

	South Salem Street From North				From East				South Salem Street From South				I-540 Northbound Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	33	74	0	107	0	0	0	0	0	79	42	121	63	0	11	74	302
07:15 AM	35	41	0	76	0	0	0	0	0	91	64	155	19	0	35	54	285
07:30 AM	53	63	0	116	0	0	0	0	0	91	65	156	25	0	46	71	343
07:45 AM	52	65	0	117	0	0	0	0	0	101	80	181	27	0	26	53	351
Total Volume	173	243	0	416	0	0	0	0	0	362	251	613	134	0	118	252	1281
% App. Total	41.6	58.4	0		0	0	0		0	59.1	40.9		53.2	0	46.8		
PHF	.816	.821	.000	.889	.000	.000	.000	.000	.000	.896	.784	.847	.532	.000	.641	.851	.912



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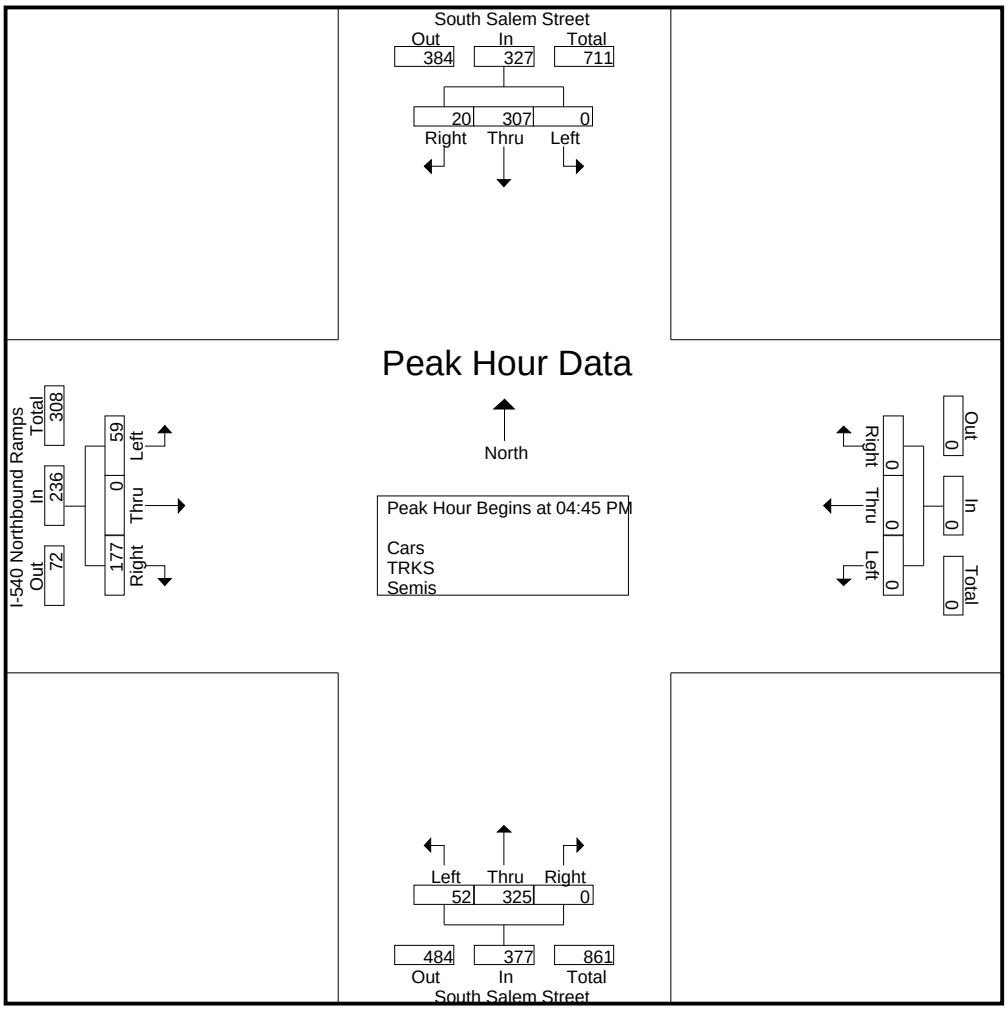
File Name : South Salem Street and Northbound I-540 Ramps
Site Code : 00000002
Start Date : 10/22/2019
Page No : 3

	South Salem Street From North				From East				South Salem Street From South				I-540 Northbound Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	6	85	0	91	0	0	0	0	0	64	13	77	40	0	9	49	217
05:00 PM	3	76	0	79	0	0	0	0	0	93	9	102	40	0	19	59	240
05:15 PM	6	75	0	81	0	0	0	0	0	73	14	87	53	0	18	71	239
05:30 PM	5	71	0	76	0	0	0	0	0	95	16	111	44	0	13	57	244
Total Volume	20	307	0	327	0	0	0	0	0	325	52	377	177	0	59	236	940
% App. Total	6.1	93.9	0		0	0	0		0	86.2	13.8		75	0	25		
PHF	.833	.903	.000	.898	.000	.000	.000	.000	.000	.855	.813	.849	.835	.000	.776	.831	.963



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File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 1

Groups Printed- Cars - TRKS - Semis

	I-540 Southbound Ramps From North					South Salem Street From East					From South					South Salem Street From West							
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	13	0	5	0	18	12	105	0	0	117	0	0	0	0	0	0	118	47	0	165	0	300	300
07:15 AM	5	0	4	0	9	15	44	0	0	59	0	0	0	0	0	0	156	36	0	192	0	260	260
07:30 AM	8	0	12	0	20	20	64	0	0	84	0	0	0	0	0	0	139	46	0	185	0	289	289
07:45 AM	5	0	10	0	15	34	56	0	0	90	0	0	0	0	0	0	157	48	0	205	0	310	310
Total	31	0	31	0	62	81	269	0	0	350	0	0	0	0	0	0	570	177	0	747	0	1159	1159
08:00 AM	12	0	2	0	14	18	63	0	0	81	0	0	0	0	0	0	106	53	0	159	0	254	254
08:15 AM	11	0	4	0	15	12	51	0	0	63	0	0	0	0	0	0	84	55	0	139	0	217	217
08:30 AM	9	0	7	0	16	15	56	0	0	71	0	0	0	0	0	0	96	33	0	129	0	216	216
08:45 AM	4	0	8	0	12	19	65	0	1	84	0	0	0	0	0	0	97	61	0	158	1	254	255
Total	36	0	21	0	57	64	235	0	1	299	0	0	0	0	0	0	383	202	0	585	1	941	942
*** BREAK ***																							
04:00 PM	22	0	18	0	40	17	105	0	0	122	0	0	0	0	0	0	60	31	0	91	0	253	253
04:15 PM	29	0	25	0	54	20	98	0	0	118	0	0	0	0	0	0	55	34	0	89	0	261	261
04:30 PM	21	0	32	0	53	11	94	0	0	105	0	0	0	0	0	0	54	37	0	91	0	249	249
04:45 PM	32	0	24	0	56	14	111	0	0	125	0	0	0	0	0	0	47	30	0	77	0	258	258
Total	104	0	99	0	203	62	408	0	0	470	0	0	0	0	0	0	216	132	0	348	0	1021	1021
05:00 PM	62	0	43	0	105	13	101	0	0	114	0	0	0	0	0	1	60	43	0	104	0	323	323
05:15 PM	74	0	39	0	113	8	115	0	0	123	0	0	0	0	0	0	43	25	0	68	0	304	304
05:30 PM	76	0	48	0	124	10	103	0	0	113	0	0	0	0	0	0	53	41	0	94	0	331	331
05:45 PM	65	0	29	0	94	12	92	0	0	104	0	0	0	0	0	0	52	23	0	75	0	273	273
Total	277	0	159	0	436	43	411	0	0	454	0	0	0	0	0	1	208	132	0	341	0	1231	1231
Grand Total	448	0	310	0	758	250	1323	0	1	1573	0	0	0	0	0	1	1377	643	0	2021	1	4352	4353
Apprch %	59.1	0	40.9			15.9	84.1	0			0	0	0			0	68.1	31.8					
Total %	10.3	0	7.1		17.4	5.7	30.4	0		36.1	0	0	0		0	0	31.6	14.8		46.4	0	100	
Cars	433	0	305		738	247	1272	0		1520	0	0	0		0	0	1339	612		1951	0	0	4209
% Cars	96.7	0	98.4	0	97.4	98.8	96.1	0	100	96.6	0	0	0	0	0	0	97.2	95.2	0	96.5	0	0	96.7
TRKS	14	0	5		19	2	49	0		51	0	0	0		0	1	38	30		69	0	0	139
% TRKS	3.1	0	1.6	0	2.5	0.8	3.7	0	0	3.2	0	0	0	0	0	100	2.8	4.7	0	3.4	0	0	3.2
Semis	1	0	0		1	1	2	0		3	0	0	0		0	0	0	1		1	0	0	5
% Semis	0.2	0	0	0	0.1	0.4	0.2	0	0	0.2	0	0	0	0	0	0	0	0.2	0	0	0	0	0.1

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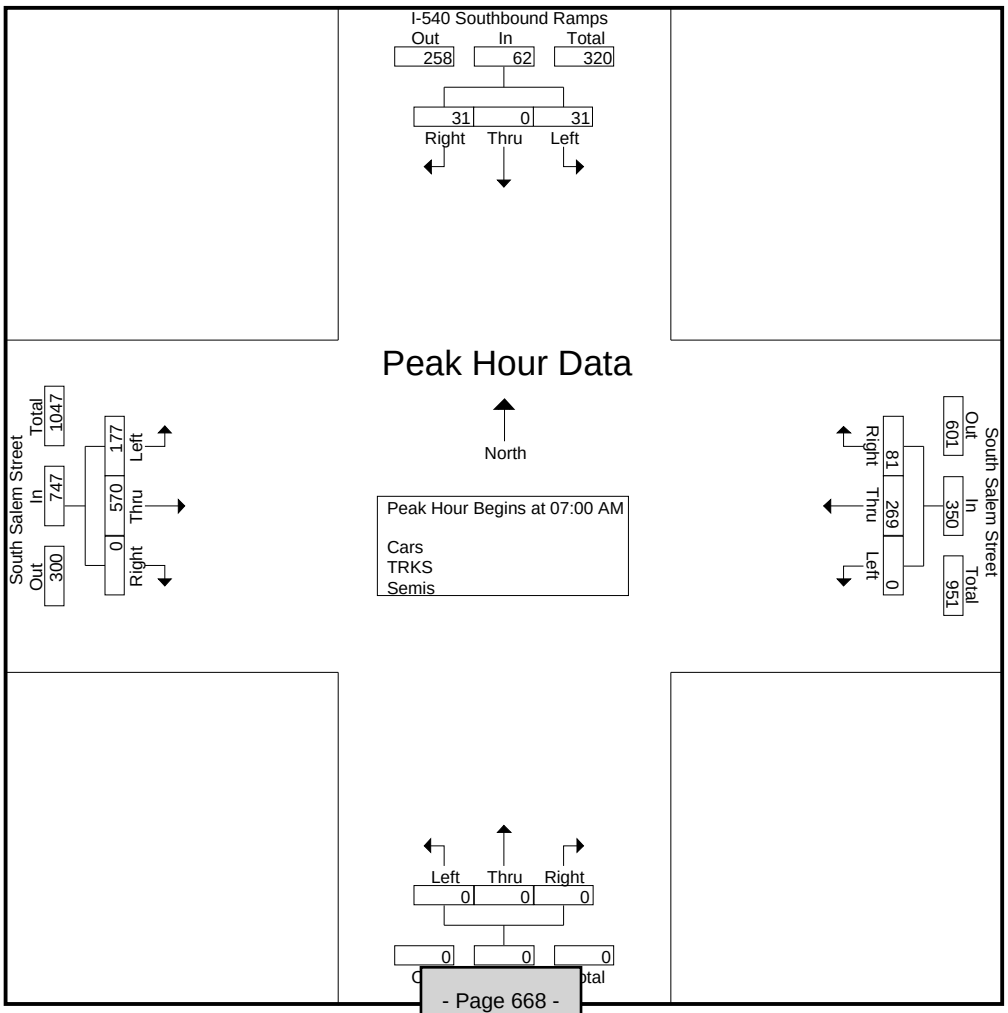
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
PH: 919 872-5115

File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 2

	I-540 Southbound Ramps From North				South Salem Street From East				From South				South Salem Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	13	0	5	18	12	105	0	117	0	0	0	0	0	118	47	165	300
07:15 AM	5	0	4	9	15	44	0	59	0	0	0	0	0	156	36	192	260
07:30 AM	8	0	12	20	20	64	0	84	0	0	0	0	0	139	46	185	289
07:45 AM	5	0	10	15	34	56	0	90	0	0	0	0	0	157	48	205	310
Total Volume	31	0	31	62	81	269	0	350	0	0	0	0	0	570	177	747	1159
% App. Total	50	0	50		23.1	76.9	0		0	0	0		0	76.3	23.7		
PHF	.596	.000	.646	.775	.596	.640	.000	.748	.000	.000	.000	.000	.000	.908	.922	.911	.935



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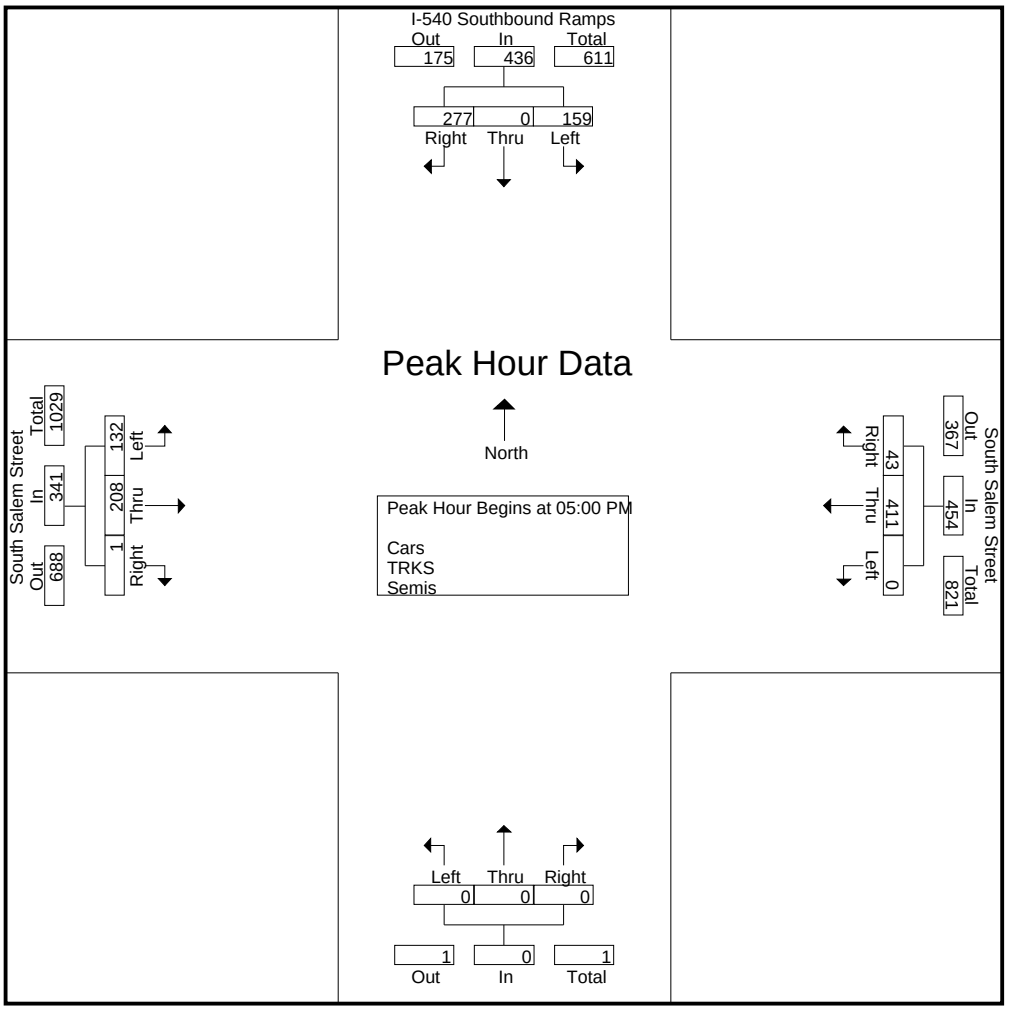
File Name : South Salem Street and Southbound I-540 Ramps
Site Code : 00000003
Start Date : 10/22/2019
Page No : 3

	I-540 Southbound Ramps From North				South Salem Street From East				From South				South Salem Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	62	0	43	105	13	101	0	114	0	0	0	0	1	60	43	104	323
05:15 PM	74	0	39	113	8	115	0	123	0	0	0	0	0	43	25	68	304
05:30 PM	76	0	48	124	10	103	0	113	0	0	0	0	0	53	41	94	331
05:45 PM	65	0	29	94	12	92	0	104	0	0	0	0	0	52	23	75	273
Total Volume	277	0	159	436	43	411	0	454	0	0	0	0	1	208	132	341	1231
% App. Total	63.5	0	36.5		9.5	90.5	0		0	0	0		0.3	61	38.7		
PHF	.911	.000	.828	.879	.827	.893	.000	.923	.000	.000	.000	.000	.250	.867	.767	.820	.930

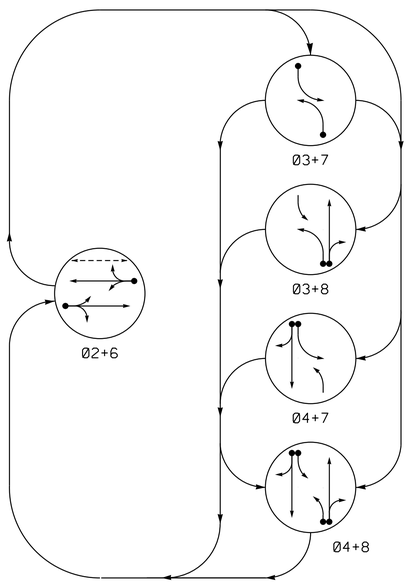


APPENDIX C

SIGNAL INFORMATION

DocuSign Envelope ID: E063F727-4F59-44F7-B6C6-DB7B8E274886

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

EV PREEMPT PHASE

(Medium Priority)

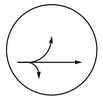
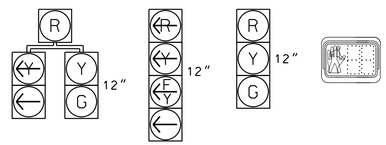


TABLE OF OPERATION

SIGNAL FACE	PHASE 02+6	03+7	03+8	04+7	04+8	EVP 2	FLASH
21	G	R	R	R	R	G	Y
22	G	R	R	R	R	G	Y
31	←R	←	←	F Y	F Y	←R	←R
41,42	R	R	R	G	G	R	R
61,62	G	R	R	R	R	R	Y
71	←R	←	F Y	←	F Y	←R	←R
81,82	R	R	G	R	G	R	R
P61,P62	W	DW	DW	DW	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



21 | 31, 71 | 22, 41,42, 61,62, 81,82 | P61,P62

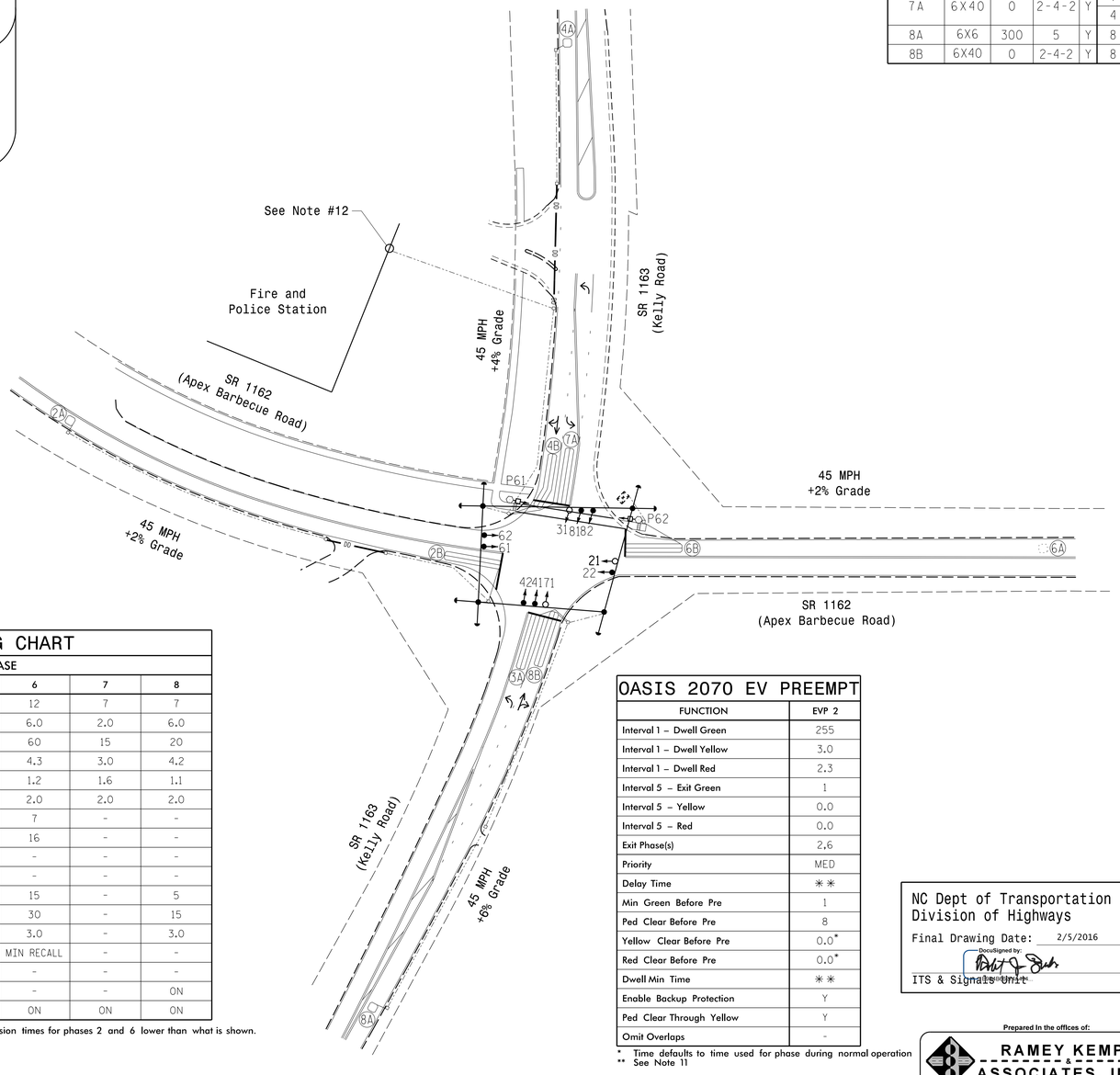
2070 LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	5	Y	2	Y	Y	-	-	-	-	-
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	2.0	5	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	15	-	Y
					8	Y	Y	-	-	3	-	Y
4A	6X6	300	5	Y	4	-	Y	-	-	-	-	-
4B	6X40	0	2-4-2	Y	4	Y	Y	Y	2.0	5	-	-
6A	6X6	300	4	-	6	Y	Y	-	-	-	-	-
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	2.0	5	-	-
7A	6X40	0	2-4-2	Y	7	Y	Y	-	-	15	-	Y
					4	Y	Y	-	-	3	-	Y
8A	6X6	300	5	Y	8	-	Y	-	-	-	-	-
8B	6X40	0	2-4-2	Y	8	Y	Y	Y	2.0	5	-	-

5 Phase
Fully Actuated
(Isolated)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012, "Standard Specifications for Roads and Structures" dated January 2012, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: https://connect.ncdot.gov/resources/safety/pages/its-and-signals.aspx
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 3 and/or 7 may be lagged.
4. Reposition existing signal heads numbered 41,42,81 and 82.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. See Pavement Marking Plans for stop bar and crosswalk locations.
9. Program signal heads numbered 21 and 22 to clear to all red before going into preempt.
10. Shown locations of pedestrian signals are conceptual only. See sheets P1-P3 for pushbutton location details.
11. The Delay before Preempt and Preempt Dwell Min Green time for emergency vehicle preemption timing will be determined by Town of Apex Traffic Engineer.
12. Locate Emergency Vehicle Preemption switch in new Public Safety Station 5. Contractor shall coordinate with Town of Apex Staff on exact location.



LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
▼	Pedestrian Signal Head	■
○	Signal Pole with Guy	●
○	Signal Pole with Sidewalk Guy	●
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
·-·-·	2-in Underground Conduit	·-·-·
N/A	Right of Way	- - - -
→	Directional Arrow	→
DD	Directional Drill	N/A
⬡	Type II Signal Pedestal	⬢

OASIS 2070 TIMING CHART

FEATURE	PHASE 2	3	4	6	7	8
Min Green 1 *	12	7	7	12	7	7
Extension 1 *	6.0	2.0	6.0	6.0	2.0	6.0
Max Green 1 *	60	15	20	60	15	20
Yellow Clearance	4.3	3.0	4.2	4.3	3.0	4.2
Red Clearance	1.0	1.6	1.1	1.2	1.6	1.1
Red Revert	5.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	7	-	-
Don't Walk 1	-	-	-	16	-	-
Seconds Per Actuation *	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-
Time Before Reduction *	15	-	5	15	-	5
Time To Reduce *	30	-	15	30	-	15
Minimum Gap	3.0	-	3.0	3.0	-	3.0
Recall Mode	MIN RECALL	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	-	-	-	-	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

OASIS 2070 EV PREEMPT

FUNCTION	EVP 2
Interval 1 – Dwell Green	255
Interval 1 – Dwell Yellow	3.0
Interval 1 – Dwell Red	2.3
Interval 5 – Exit Green	1
Interval 5 – Yellow	0.0
Interval 5 – Red	0.0
Exit Phase(s)	2,6
Priority	MED
Delay Time	**
Min Green Before Pre	1
Ped Clear Before Pre	8
Yellow Clear Before Pre	0.0*
Red Clear Before Pre	0.0*
Dwell Min Time	**
Enable Backup Protection	Y
Ped Clear Through Yellow	Y
Omit Overlaps	-

* Time defaults to time used for phase during normal operation
** See Note 11

NC Dept of Transportation
Division of Highways
Final Drawing Date: 2/5/2016
DocuSigned by: Wesley J. Birch
ITS & Signals Unit

Prepared in the offices of:
RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
5808 Farrington Place, Suite 100
Raleigh, North Carolina 27609
919-872-5115 Tel. 919-878-5416 Fax.
www.rameykemp.com

Signal Upgrade

Prepared for: Transportation Mobility and Safety Division, Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1162 (Apex Barbecue Road)
at
SR 1163 (Kelly Road)

Division 5 | Wake County | Apex

PLAN DATE:	February 2016	REVIEWED BY:	WJ Hamilton
PREPARED BY:	NE Burns	RKA PROJ NO:	15242 (040)

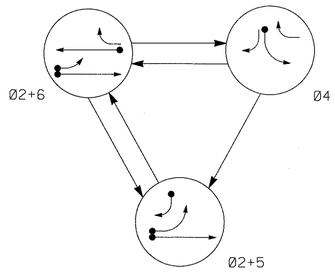
SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 32396 ENGINEER WILLIAM J. HAMILTON
DocuSigned by: William J. Hamilton 2/2/2016
ADMINISTRATOR SIGNATURE DATE
SIG. INVENTORY NO. 05-2326

PROJECT REFERENCE NO.	SHEET NO.
36249.3343	Sig-1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

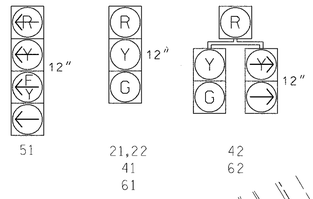
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	PHASE Ø2+6	PHASE Ø4	FLASH
21,22	G	G	R	Y
41	R	R	G	R
42	R/→	R	G	R
51	←	F.Y.	R	Y
61	R	G	R	Y
62	R	G	R/→	Y

SIGNAL FACE I.D.

All Heads L.E.D.



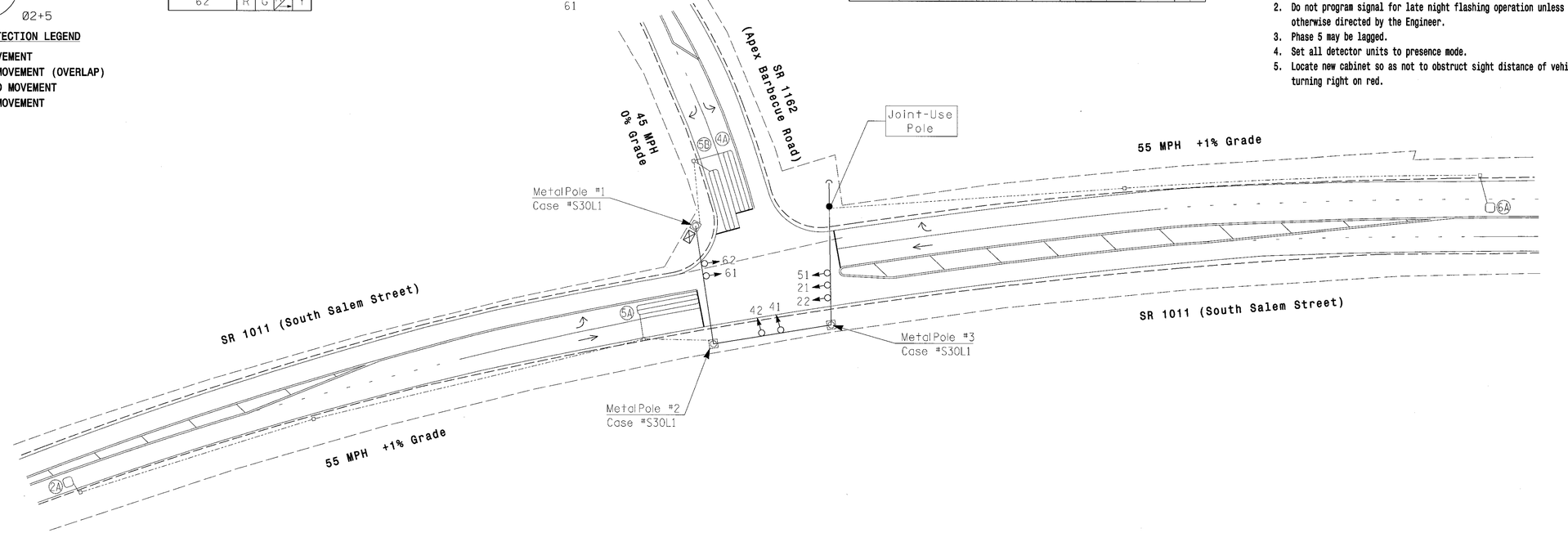
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	420	6	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
					2	Y	Y	Y	-	3	-	Y
5B	6X40	0	2-4-2	Y	5	Y	Y	-	-	10	-	Y
6A	6X6	420	6	Y	6	Y	Y	-	-	-	-	Y

3 Phase Fully Actuated Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012, "Standard Specifications for Roads and Structures" dated January 2012 and all applicable sections of the latest verson of the generic Project Special Provisions. The PSP can be accessed at the following website: http://www.ncdot.org/doh/preconstruct/traffic/itss/
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.

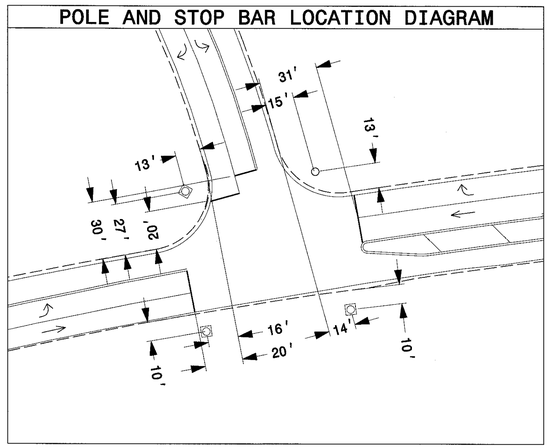


OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	14	7	7	14
Extension 1 *	6.0	2.0	2.0	6.0
Max Green 1 *	90	30	15	90
Yellow Clearance	5.1	3.0	3.0	5.1
Red Clearance	1.0	2.3	2.1	1.0
Walk 1 *	-		-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	-	2.5
Max Variable Initial *	46	-	-	46
Time Before Reduction *	15	-	-	15
Time To Reduce *	45	-	-	45
Minimum Gap	3.4	-	-	3.4
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

POLE AND STOP BAR LOCATION DIAGRAM



LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
⊡	Pedestrian Signal Head With Push Button & Sign	■
○	Signal Pole with Guy	●
○	Signal Pole with Sidewalk Guy	●
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
.....	2-in Underground Conduit	.....
N/A	Right of Way	- - - -
→	Directional Arrow	→
◎	Metal Strain Pole	■

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING Date: 7/14/14
Traffic Engineering Branch

New Installation

Prepared for: Transportation Mobility and Safety Division, NC DEPARTMENT OF TRANSPORTATION, Signal Design Section, 750 N.Greenfield Pkwy.Garner,NC 27529

Prepared in the offices of: RAMEY KEMP & ASSOCIATES, INC. Transportation Engineers, 5808 Farrington Place, Suite 100, Raleigh, North Carolina 27609, 919-872-5115 Tel. 919-872-5410 Fax. www.rameykemp.com

SCALE 0 40' 1"=40'

SR 1011 (South Salem Street) at SR 1162 (Apex Barbecue Road)

Division 5 Wake County Apex

PLAN DATE: July 2014 REVIEWED BY: WJ Hamilton

PREPARED BY: NE Burns RKA PROJ. NO: 13110 (040)

REVISIONS	INIT.	DATE

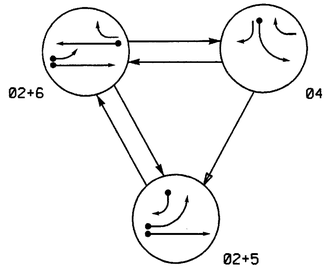
SEAL: NORTH CAROLINA PROFESSIONAL SEAL 32396 ENGINEER WILLIAM JAMES HAMILTON

SIGNATURE 7/9/14 DATE

SIG. INVENTORY NO. 05-1543

PROJECT REFERENCE NO.	SHEET NO.
R-2635B	SIG-7

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 04	FLASH
21,22	G	G	R	Y
41	R	R	G	R
42	R/G	R	G	R
51	←	F←	R	Y
61	R	G	R	Y
62	R	G	R/G	Y

F← = Flashing Yellow Arrow

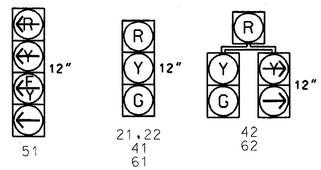
STANDARD SIGNAL FACE CLEARANCES FOR FLASHING LEFT TURN SIGNAL

FROM \ TO	←	F←		→	
	1	2	1	2	1	2
F←	←	←	F←	F←	→	→
F←	F←	F←	F←	F←	→	→
→	→	→	→	→	→	→

F← = Flashing Yellow Arrow

SIGNAL FACE I.D.

All Heads L.E.D.



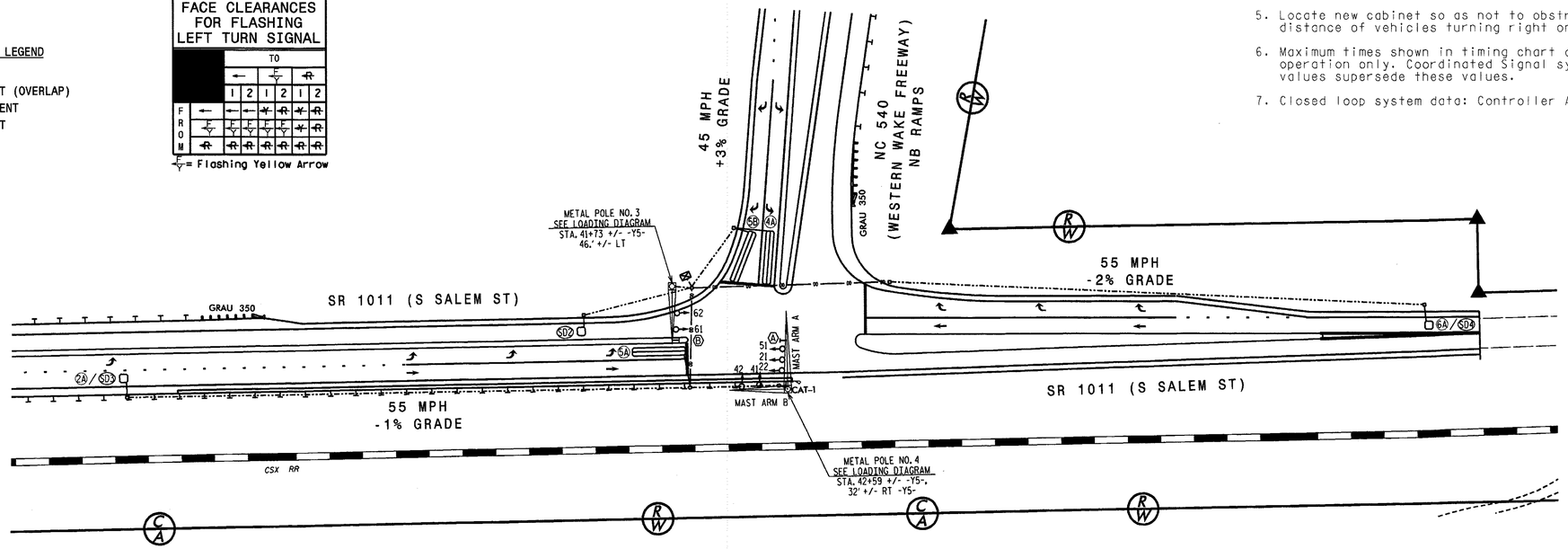
2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
SD2	6X6	+75	3	Y	-	-	-	-	-	-	Y	Y
2A/SD3	6X6	420	5	Y	2	Y	Y	-	-	-	Y	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
					2	Y	Y	Y	-	3	-	Y
5B	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
6A/SD4	6X6	420	6	Y	6	Y	Y	-	-	-	Y	Y

3 PHASE FULLY ACTUATED SR 1011 (S SALEM ST) CLOSED LOOP SYSTEM

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do Not Program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detectors to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated Signal system timing values supersede these values.
7. Closed loop system data: Controller Asset #:2315.



LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
⊡↓	Pedestrian Signal Head With Push Button & Sign	■↓
○⌇	Signal Pole with Guy	●⌇
○⌇	Signal Pole with Sidewalk Guy	●⌇
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	■
□	Junction Box	■
·-·-·	2-in Underground Conduit	·-·-·
N/A	Right of Way	- - - -
→	Directional Arrow	→
Ⓐ	"U Turn Yield to Right Turn" (R10-16)	Ⓐ
Ⓑ	No U Turn Sign (R3-4)	Ⓑ

OASIS 2070L TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	14	7	7	14
Extension 1 *	6.0	1.0	1.0	6.0
Max Green 1 *	60	20	20	60
Yellow Clearance	5.4	3.1	3.2	5.4
Red Clearance	1.6	2.1	2.5	1.6
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	-	2.5
Max Variable Initial *	46	-	-	46
Time Before Reduction *	15	-	-	15
Time To Reduce *	30	-	-	30
Minimum Gap	3.4	-	-	3.4
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phase should not be lower than 4 seconds.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING Date: 3/18/13
Traffic Engineering Branch

New Installation

THE LPA GROUP TRANSPORTATION CONSULTANTS
THE LPA GROUP of North Carolina, P.A.
5000 Falls of Neuse Road, Suite 304
Raleigh, North Carolina 27609

Prepared In the Offices of:
Traffic Engineering Branch
Signal Design Section
750 N.Greenfield Pkwy.,Garner,NC 27529

RALEIGH-DURHAM ROADBUILDERS

SCALE 0 50 1"=50'

SR 1011 (S Salem St)
at
NC 540 (Western Wake Freeway)
Northbound Ramps

Division 5 | Wake County | Apex

PLAN DATE: November 2010 | REVIEWED BY: R Dubnicka
PREPARED BY: K M Cory | REVIEWED BY:

REVISIONS	INIT.	DATE
RELOCATE METAL POLE NO. 4	RJD	2-22-13

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 027742 ENGINEER ROBERT J. DUBNICKA

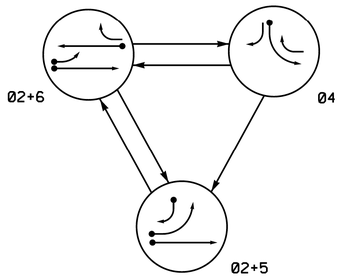
SIGNATURE Robert J. Dubnicka 11-30-12
DATE
SIG. INVENTORY NO. 05-2315

$$$$$SYSTIME$$$$$
$$$$$USERNAME$$$$$

DocuSign Envelope ID: 9B2B973D-6A4D-4216-818E-729F9CD75A55

PROJECT REFERENCE NO.	SHEET NO.
R-2635B	SIG-2

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE 02+5	PHASE 02+6	PHASE 04	FLASH
21,22	G	G	R	Y
41	R	R	G	R
42	R/	R	G	R
51	←	F Y	R	Y
61	R	G	R	Y
62	R	G	R/	Y

F Y = Flashing Yellow Arrow

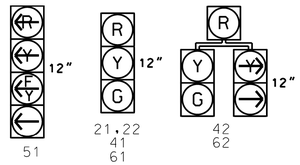
STANDARD SIGNAL FACE CLEARANCES FOR FLASHING LEFT TURN SIGNAL

FROM \ TO	←	F Y		R	
	1	2	1	2	1	2
←	←	←	R	R	R	R
F Y	F Y	F Y	F Y	F Y	R	R
R	R	R	R	R	R	R

F Y = Flashing Yellow Arrow

SIGNAL FACE I.D.

All Heads L.E.D.



2070L LOOP & DETECTOR INSTALLATION

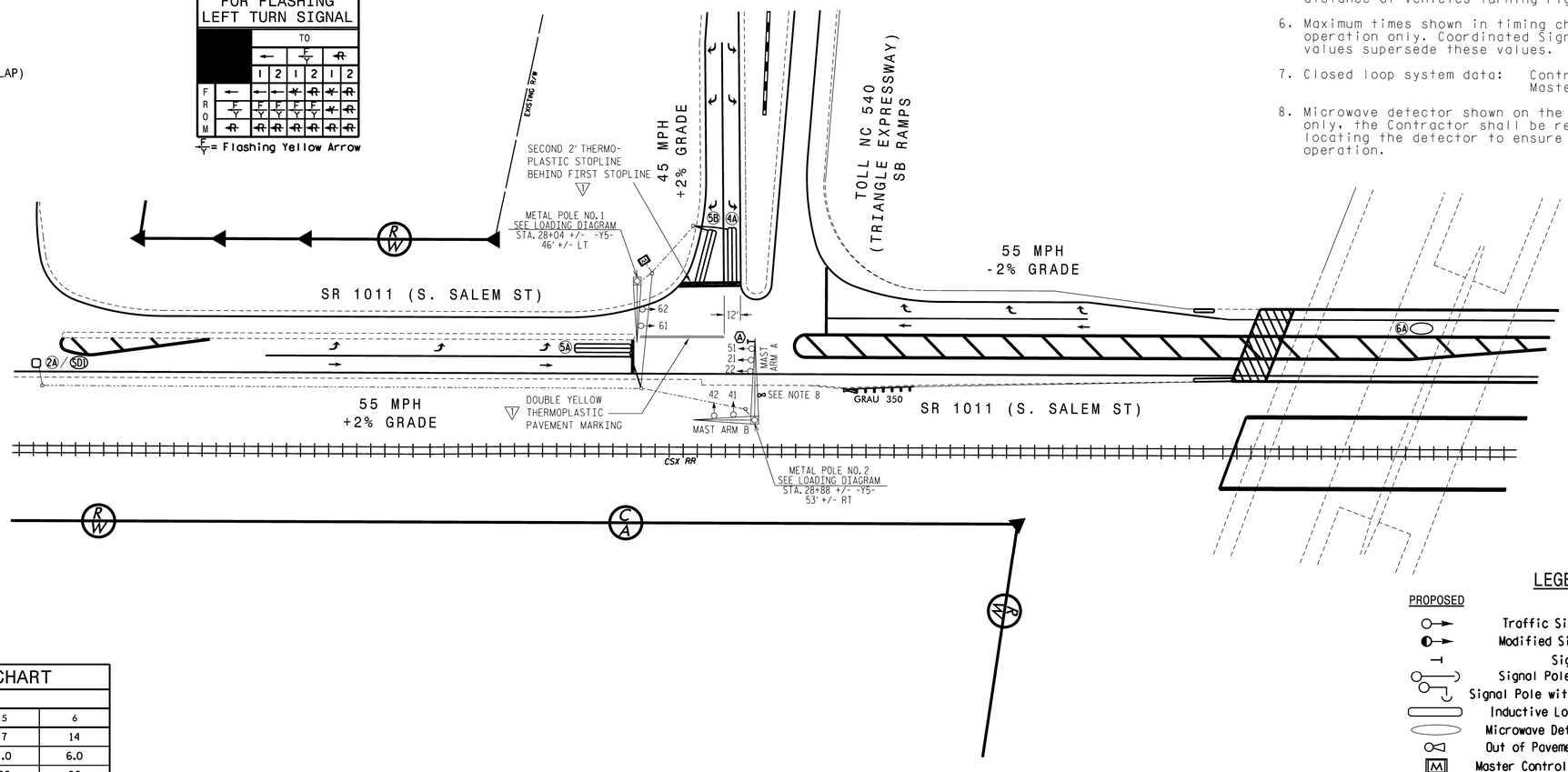
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A/SD1	6X6	420	6	Y	2	Y	Y	-	-	-	Y	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
					2	Y	Y	Y	-	3	-	Y
5B	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
6A	*	420	*	Y	6	Y	Y	-	-	-	-	*

* Microwave Detection Zone

3 PHASE FULLY ACTUATED SR 1011 (S. SALEM ST) CLOSED LOOP SYSTEM

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do Not Program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Set all detectors to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated Signal system timing values supersede these values.
7. Closed loop system data: Controller Asset #: 2316 Master Asset #: 10547
8. Microwave detector shown on the plan sheet is concept only, the Contractor shall be responsible for field locating the detector to ensure the most effective operation.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Microwave Detection Zone	
	Out of Pavement Detector	
	Master Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	"U Turn Yield to Right Turn" (R10-16)	

OASIS 2070L TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 5	PHASE 6
Min Green 1 *	14	7	7	14
Extension 1 *	6.0	1.0	1.0	6.0
Max Green 1 *	60	20	20	60
Yellow Clearance	5.4	3.1	3.1	5.4
Red Clearance	1.4	2.0	2.9	1.4
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	-	2.5
Max Variable Initial *	46	-	-	46
Time Before Reduction *	15	-	-	15
Time To Reduce *	30	-	-	30
Minimum Gap	3.4	-	-	3.4
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

$$$$SYSTEMSETTINGS$$$$
$$$$SIGNALVERSION$$$$
$$$$USERNAME$$$$

NC Dept. of Transportation
Division of Highways
Final Drawing Date 11/13/2017
DocuSigned by: [signature] 1B8B1A0C4F1F4A0...
ITS & Signals Unit

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Signal Revision

ATKINS
1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

REVISION SEAL

NORTH CAROLINA PROFESSIONAL SEAL 23535 ENGINEER DAVID L. JONES

DocuSigned by: David Jones 3300D8D8C7B8488... SIGNATURE 11/13/2017 DATE

THE LPA GROUP TRANSPORTATION CONSULTANTS
THE LPA GROUP of North Carolina, P.A.
5000 Falls of Neuse Road, Suite 304
Raleigh, North Carolina 27609

Prepared in the Offices of: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

SCALE 0 50 1"=50'

SR 1011 (S. Salem St) at Toll NC 540 (Triangle Expressway) Southbound Ramps

Division 5 Wake County Apex

PLAN DATE: November 2010 REVIEWED BY: R Dubnicka
PREPARED BY: K M Cory REVIEWED BY:

REVISIONS	INIT.	DATE
CONSTRUCTION REVISION - ADDED ENHANCED TRAFFIC CONTROL DEVICES	DLJ	11/13/2017

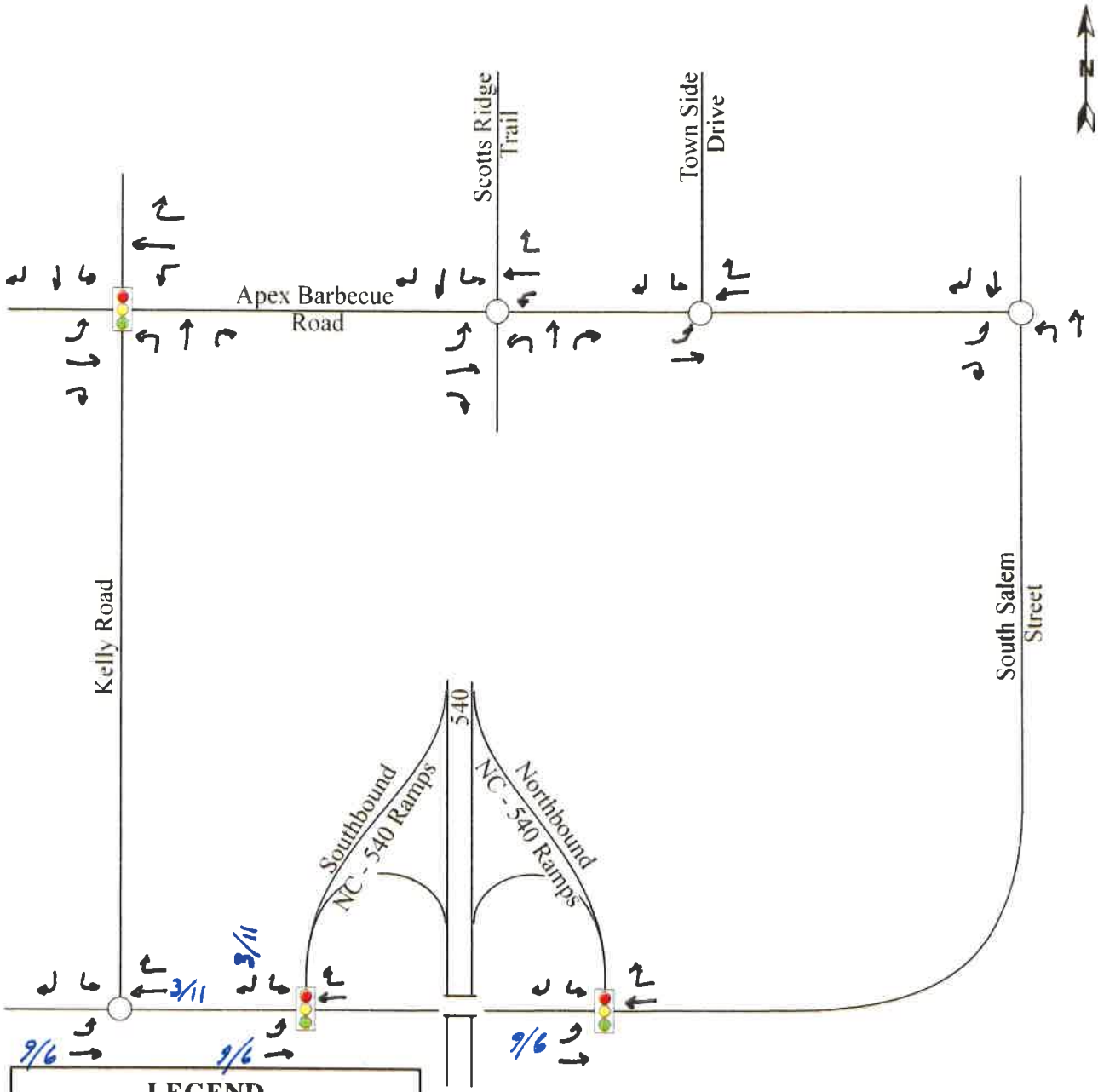
SEAL
Not a Certified Document as the original document, but only as to the revision. This document originally issued and sealed by Robert J. Dubnicka, 27742, on 11-30-2010.

SIGNATURE DATE

SIG. INVENTORY NO. 05-2316

APPENDIX D

ADJACENT DEVELOPMENT INFORMATION



LEGEND

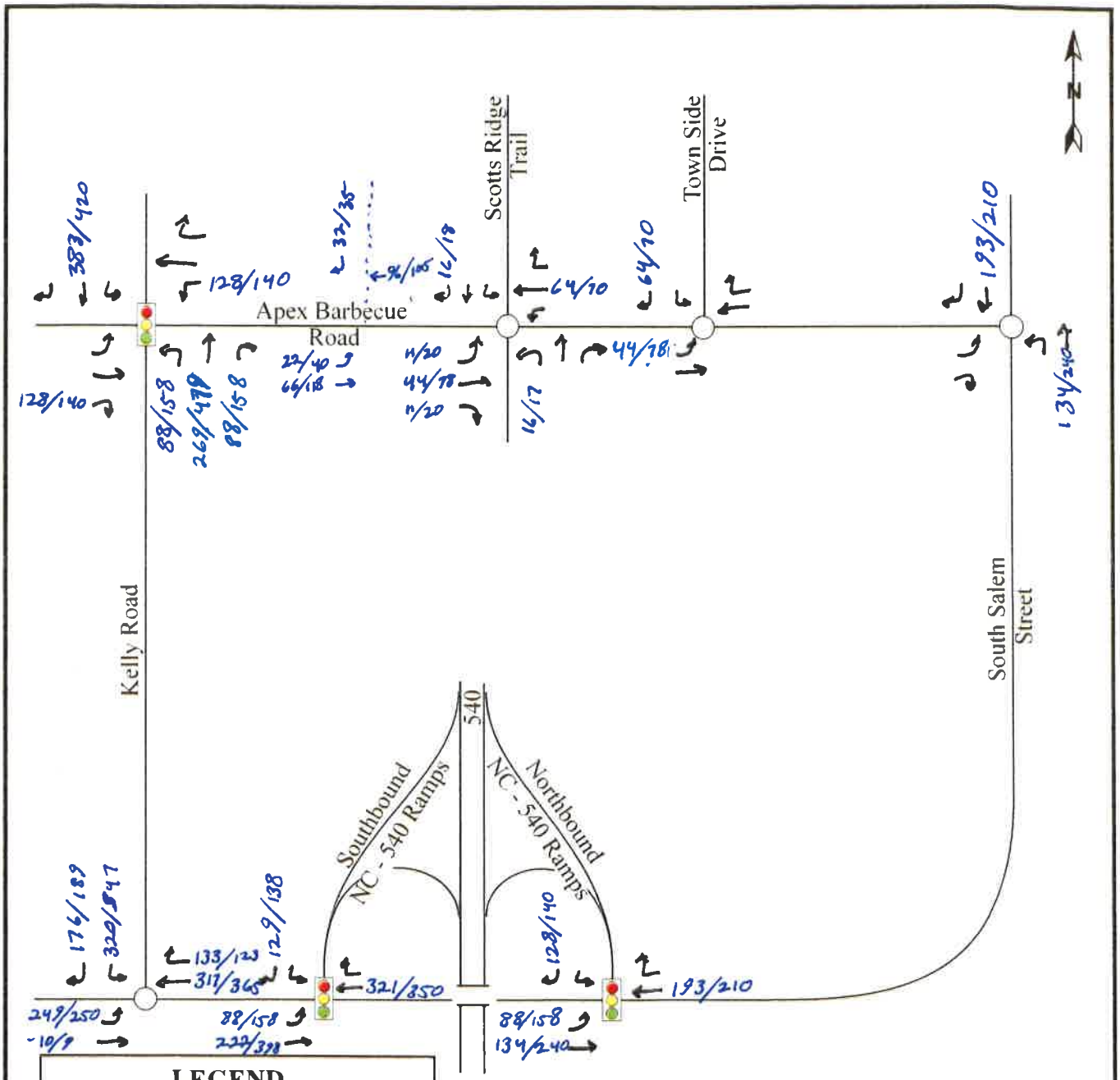
- Unsignalized Intersection
- Signalized Intersection
- X / Y → AM / PM Peak Hour Adjacent Development Trips

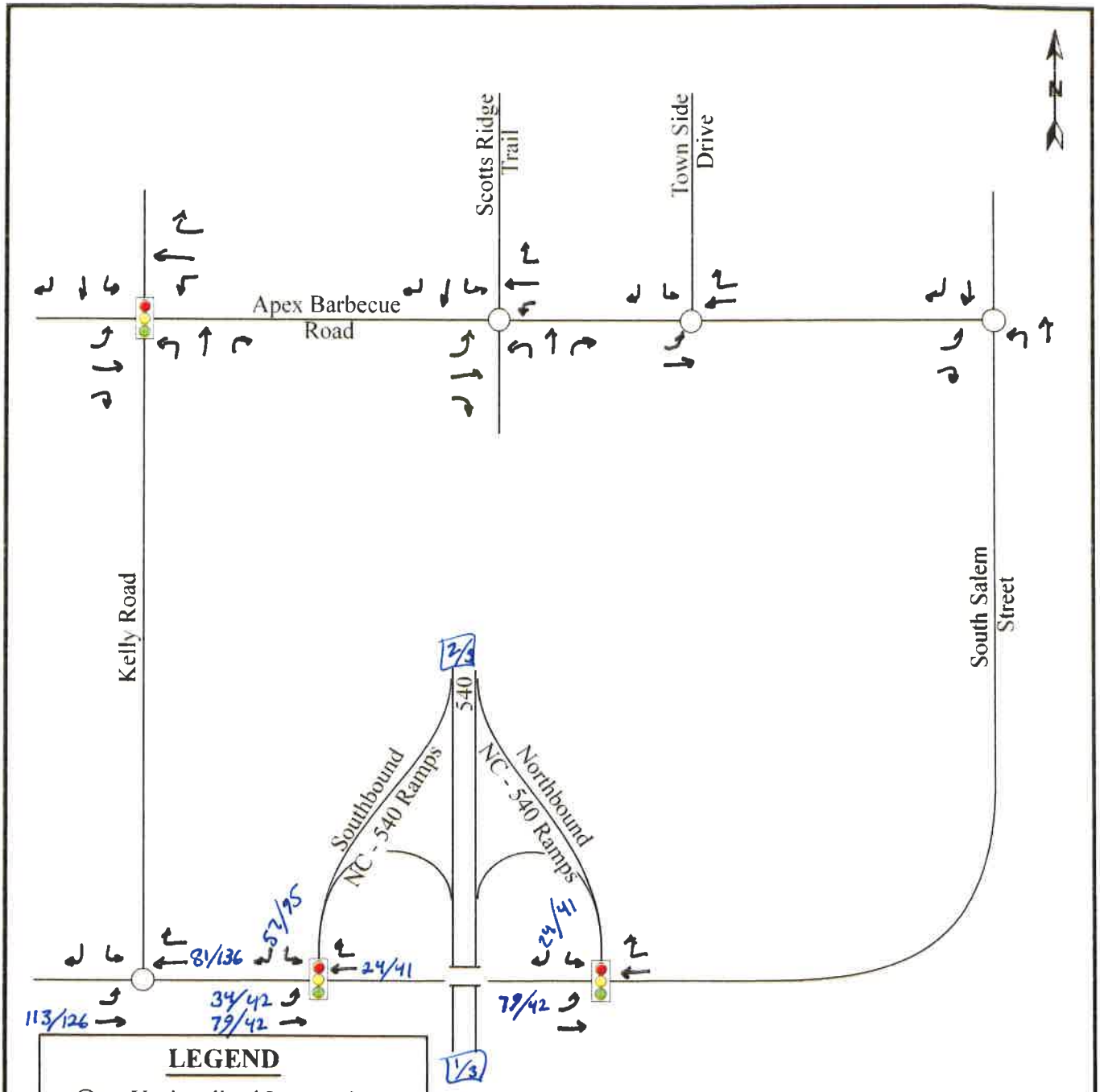
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Olive Ridge Residential

Scale: Not to Scale


N
Apex Barbecue Road
Scotts Ridge Trail
Town Side Drive
Kelly Road
South Salem Street
540
Southbound NC - 540 Ramps
Northbound NC - 540 Ramps
383/420
128/140
32/35
9/105
16/19
64/70
64/70
193/210
128/140
88/158
269/479
88/158
22/40
66/78
11/20
44/78
11/20
16/17
44/78
134/240
176/189
329/347
133/123
311/345
129/138
321/350
128/140
193/210
249/250
10/9
88/158
222/398
88/158
134/240
LEGEND
Unsignalized Intersection
Signalized Intersection
X / Y
AM / PM Peak Hour
Adjacent Development Trips
RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS
Poe Tract Mixed Use Development
Apex, NC
west village
-full Build
Scale: Not to Scale

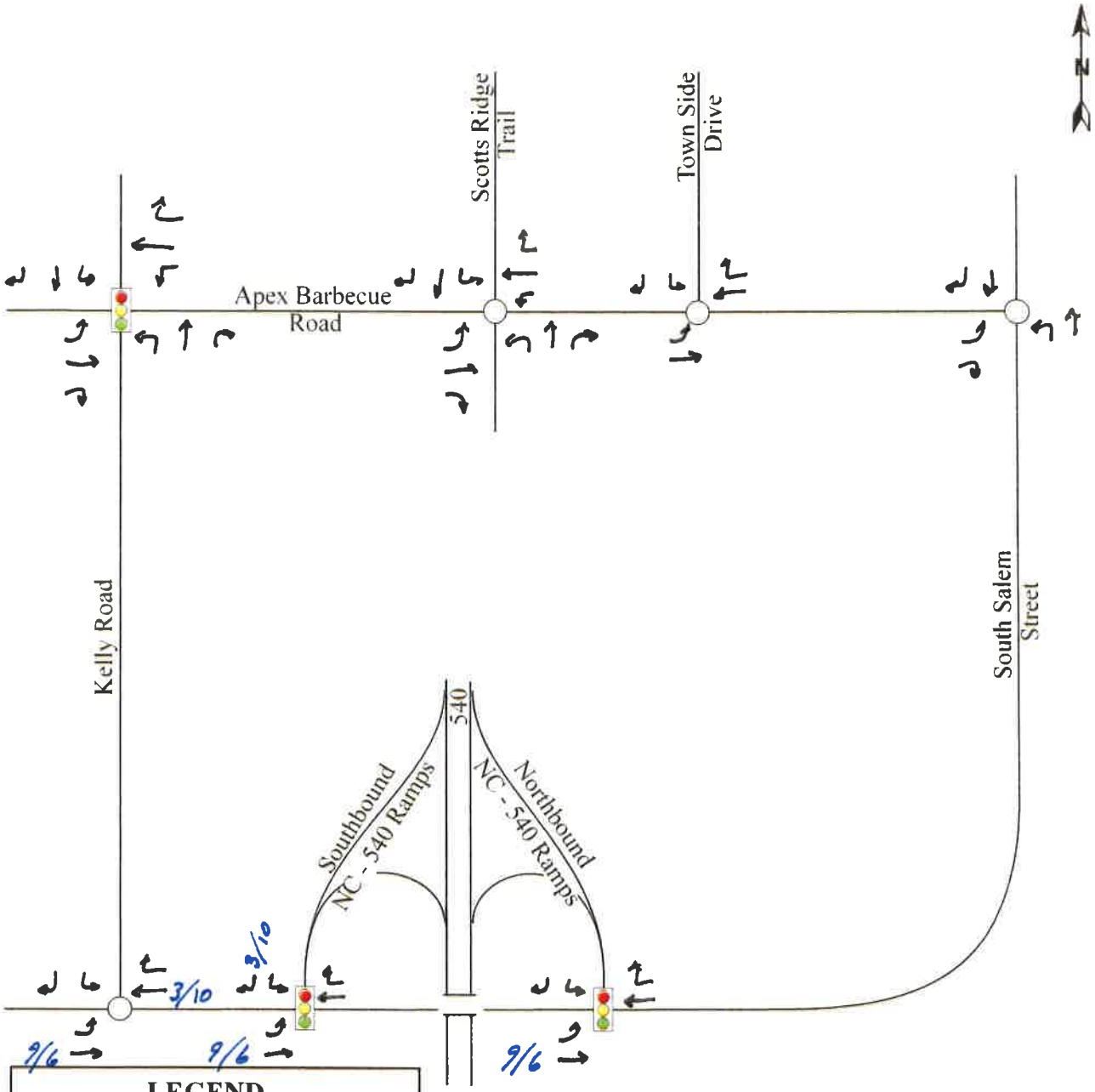


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Friendship Station - Phase 2

Scale: Not to Scale

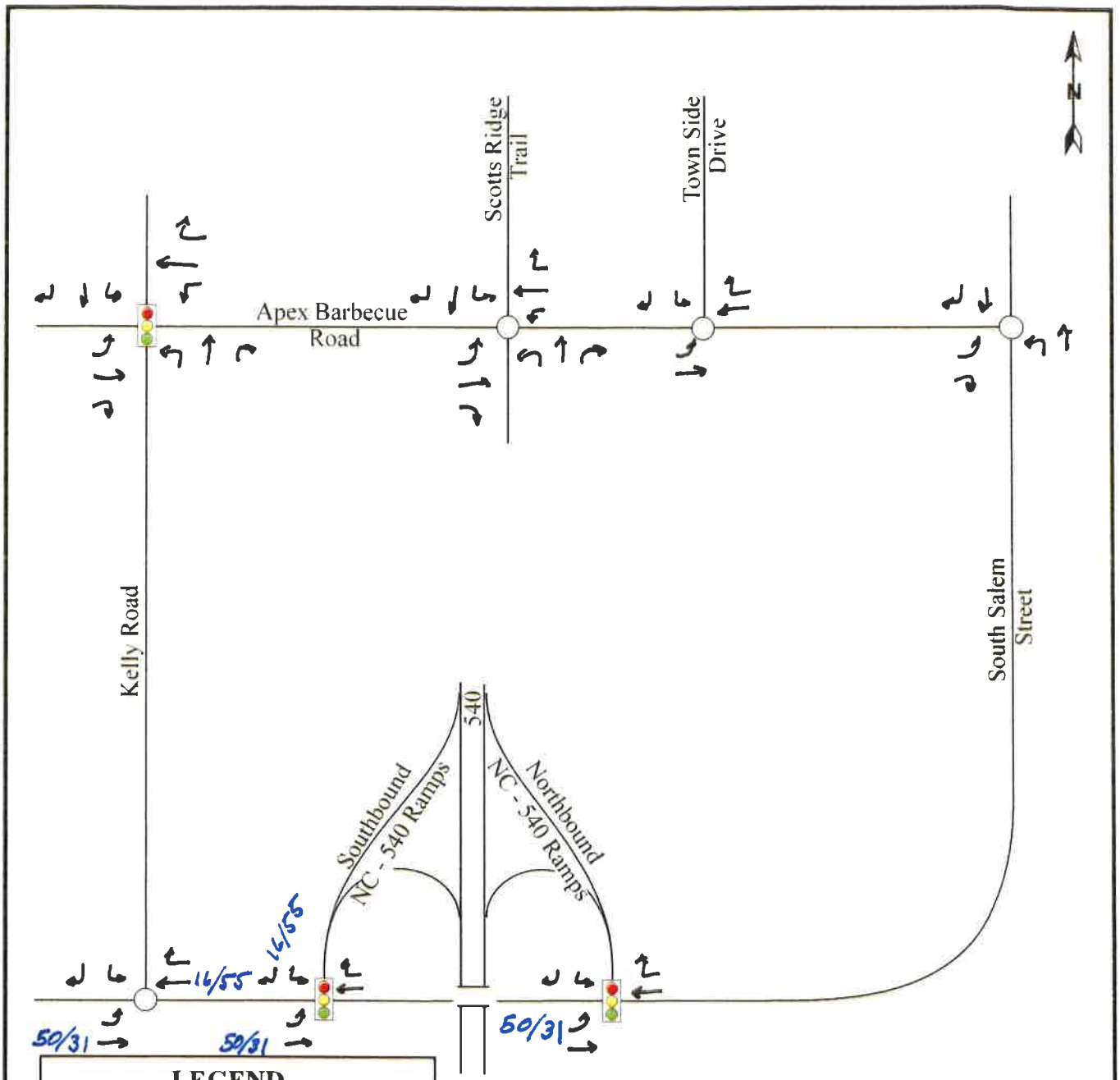


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

New Hill Assembly

Scale: Not to Scale

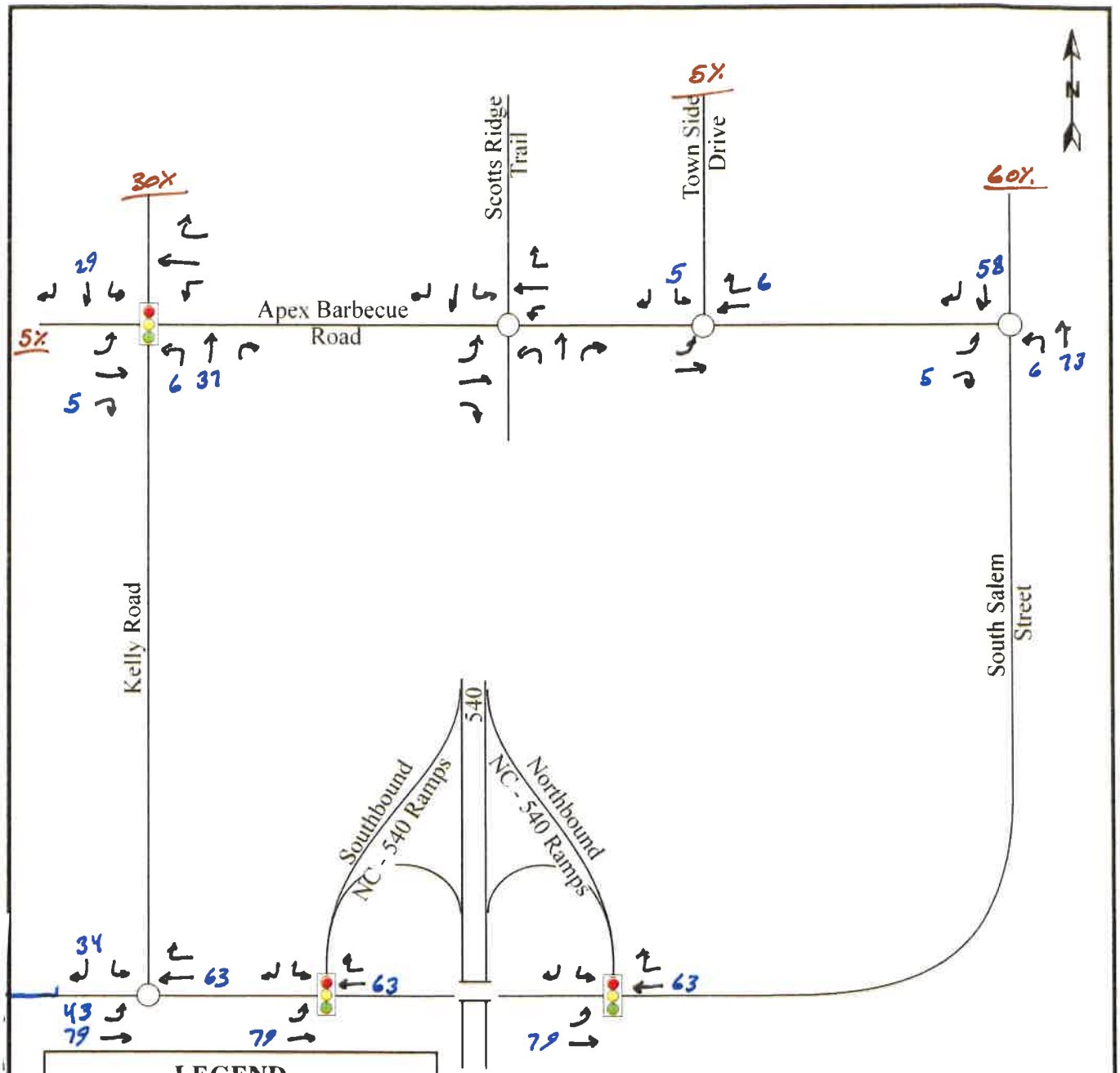


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

woodbury (25% built-out)

Scale: Not to Scale

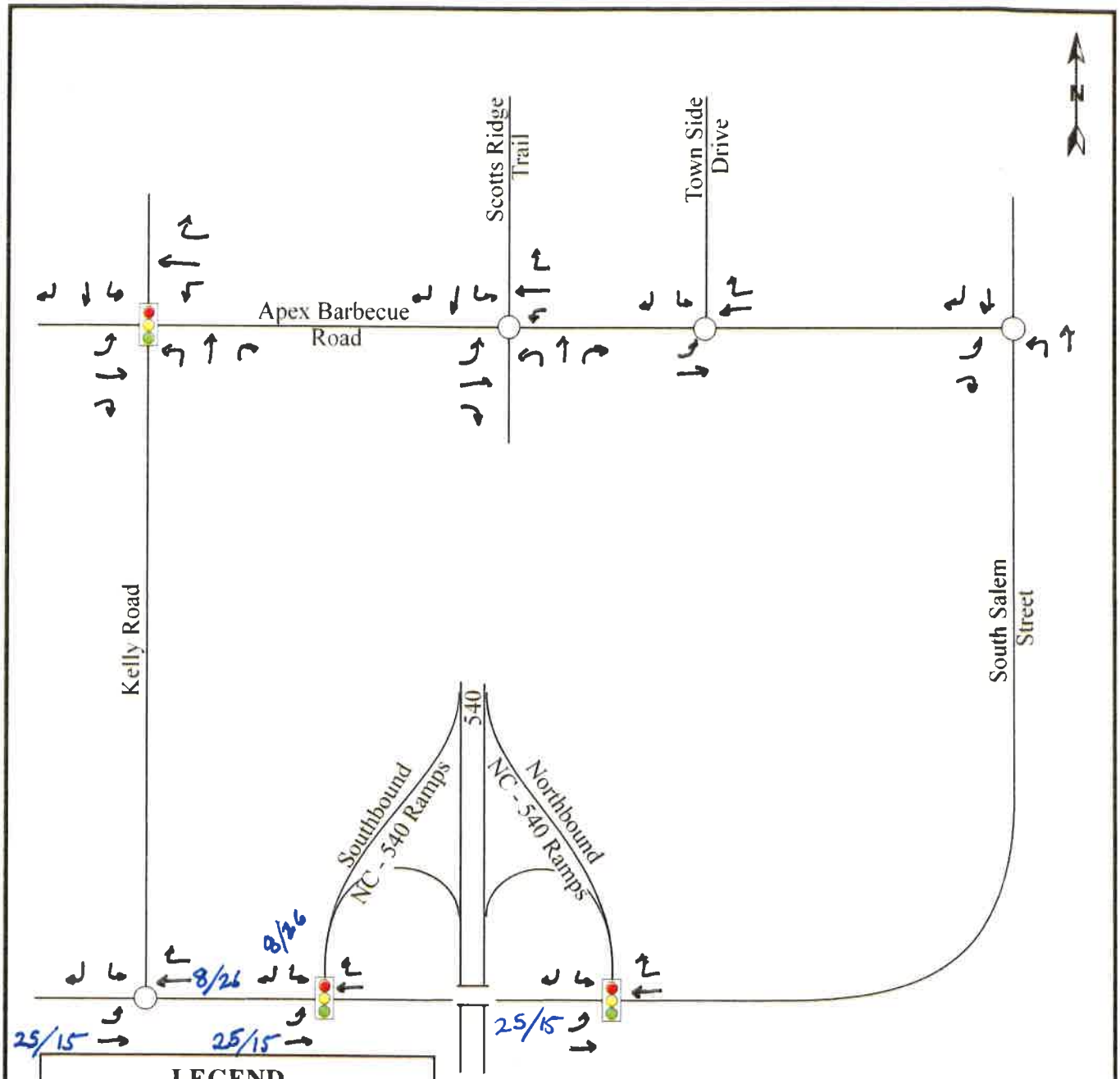


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Pleasant Park

Scale: Not to Scale

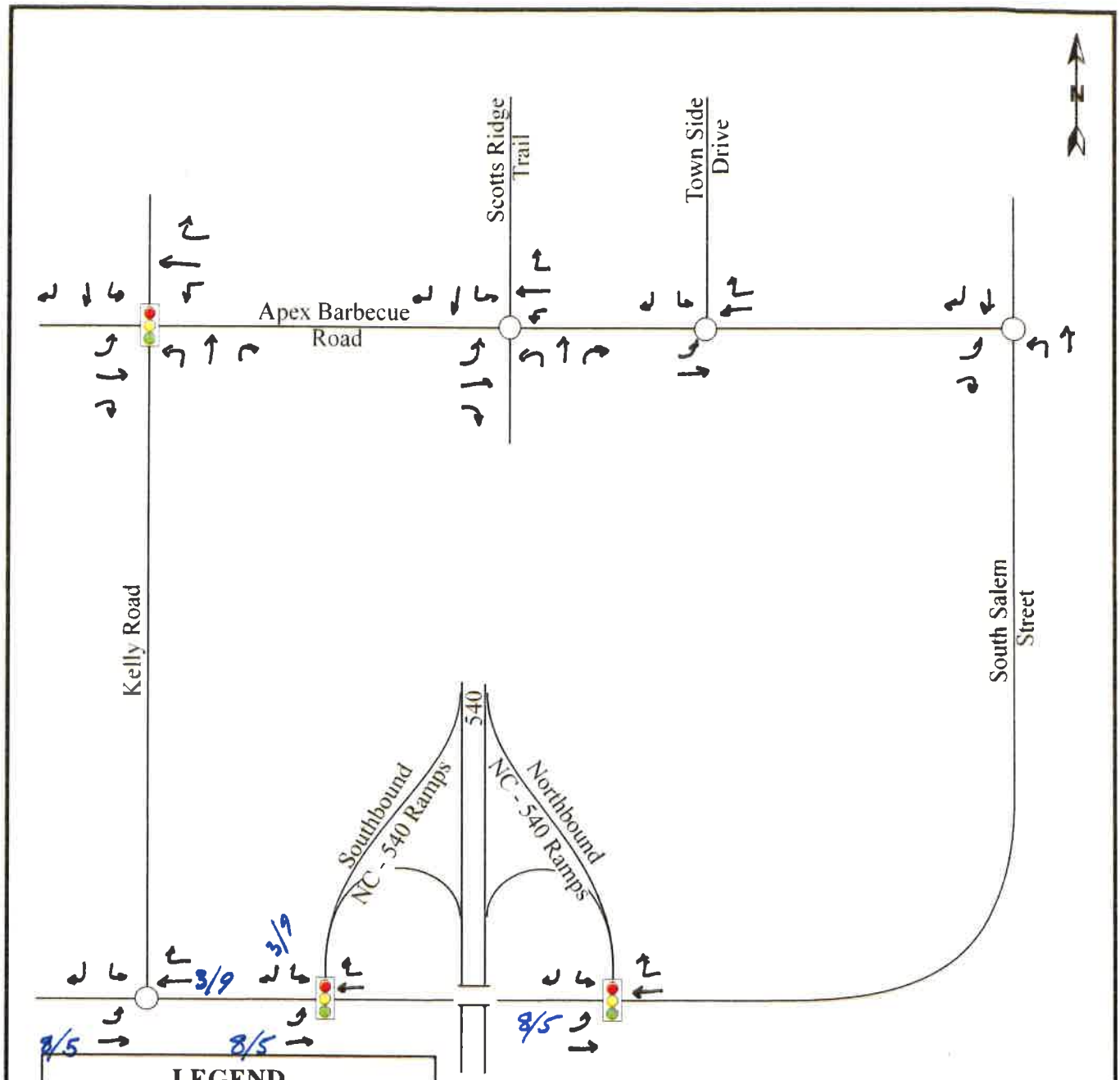


RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Jordan Pointe
(65% built-out)

Scale: Not to Scale

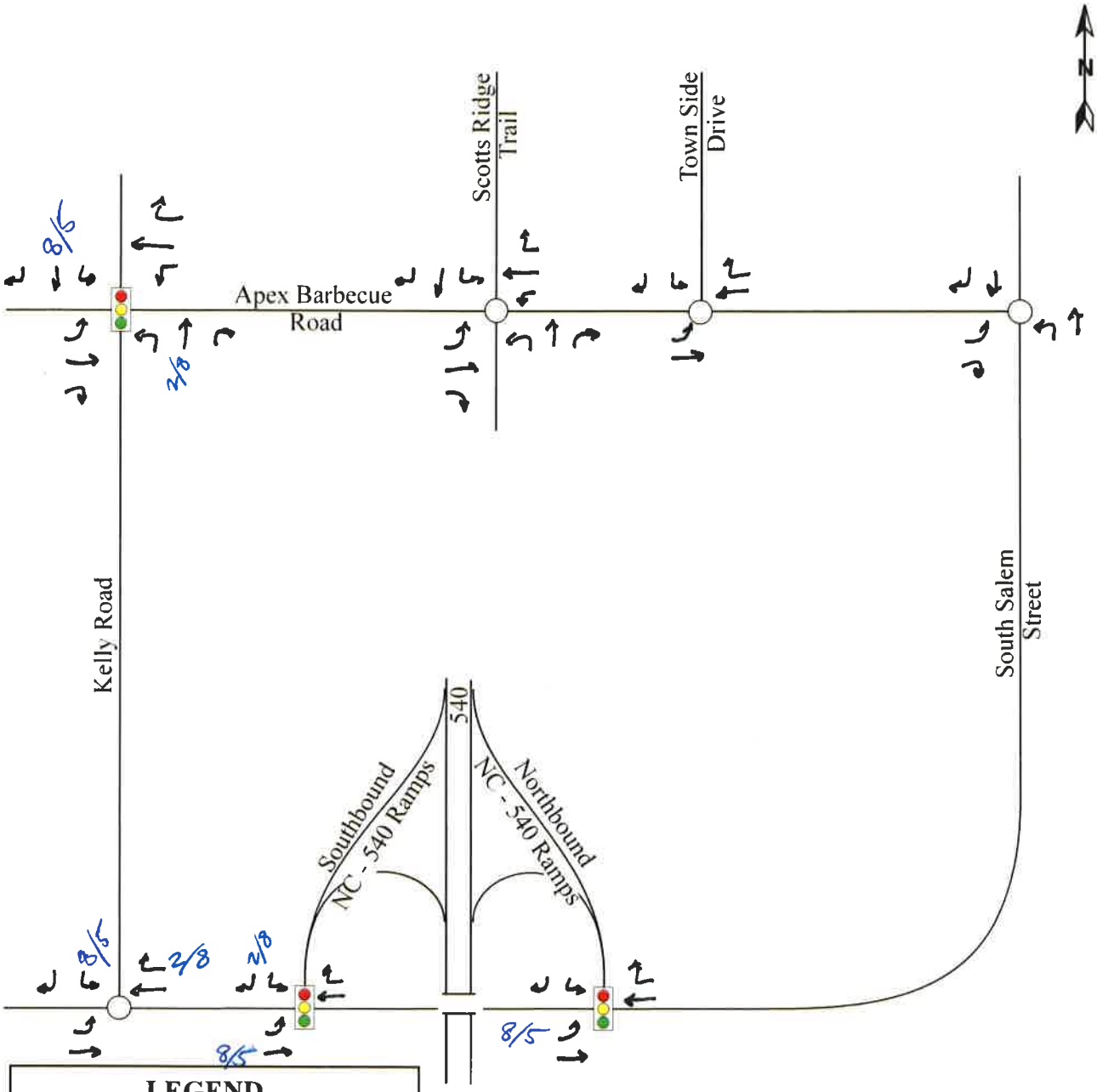


RAMEY KEMP ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Jordan Manors (40% built-out)

Scale: Not to Scale



LEGEND

- ○ Unsignalized Intersection
- Signalized Intersection
- X / Y → AM / PM Peak Hour Adjacent Development Trips

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Poe Tract Mixed Use Development
Apex, NC

Buckhorn (20% built-out)

Scale: Not to Scale

Traffic Impact Analysis

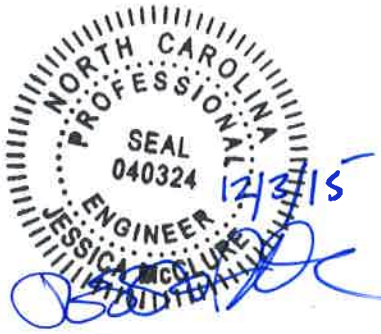
For

West Village

Located in

Apex, North Carolina

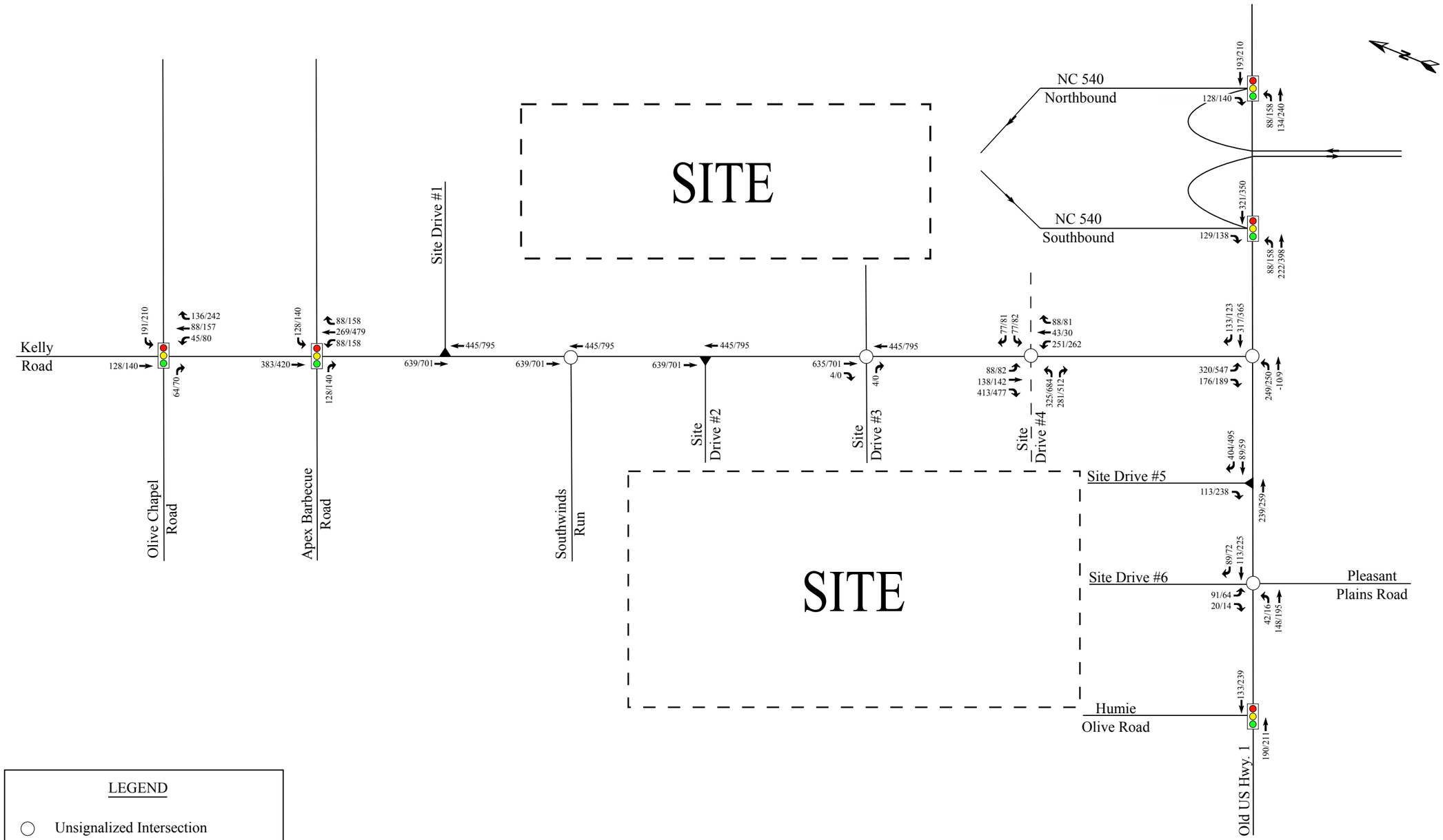
Prepared For:
Orleans Homes
3333 Street Road
Bensalem, PA 19020



Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
NC Corporate License # C-0910

December 2015

RKA Project #15236



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In / Right-Out Intersection
- X/Y → AM/PM Total Site Trips

RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

West Village Development
Apex, NC

Total Site Trip Assignment
(Phase 2 - 2020)

Scale: Not to Scale

Figure 12b

West Village
Recommended rezoning conditions to address traffic impacts

All recommendations on state maintained roadways are subject to NCDOT review and approval as part of the driveway permits and encroachment agreements.

Build 2018 refers to the first phase of residential development or as otherwise determined during the review and approval of subdivision plans. Build 2020 refers to the first phase of commercial development or as otherwise determined during the review and approval of site plans. Recommendations for Build 2020 are subject to further analysis at the time of site plan submittal and may change from what is recommended below as part of site plan approval.

IPS: Internal Protected Storage Length. Distance from the intersection along the proposed driveway or street before any full movement commercial driveway access or public street intersection will be allowed.

Kelly Road at Olive Chapel Road

- Developer shall construct a 200-foot eastbound right turn lane and a 300-foot additional westbound left turn lane on Olive Chapel Road (with southbound receiving through lane on Kelly Road) for Build 2020.

Kelly Road at Apex Barbecue Road

- Developer shall construct a 400-foot eastbound left turn lane, 350-foot westbound left turn lane, 350-foot northbound left turn lane, 150-foot northbound right turn lane, 350-foot southbound left turn lane, and 200-foot southbound right turn lane for Build 2020.

Kelly Road at Southwinds Run

- Developer shall construct a 100-foot northbound left turn lane on Kelly Road, an additional (second) northbound through lane through the intersection to drop as a right turn at Site Drive #1, and begin an additional (second) southbound through lane immediately south of Southwinds Run for Build 2020.

Old US 1 at Kelly Road

- Developer shall construct a 100-foot westbound right turn lane on Old US 1 for Build 2018.
- Developer shall install a traffic signal once warranted and approved by NCDOT and install communication with the NC 540 traffic signals.

- Developer shall construct an additional westbound through lane, beginning at the NC 540 Southbound off-ramp as a free-flow right turn exiting the ramp, as well as a 200-foot westbound right turn lane on Old US 1 for Build 2020.
- Developer shall construct a second southbound left turn lane with 300 feet of storage for dual left turn lanes and extend the southbound right turn lane to 300 feet on Kelly Road for Build 2020.
- Developer shall extend the eastbound left turn lane as a contiguous lane back through the intersection with Site Drive #5 and Site Drive #6 starting as a second eastbound through lane 400-feet west of Site Drive #6 on Old US 1 for Build 2020.

NC 540 Ramps at Old US 1

- Developer shall provide a free-flow right turn lane for the NC 540 Southbound off-ramp and additional receiving through lane continuing west to drop as a right turn at Site Drive #6 on Old US 1 for Build 2020.
- Developer shall extend the eastbound left turn lane on Old US 1 at the NC 540 Southbound on-ramp as a contiguous lane back to Kelly Road to receive the southbound dual left turn lanes from Kelly Road for Build 2020.

Old US 1 at Pleasant Plains Road & Site Drive #6

- Developer shall construct Site Drive #6 with a through-left lane and a 100-foot right turn lane with 200 feet IPS for Build 2018.
- Developer shall construct a 100-foot eastbound left turn lane and 100-foot westbound left turn lane on Old US 1 for Build 2018.
- Developer shall install a traffic signal once warranted and approved by NCDOT and install communication with the NC 540 traffic signals.
- Developer shall construct an additional westbound through lane on Old US 1 to drop as a right turn lane at Site Drive #6 for Build 2020.
- Developer shall construct an additional eastbound through lane on Old US 1 beginning 400 feet west of Site Drive #6 for Build 2020.

Kelly Road at Site Drive #1

- Developer shall construct Site Drive #1 as a right-in and right-out only providing 100 feet IPS and a 100-foot northbound right turn lane on Kelly Road for Build 2018.
- Developer shall construct an additional northbound through lane on Kelly Road to drop as a right turn lane at Site Drive #1 for Build 2020.

Kelly Road at Site Drive #2

- Developer shall construct Site Drive #2 as a right-in and right-out only providing 100 feet IPS for Build 2018.
- Developer shall construct an additional northbound through lane and an additional southbound through lane on Kelly Road at Site Drive #2 for Build 2020.

Kelly Road at Site Drive #3

- Developer shall construct Site Drive #3 with a 100-foot eastbound right turn lane and a 100-foot westbound right turn lane on the Site Drive #3 approaches adjacent to through-right lanes with 200 feet IPS for Build 2018.
- Developer shall construct 100-foot northbound and 100-foot southbound left turn lanes on Kelly Road for Build 2018.
- Developer shall construct an additional (second) southbound through lane and additional (second) northbound through lane on Kelly Road at Site Drive #3 for Build 2020.

Kelly Road at Site Drive #4

- Developer shall construct Site Drive #4 with a four-lane eastbound approach including 400-foot dual left turn lanes, 100-foot right turn lane, and shared through-right lane with 500 feet IPS for Build 2020.
- Developer shall construct Site Drive #4 with a two-lane westbound approach including a 125-foot left turn lane and a through-right lane with 200-feet IPS for Build 2020.
- Developer shall construct an additional (second) southbound through lane dropping as a right turn lane at Site Drive #4, construct a 125-foot southbound left turn lane, 300-foot northbound left turn lane, and 100-foot northbound right turn lane on Kelly Road for Build 2020.
- Developer shall install a traffic signal once warranted and approved by NCDOT and install communication with the traffic signals on Old US 1.

Old US 1 at Site Drive #5

- Developer shall construct Site Drive #5 as a right-in and right-out only providing 200 feet IPS for Build 2018.
- Developer shall construct an additional (second) westbound through lane and add a 200-foot westbound right turn lane on Old US 1 for Build 2020.
- Developer shall construct an additional (second) eastbound through lane on Old US 1 for Build 2020.

Bristol Property Update

Apex, NC

PREPARED FOR

Pulte Homes
c/o Randy King
1225 Crescent Green Drive
Suite 250
Cary, NC 27518

PREPARED BY

VHB Engineering NC, PC (C-3705)
4000 WestChase Boulevard, Suite 530
Raleigh, NC 27607
919.829.0328

May 18, 2016

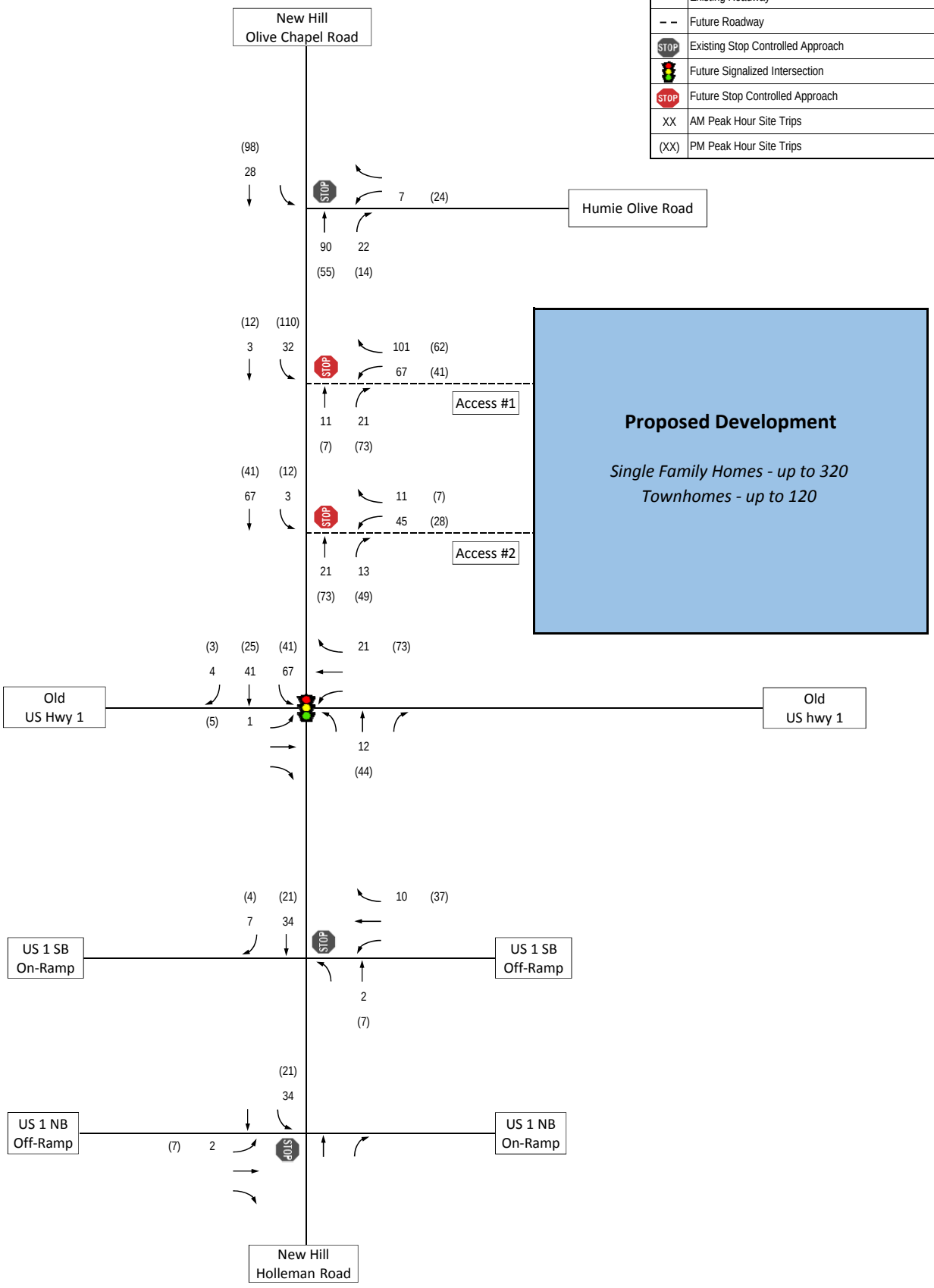


Figure 7
AM and P[illegible] Site Trips

Bristol Property
Apex, NC

Pleasant Park

Apex, NC

PREPARED FOR

WithersRavenel
Our People. Your Success.

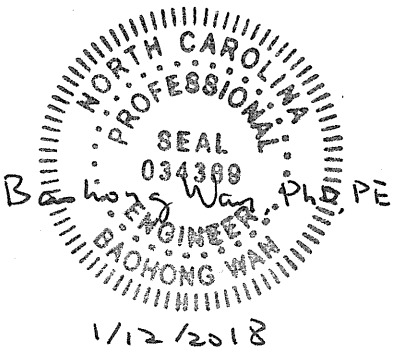
c/o Jason Bertoncino, PE, LEED AP
115 MacKenan Drive
Cary, NC 27511

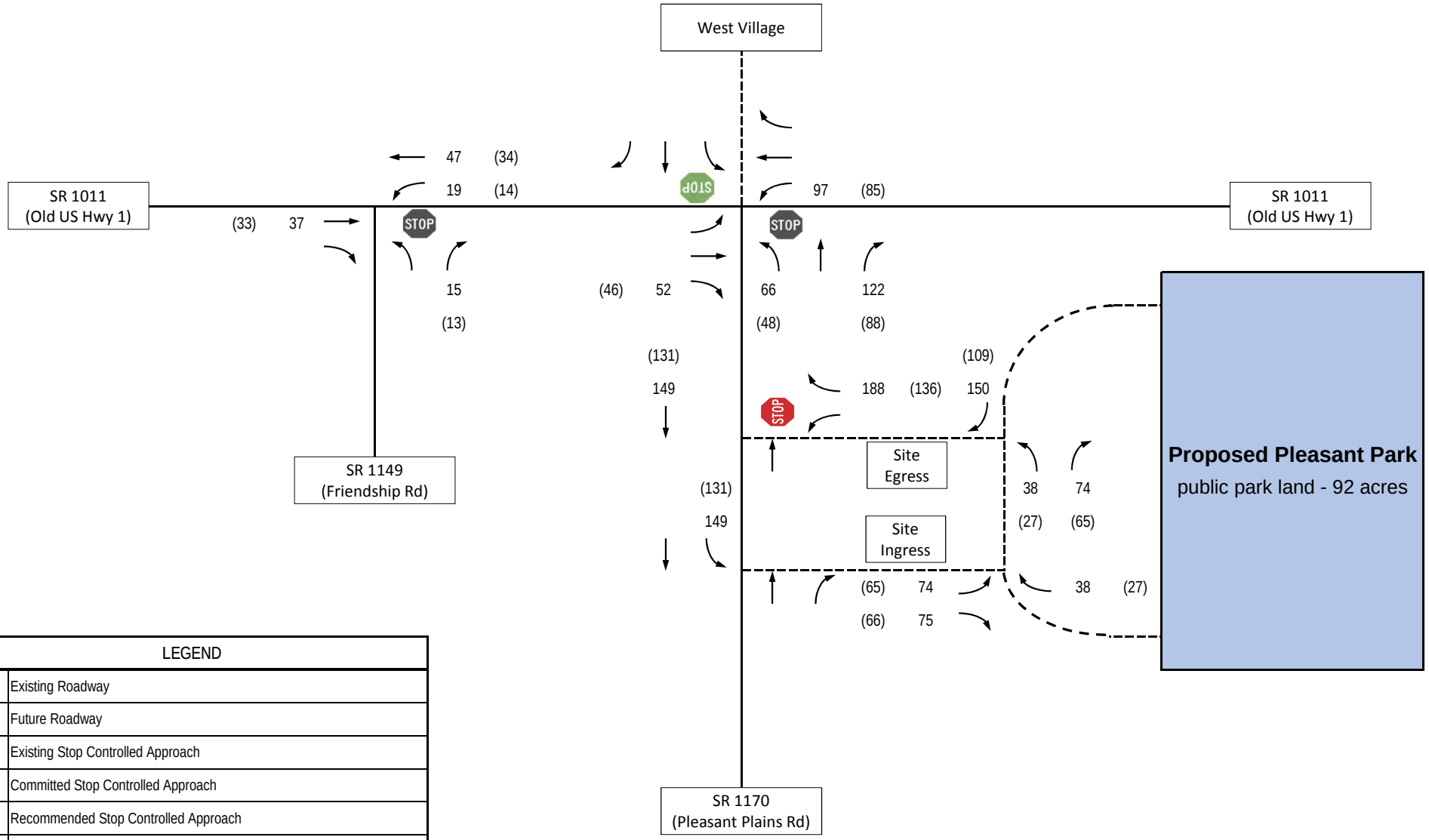
PREPARED BY

vhb

VHB Engineering NC, P.C. (C-3705)
940 Main Campus Drive, Suite 500
Raleigh, NC 27606
919.829.0328

January 12, 2018





LEGEND	
——	Existing Roadway
- - -	Future Roadway
STOP	Existing Stop Controlled Approach
STOP	Committed Stop Controlled Approach
STOP	Recommended Stop Controlled Approach
→	Turning Movement
XX	Weekday PM Peak Hour Turning Movement Volume
(XX)	Saturday Peak Hour Turning Movement Volume

Figure 7

Weekday PM and Saturday Peak Hour Hour Site Trips

Pleasant Park
Apex, NC

TRAFFIC IMPACT ANALYSIS

FOR

OLIVE RIDGE

LOCATED

IN

APEX, NORTH CAROLINA

Prepared For:
Rob Tessar
Weekley Homes, LLC
1901 N. Harrison Avenue, Suite 200
Cary, NC 27513

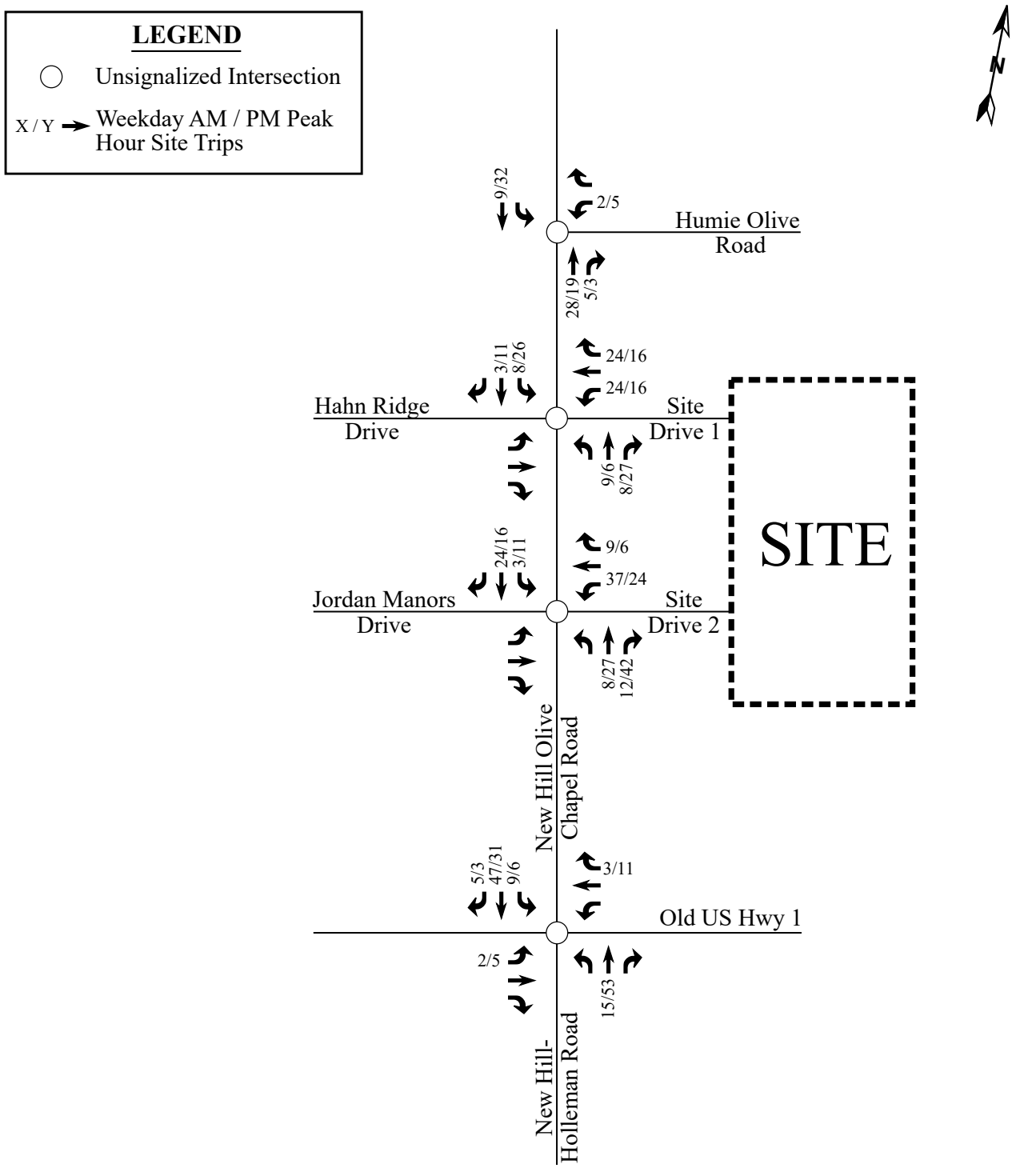
Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

December 2018

RKA Project No. 18357

Prepared By: NB

Reviewed By: RS



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

Olive Ridge Residential
Apex, NC

Site
Trip Assignment

Scale: Not to Scale

Figure 9

TRAFFIC IMPACT ANALYSIS

FOR

NEW HILL ASSEMBLY

LOCATED

IN

APEX, NORTH CAROLINA

Prepared For:
Forsyth Investments Company, LLC
414 Forsyth Street
Raleigh, NC 27609

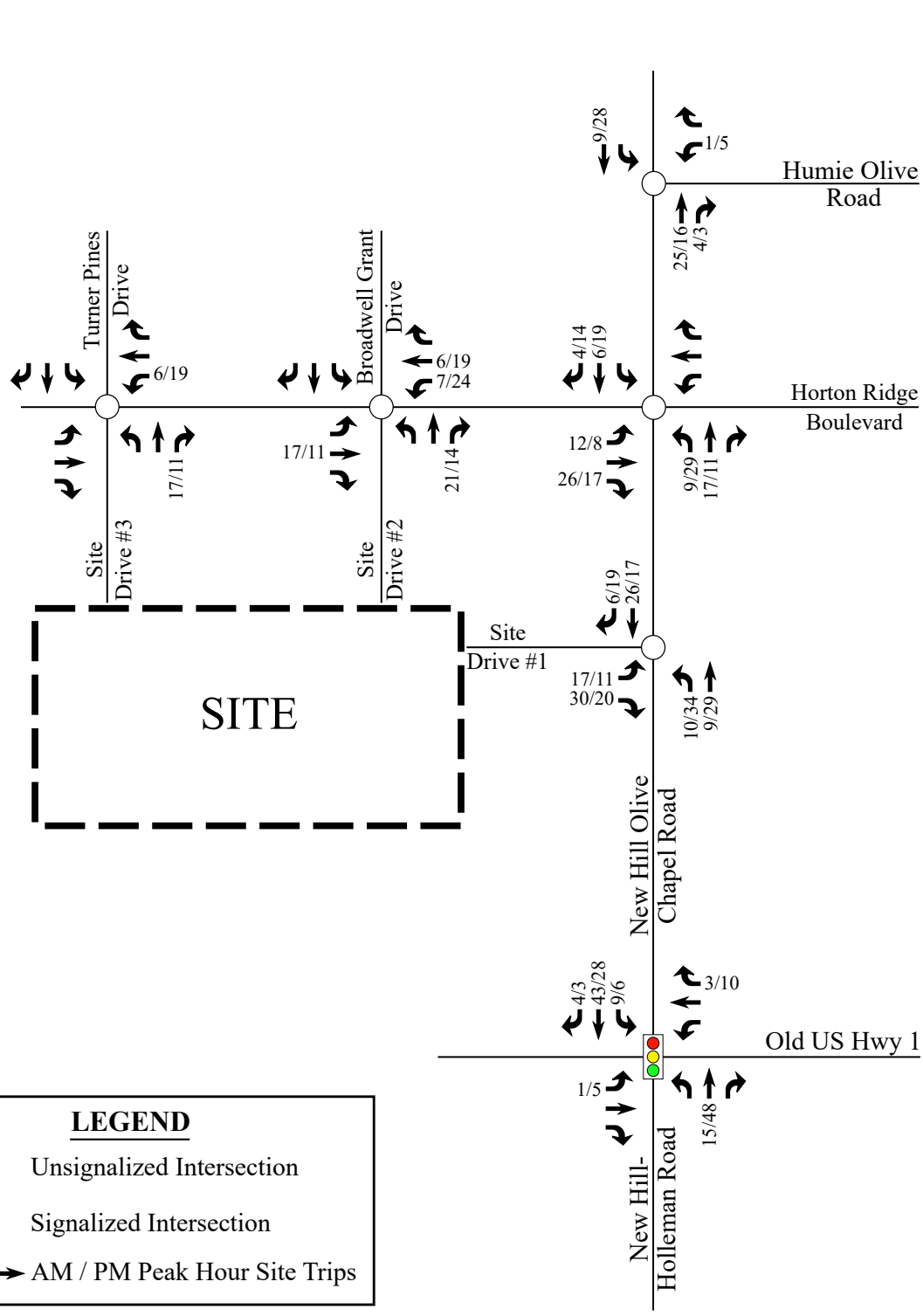
Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

April 2018

RKA Project No. 18120

Prepared By: NB

Reviewed By: JM



RAMEY KEMP & ASSOCIATES
TRANSPORTATION ENGINEERS

New Hill Assembly
Apex, NC

Site
Trip Assignment

Scale: Not to Scale

Figure 9

Kimley-Horn
and Associates, Inc.

October 2, 2013

3001 Weston Parkway
Cary, NC 27513

Mr. Colen Davidson
Impact Homes, LLC
140 Towerview Court
Cary, North Carolina 27513

Re: Proposed Lawrence Assemblage Residential Development
Apex, North Carolina – Traffic Impact Analysis

Dear Mr. Davidson:

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed Lawrence Assemblage residential development located north of Old US 1 and east of Horton Road in Apex, North Carolina. The proposed development will consist of 440 single-family homes. The development is proposed to be accessed by two project driveways on Horton Road and one project driveway on Old US 1. The development is expected to be completed (built-out) in 2016.

This report presents existing conditions, trip generation, distribution, traffic analyses, and recommendations for transportation improvements. The three traffic conditions studied include the existing (2013) traffic condition, the background (2016) traffic condition, and the projected (2016) build-out traffic condition. The study intersections consist of two existing unsignalized intersections and three proposed unsignalized intersections.

Existing Conditions

The surrounding land uses are agricultural and residential uses. Major roadways in the vicinity of the site include Old US 1 and New Hill Olive Chapel Road / New Hill Holleman Road. AM and PM peak hour traffic counts were performed at the intersections of Old US 1 at New Hill Olive Chapel Road / New Hill Holleman Road and Old US 1 at Horton Road on August 28, 2013. The existing AM and PM peak hour turning movement volumes are shown on **Figure 1** and **Figure 2**, respectively.

Trip Generation

The traffic generation potential of the development was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Ninth Edition, 2012) and is summarized in **Table 1**. Detailed trip generation calculations are attached.

TEL 919 677 2000
FAX 919 677 2050

Table 1 ITE Trip Generation							
Land Use	Size	Daily		AM		PM	
		In	Out	In	Out	In	Out
Single Family Detached Housing	440 d.u.	2,052	2,052	80	238	251	148

Table 1 shows that the site has the potential to generate approximately 2,052 new daily trips in and 2,052 new daily trips out with 80 new trips entering and 238 new trips exiting in the AM peak hour and 251 new trips entering and 148 new trips exiting in the PM peak hour.

Background Traffic

Based upon discussions with Town of Apex staff, there are no approved developments within the study area. Based on historical traffic volumes along the roadways in the study area, a 3.0% growth rate was applied to existing traffic to calculate the 2016 background traffic. The traffic growth and total background volumes for the AM and PM peak hours are shown in **Figure 1** and **Figure 2**, respectively.

Distribution and Assignment

Based on surrounding land uses and existing travel patterns, the proposed development site trips were assigned to the study intersections as follows:

- 48% to/from the south on New Hill Holleman Road
- 30% to/from the east on Old US 1
- 20% to/from the north on New Hill Olive Chapel Road
- 2% to/from the west on Old US 1

Figure 3 shows the site traffic distribution and percent assignment at the study intersections. Site traffic was assigned to the network based on the distributions shown above and added to the background traffic to obtain total traffic volumes. **Figure 4** and **Figure 5** show the AM and PM peak hour site and total build-out traffic volumes respectively at the five study intersections.

Capacity Analysis

Capacity analyses were performed for the five study intersections using Synchro Version 7 software. Synchro intersection LOS reports are attached. The level-of-service at each of the study intersections is summarized on **Table 2**.

Table 2 Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay in seconds)**	**PM Peak Hour LOS (Delay in seconds)**
Horton Road at Site Driveway #1 (Unsignalized)		
Build-out (2016) Traffic	Short delays for side-street approach	
Horton Road at Site Driveway #2 (Unsignalized)		
Build-out (2016) Traffic	Short delays for side-street approach	
Old US 1 at Horton Road (Unsignalized)		
Existing (2013) Traffic	Short delays for side-street approach	
Background (2016) Traffic		
Build-out (2016) Traffic		
Old US 1 at Site Driveway #3 (Unsignalized)		
Build-out (2016)	Short delays for side-street approach	
Old US 1 at New Hill Olive Chapel Road / New Hill Holleman Road (Unsignalized)		
Existing (2013) Traffic	Short delays for side-street approaches	Moderate delays for side-street approaches
Background (2016) Traffic		
Build-out (2016) Traffic	Long delays for side-street approaches	
Build-out (2016) Traffic with Signal	B (15.2)	B (18.6)

Analysis indicates the side-street approaches for the three proposed unsignalized site driveways are expected to operate with short delays in the AM and PM peak hours for the build-out traffic condition.

Analysis indicates the southbound side-street approach for the unsignalized intersection of Old US 1 at Horton Road is currently operating with short delays in the AM and PM peak hours and is expected to continue operating with short delays in the AM and PM peak hours for the background and build-out traffic conditions.

Analysis indicates the side-street approaches for the unsignalized intersection of Old US 1 at New Hill Olive Chapel Road / New Hill Holleman Road is currently operating with short delays in the AM peak hour and moderate delays in the PM peak hour and is expected to continue operating with short delays in the AM peak hour and moderate delays in the PM peak hour for the background condition. The side-street approaches are expected to operate with long delays in both the AM and PM peak hours for the build-out traffic condition.

Upon build-out of the proposed development, volumes at the intersection of Old US 1 at New Hill Olive Chapel Road / New Hill Holleman Road are expected to meet traffic signal warrants. With signalization, the intersection is expected to operate at LOS B in both the AM and PM peak hours for the build-out traffic condition.

Recommendations

Based on the capacity analyses and criteria from NCDOT, the following roadway improvements are recommended:

Old US 1 at Horton Road

- Construct an eastbound right-turn lane with 75' of full-width storage on Old US 1

Old US 1 at Site Driveway #3

- Construct an eastbound right-turn lane with 125' of full-width storage on Old US 1
- Construct a westbound left-turn lane with 50' of full-width storage on Old US 1

Old US 1 at New Hill Olive Chapel Road / New Hill Holleman Road

- Signalize when warrants are met

The existing roadway network and recommended roadway improvements are shown on **Figure 6**. If you have any further questions or comments please do not hesitate to call me at 919-677-2062.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.
NC License # F-0102

R. Michael Horn

R. Michael Horn, P.E.
Principal

NORTH CAROLINA PROFESSIONAL SEAL 14510 ENGINEER ROSS MICHAEL HORN

Attachments: Site Plan, Trip Generation Table, Traffic Counts, Intersection Worksheets, Signal Warrant Spreadsheet, Figures 1-6, Synchro LOS Reports

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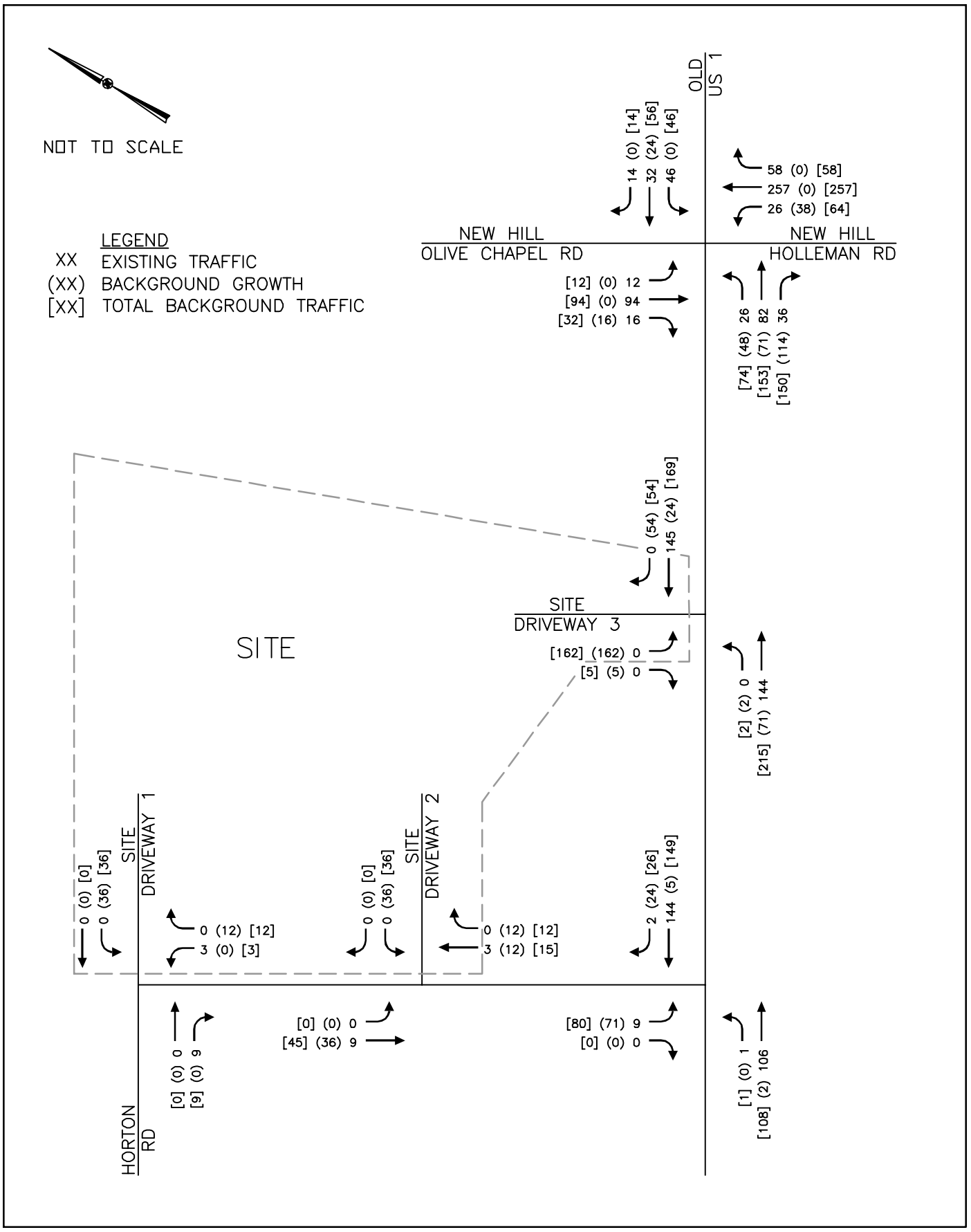

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Kimley-Horn and Associates, Inc.

LAWRENCE ASSEMBLAGE
TRAFFIC IMPACT ANALYSIS

PROJECTED (2016)
AM PEAK HOUR BUILDOUT
TRAFFIC VOLUMES

FIGURE
4

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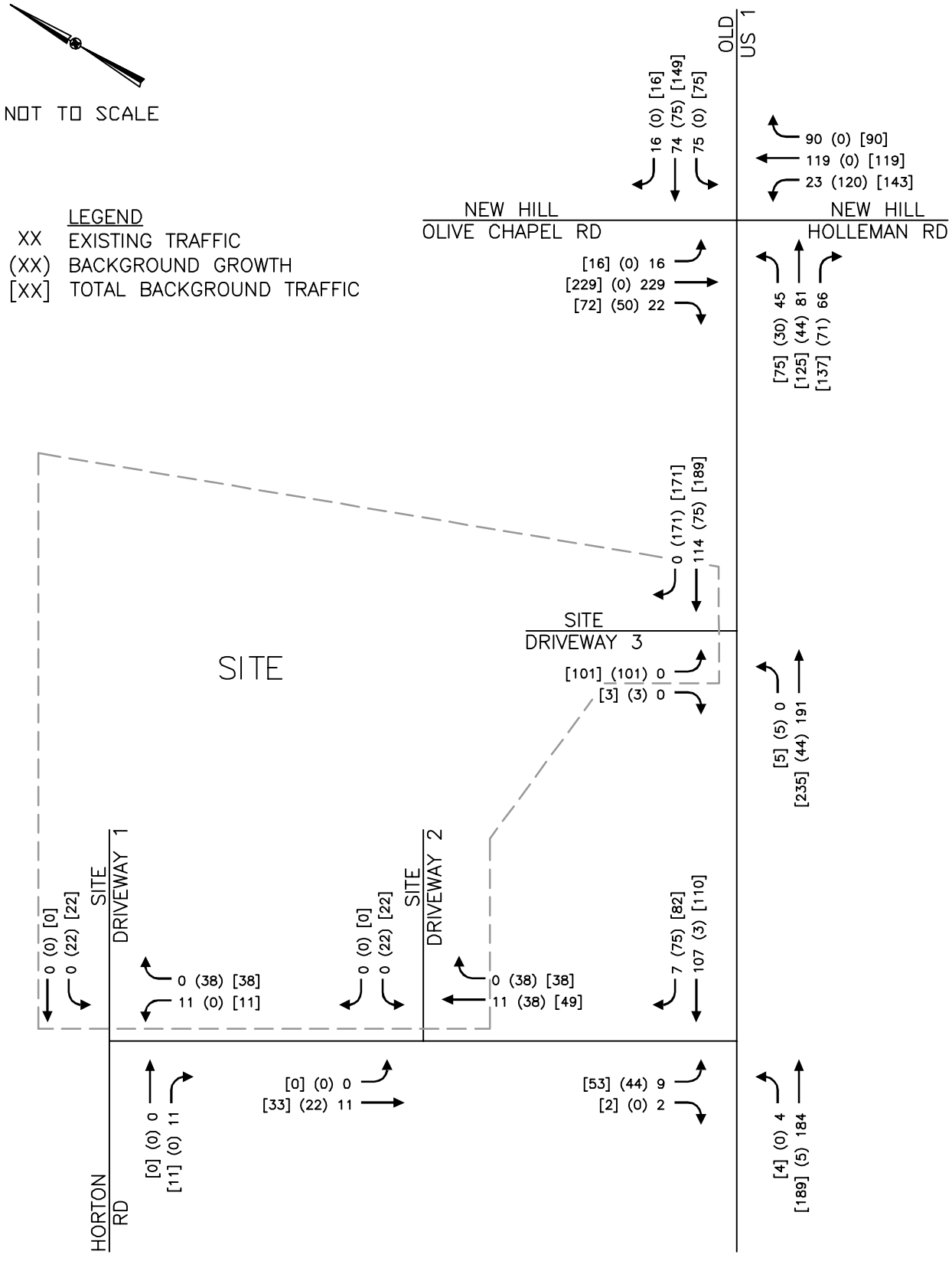

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Kimley-Horn and Associates, Inc.

LAWRENCE ASSEMBLAGE
TRAFFIC IMPACT ANALYSIS

PROJECTED (2016)
PM PEAK HOUR BUILDOUT
TRAFFIC VOLUMES

FIGURE
5

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KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

May 29, 2015

Mr. Colen Davidson
Milestone Developments, LLC.
140 Towerview Ct.
Cary, NC 27513

DocuSigned by:
E9D825BFBC3E429...
5/29/2015

RE: ***Finkle and Haus Assemblage – Traffic Impact Analysis***

Dear Mr. Davidson:

Kimley-Horn and Associates, Inc. has revised the Traffic Impact Analysis (originally dated February 27, 2015) for the proposed residential development located on the west side of New Hill Olive Chapel Road in Apex, NC. The proposed development will consist of approximately 240 single-family homes split between 2 parcels (approximately 160 units in the northern parcel and 80 units in the southern parcel) and is expected to be completed (built-out) by the year 2018. The northern parcel is proposed to be accessed by two full-movement driveways on New Hill Olive Chapel Road, and the southern parcel is proposed to be access by two full-movement driveways on the Proposed Collector Road that will tie to New Hill Olive Chapel Road along the south end of the site. Figure 1 shows the site location, and Figure 2 shows the proposed site plan.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The three traffic conditions studied include the existing (2015) traffic condition, the projected (2018) background traffic condition, and the projected (2018) build-out traffic condition. Analyses were performed for the weekday AM and PM peak hours. The study area consists of the following intersections:

- New Hill Olive Chapel Road & Old US Hwy 1
- New Hill Olive Chapel Road & Humie Olive Road
- New Hill Olive Chapel Road & Proposed Site Access 1
- New Hill Olive Chapel Road & Proposed Site Access 2
- New Hill Olive Chapel Road & Proposed Collector Road (to connect with Site Access 3, 4)

Background Traffic

AM and PM peak hour traffic counts were performed at the following intersections on January 22, 2015:

- New Hill Olive Chapel Road & Old US Hwy 1
- New Hill Olive Chapel Road & Humie Olive Road

The existing AM and PM peak hour turning movement volumes are shown on Figures 3 and 4, respectively. A 3% annual growth factor was applied to the existing volumes to account for ambient

growth in the area through 2018. Traffic from the following five approved but un-built developments was also added to the roadway network:

- Lawrence Assemblage
- Womble Tract Development
- Parkside at Bella Casa
- H-10 High School
- Residential Development along Evans Road (Bella Casa)
- Holland Road Property

Traffic for each of the above developments was assigned based on the *Lawrence Assemblage TIA* prepared by Kimley-Horn in October 2013 and the *Womble Tract Development TIA* prepared by Stantec, Inc. in February 2014. Total background traffic, which includes existing traffic, background growth, and approved development traffic, is shown on Figures 3 and 4 and detailed on the attached intersection worksheets.

Trip Generation

The traffic generation potential of the development was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Ninth Edition, 2012) and is summarized in Table 1.

Table 1
ITE Trip Generation

Land Use	Intensity	Daily		AM		PM	
		In	Out	In	Out	In	Out
Single Family Detached (LUC 210) – North Parcel	160 d.u.	809	809	31	91	101	59
Single Family Detached (LUC 210) – South Parcel	80 d.u.	428	428	17	49	54	32
Total	**240 d.u.**	**1,237**	**1,237**	**48**	**140**	**155**	**91**

Table 1 shows that the site has the potential to generate approximately 1,237 new daily trips in and 1,237 new daily trips out with 48 new trips entering and 140 new trips exiting in the weekday AM peak hour and 155 new trips entering and 91 new trips exiting in the weekday PM peak hour.

Distribution and Assignment

The proposed development site trips were assigned to the study intersections as follows:

- 50% to/from the south on New Hill Holloman Road

- 30% to/from the north on New Hill Olive Chapel Road
- 10% to/from the east on Old US Hwy 1
- 5% to/from the east on Humie Olive Road
- 5% to/from the west on Old US Hwy 1

Site traffic was assigned to the network by parcel based on the distribution shown above and added to the background traffic to obtain total traffic volumes. Figure 5 shows the site traffic distribution and percent assignment by parcel at the study intersections. The attached Figures 6 and 7 show the AM and PM peak hour site and total traffic volumes at the study intersections.

Levels of Service

Capacity analyses were performed using Synchro Version 9 software. Synchro intersection LOS reports are attached. The LOS at each of the study intersections is summarized on Table 2.

Table 2
Level-of-Service Summary

Condition	AM Peak-Hour LOS (Delay)	PM Peak-Hour LOS (Delay)
New Hill Olive Chapel Road & Old US Hwy 1		
Existing (2015) Traffic	NB – C (17.3) SB – B (12.8)	NB – C (17.5) SB – C (21.5)
Background (2018) Traffic - *Signalized*	C (20.5)	B (17.9)
Build-out (2018) Traffic - *Signalized*	C (21.5)	C (22.0)
New Hill Olive Chapel Road & Humie Olive Road (Unsignalized)		
Existing (2015) Traffic	WB – B (10.6)	WB – B (10.2)
Background (2018) Traffic	WB – C (17.5)	WB – B (14.0)
Build-out (2018) Traffic	WB – C (20.0)	WB – C (16.1)
New Hill Olive Chapel Road & Proposed Site Access #1 (Unsignalized)		
Build-out (2018) Traffic	EB – B (11.8) NBL – A (7.6)	EB – B (13.7) NBL – A (8.5)
New Hill Olive Chapel Road & Proposed Site Access #2 (Unsignalized)		
Build-out (2018) Traffic	EB – B (11.2) NBL – A (7.6)	EB – B (13.3) NBL – A (8.5)
New Hill Olive Chapel Road & Proposed Collector Route (Unsignalized)		
Build-out (2018) Traffic	EB – B (11.8) NBL – A (7.7)	EB – B (13.9) NBL – A (8.6)

Analysis indicates that the intersection of New Hill Olive Chapel Road and Old US Hwy 1 currently operates with short delays in the AM and PM peak hours for the northbound (New Hill Holloman Road) and southbound (New Hill Olive Chapel Road) approaches.

For the Background (2018) scenario, a traffic signal is committed to be constructed by the Lawrence Assemblage development at the intersection of New Hill Olive Chapel Road and Old US Hwy 1. In the year 2018 with a traffic signal in place, this intersection is projected to operate at LOS C in the AM peak hour and LOS B in the PM peak hour for the background traffic condition. At full build-out of the proposed development in 2018, this intersection is projected to operate at LOS C in the AM and PM peak hours.

Analysis indicates that the intersection of New Hill Olive Chapel Road and Humie Olive Road is expected to operate at an acceptable level-of-service at full build-out of the development in 2018. Furthermore, all of the proposed site driveways are expected to operate at an acceptable level-of-service.

Recommendations

Based on the capacity analyses presented herein, the following roadway improvements are recommended:

New Hill Olive Chapel Road & Proposed Site Access #1

- Construct a northbound left turn lane with a minimum of 50 feet of full-width storage on New Hill Olive Chapel Road

New Hill Olive Chapel Road & Proposed Site Access #2

- Construct a northbound left turn lane with a minimum of 50 feet of full-width storage on New Hill Olive Chapel Road

New Hill Olive Chapel Road & Proposed Collector Road

- Construct a northbound left turn lane with a minimum of 50 feet of full-width storage on New Hill Olive Chapel Road

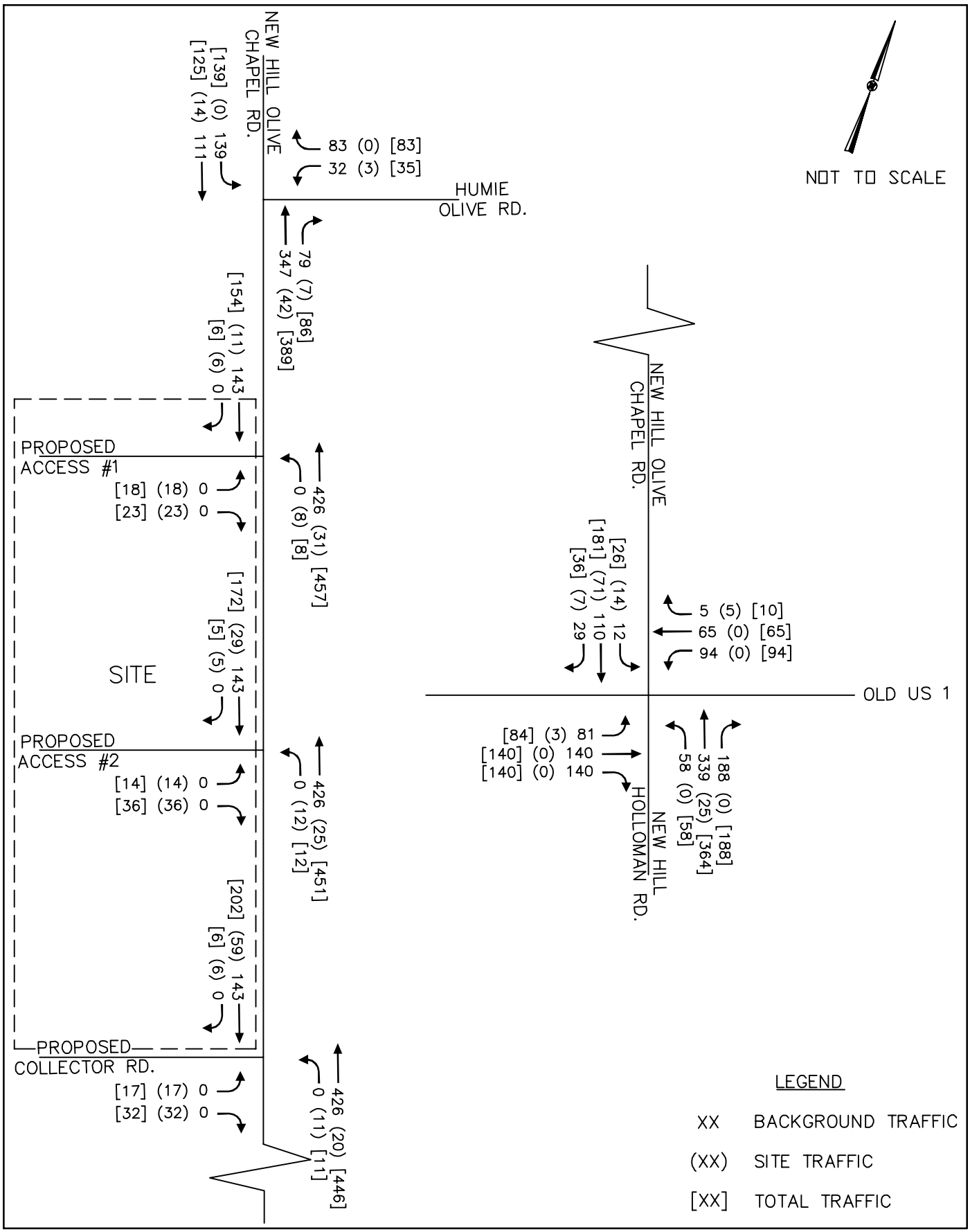
The existing roadway network and recommended roadway improvements are shown on Figure 8.

Should you have any questions or comments, please do not hesitate to contact me at (919) 653-2948 or travis.fluitt@kimley-horn.com.

Sincerely,
Kimley-Horn and Associates, Inc.
NC License #F-0102

Travis Fluitt, P.E.
Project Manager

Attachments: Figures 1-8, Traffic Counts, Approved Development TIA Excerpts, Trip Generation Table, Intersection Worksheets, Synchro LOS Reports, Signal Warrant Spreadsheets



Kimley»Horn

FINKLE & HAUS ASSEMBLAGE
APEX, NC
TRAFFIC IMPACT ANALYSIS

PROJECTED (2018)
BUILD-OUT AM PEAK HOUR
TRAFFIC VOLUMES

FIGURE
6

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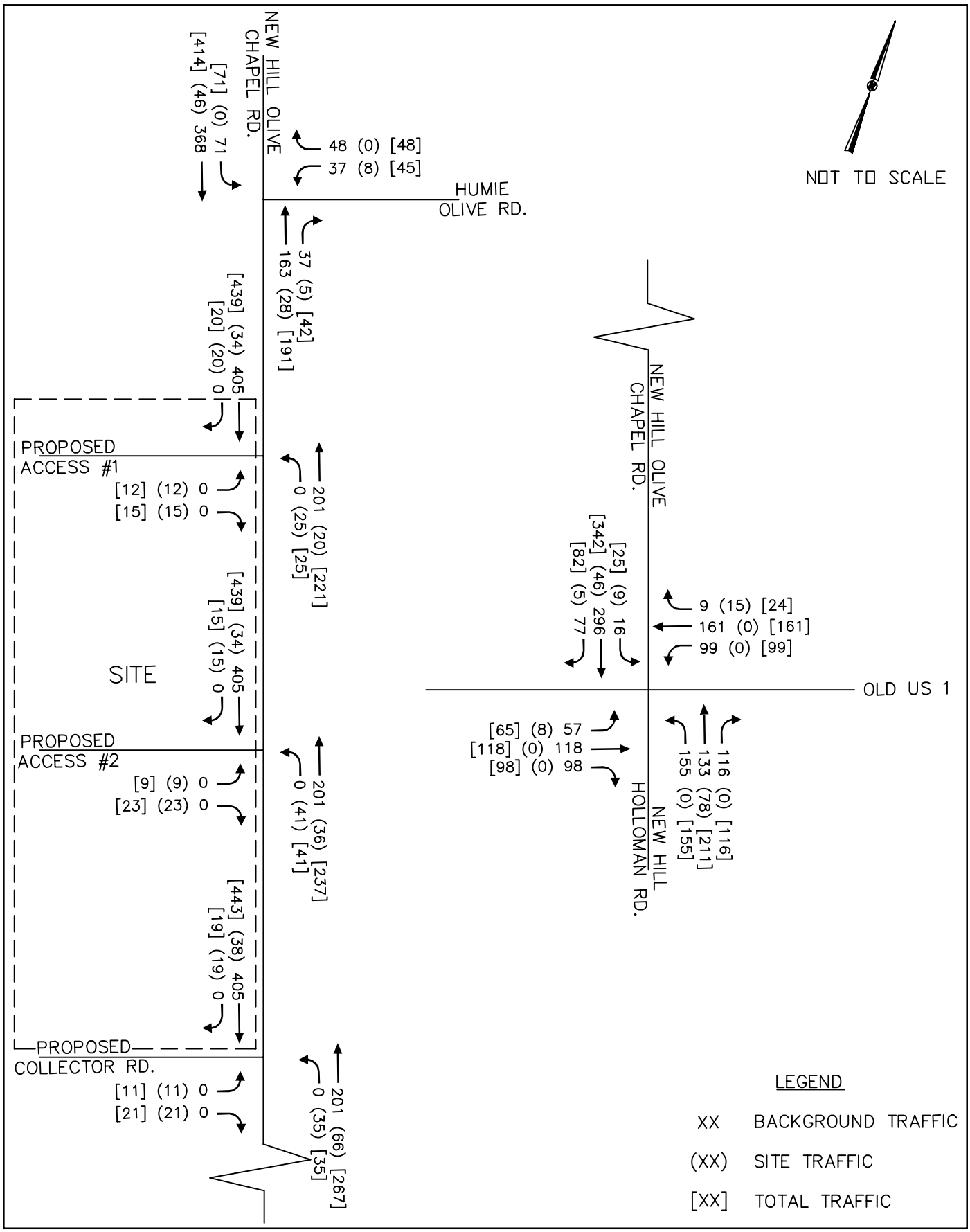

Kimley»Horn	FINKLE & HAUS ASSEMBLAGE APEX, NC TRAFFIC IMPACT ANALYSIS	PROJECTED (2018) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 7

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TRAFFIC IMPACT ANALYSIS UPDATE

FOR

FRIENDSHIP STATION

LOCATED

IN

APEX, NORTH CAROLINA

Prepared For:
Parkside Development Group, LLC
PO Box 1438
Apex, NC 27502

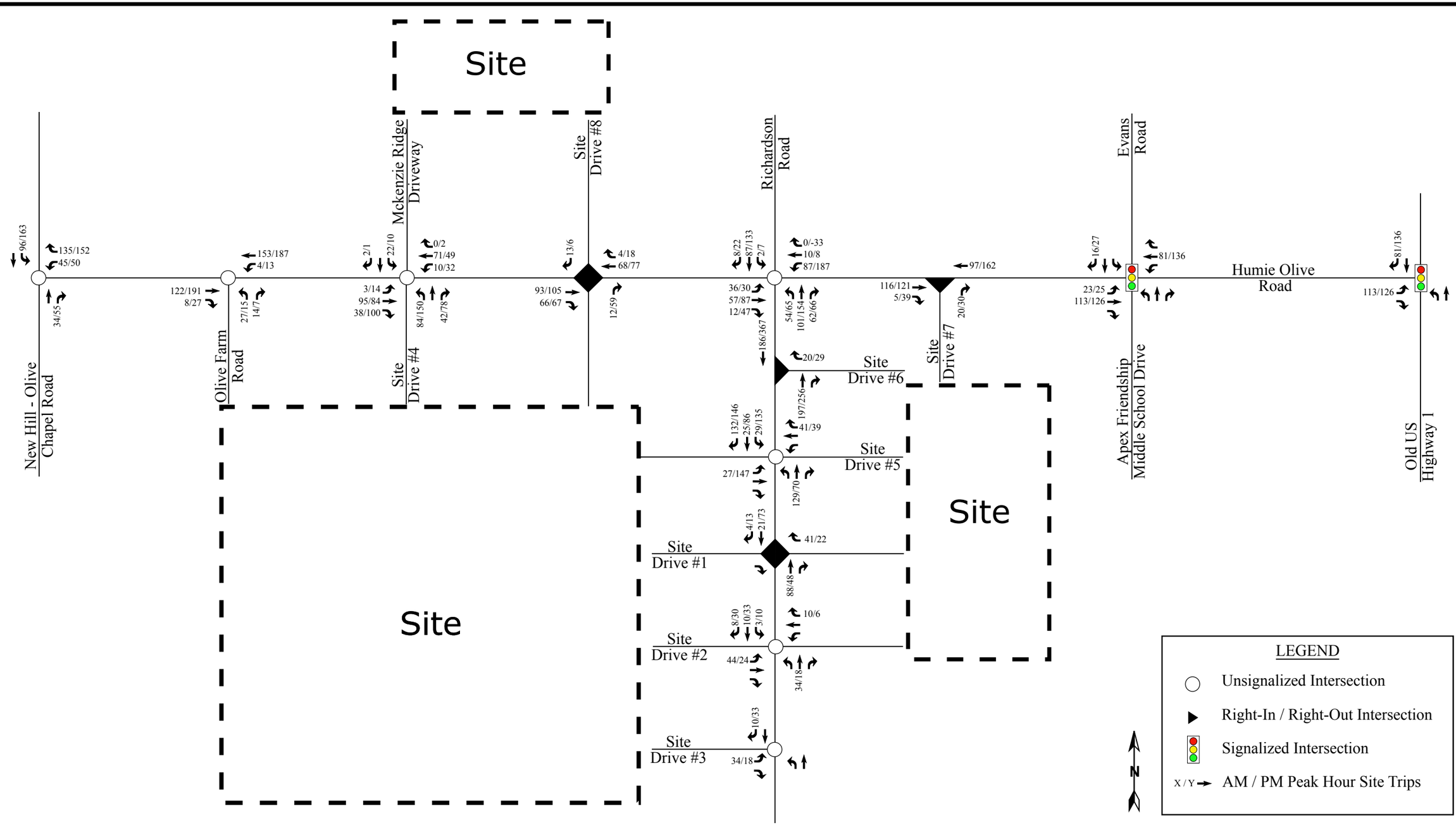
Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

March 2017

RKA Project No. 16238

Prepared By: DBL

Reviewed By: TAA


Site
Site
Site

Memorandum

To: Russell Dalton, PE
Town of Apex

Date: August 3, 2015

Project #: 38495.00

From: Tommy Pate, PE
Transportation Engineer

Re: Goodwin-MacNair Property – Additional Analysis
Apex, NC

Benchmark Communities has plans to develop a parcel of land on the east side of Richardson Road, just north of Mt. Zion Church Road, in Apex, NC. The residential development is projected to consist of 347 single-family homes and be constructed in three phases, with the final phase expected to be completed by 2020.

A Traffic Impact Analysis (TIA) was submitted to the Town of Apex and NCDOT on June 26, 2015. The Town requested that three additional recently-approved developments be included in the analysis. VHB was also informed that the future geometrics at the Olive Chapel Road and Kelly Road intersection were being modified to include dual eastbound left-turn lanes along Olive Chapel Road (as part of the Town's LAPP project). An additional northbound receiving lane will be constructed on the north side of Kelly Road by developers in the area.

As a result, analysis was updated for the Olive Chapel Road and Kelly Road intersection in the No-Build (2020) and Build (2020) scenarios. Future laneage and storage lengths were based on preliminary Town designs, with the exception of the dual eastbound left-turn lanes along Olive Chapel Road. The storage lengths for these lanes are currently unknown; however based on the spacing between the Olive Chapel Road and Kelly Road intersection and the adjacent westbound leftover west of the intersection, and discussions with the Town, the lanes were assumed to provide roughly 150 feet of storage.

A future signal plan at the Olive Chapel Road and Kelly Road intersection has not been developed at this time; therefore it was assumed that the eastbound and westbound approaches along Olive Chapel Road would operate under protected phasing conditions, while the northbound and southbound approaches along Kelly Road would operate under permitted/protected phasing conditions. In addition, overlaps were assumed for the northbound, westbound and southbound right-turns.

As previously mentioned, traffic from three additional approved developments was incorporated in the No-Build (2020) analysis. Three approved developments are as follows:

- *Daycare and Office*: Located in the southwestern quadrant of the Olive Chapel Road and Kelly Road intersection, this development is proposed to consist of a 10,000 square-foot daycare center and up to 9,500 square feet of office space. The build year for the development is expected to occur in 2015. A traffic analysis report was prepared by Ramey Kemp & Associates and submitted to the Town in June 2014. As detailed in the report, the development is projected to generate 959 daily site trips with 151 trips occurring in the AM peak hour (91 entering, 60 exiting) and 212 trips occurring in the PM peak hour (73 entering, 139 exiting). These trips were distributed to the study area based on the assumed distribution patterns in the report. Field visits indicate that the development has not been constructed; therefore, 100% of the traffic associated with the development was included in the No-Build (2020) analysis.
- *The Reserve at Beaver Creek*: Located on the east side of Kelly Road, north and south of Beaver Creek Commons Drive, this residential development is proposed to consist of 58 single-family homes and 71 townhomes, with an anticipated build year of 2017. A traffic analysis report was prepared by Ramey Kemp & Associates and

VHB Engineering NC, P.C. (C-3705)
4000 WestChase Boulevard
Suite 530
Raleigh, NC 27607
P 919.829.0328

Memorandum

submitted to the Town in February 2015. As detailed in the report, the development is projected to generate 1,100 daily site trips with 89 trips occurring in the AM peak hour (20 entering, 69 exiting) and 109 trips occurring in the PM peak hour (70 entering, 39 exiting). These trips were distributed to the study area based on the assumed distribution patterns in the report. Field visits indicate that the development has not been constructed; therefore, 100% of the traffic associated with the development was included in the No-Build (2020) analysis.

- *The Pointe Shopping Center*: Located in the northeast quadrant of the Olive Chapel Road and Kelly Road intersection, this retail development is proposed to consist of a 45,600 square-foot supermarket, 22,280 square feet of retail space, and 4 outparcels (totaling approximately 6.6 acres). Based on discussions with Town staff, the outparcels were assumed to consist of 6,000 square feet of high-turnover, sit-down restaurant space, a drive-in bank, and 10,000 square feet of fast-food restaurant space. The build year is anticipated to be 2016. A traffic analysis report was prepared by Ramey Kemp & Associates and submitted to the Town in April 2015. As detailed in the report, the development is projected to generate 13,380 external daily site trips with 545 external trips occurring in the AM peak hour (311 entering, 234 exiting) and 687 external trips occurring in the PM peak hour (354 entering, 333 exiting). These trips were distributed to the study area based on the assumed distribution patterns in the report. Field visits indicate that the development has not been constructed; therefore, 100% of the traffic associated with the development was included in the No-Build (2020) analysis.

The Pointe Shopping Center TIA recommended extending the westbound right-turn lane along Olive Chapel Road to provide 350 feet of storage. This improvement was included in the No-Build (2020) analysis in accordance with the Overall Site Layout Plan for The Pointe development (Sheet C2.0) sealed on May 14, 2015. Additionally, developers in the area are constructing the additional northbound receiving lane along Kelly Road that will be needed once the dual eastbound left-turn lanes are constructed along Olive Chapel Road as part of the Town's LAPP project. All supporting documentation for these approved development trips are included at the end of the memo, along with the updated No-Build (2020) and Build (2020) turning movement projections.

As shown in the Summary Level of Service table at the end of this memo, the Olive Chapel Road and Kelly Road intersection is projected to operate acceptably in the No-Build (2020) and Build (2020) scenarios, despite the inclusion of additional approved development traffic. The improvements being made at this intersection by the Town of Apex and developers are projected to adequately mitigate the projected increase in traffic volumes in the future. Efforts should be made to ensure optimal signal phasing and timings are implemented at this location. No further improvements are recommended at this location.

4000 WestChase Boulevard
Suite 530
Raleigh, NC 27607
P 919.829.0328

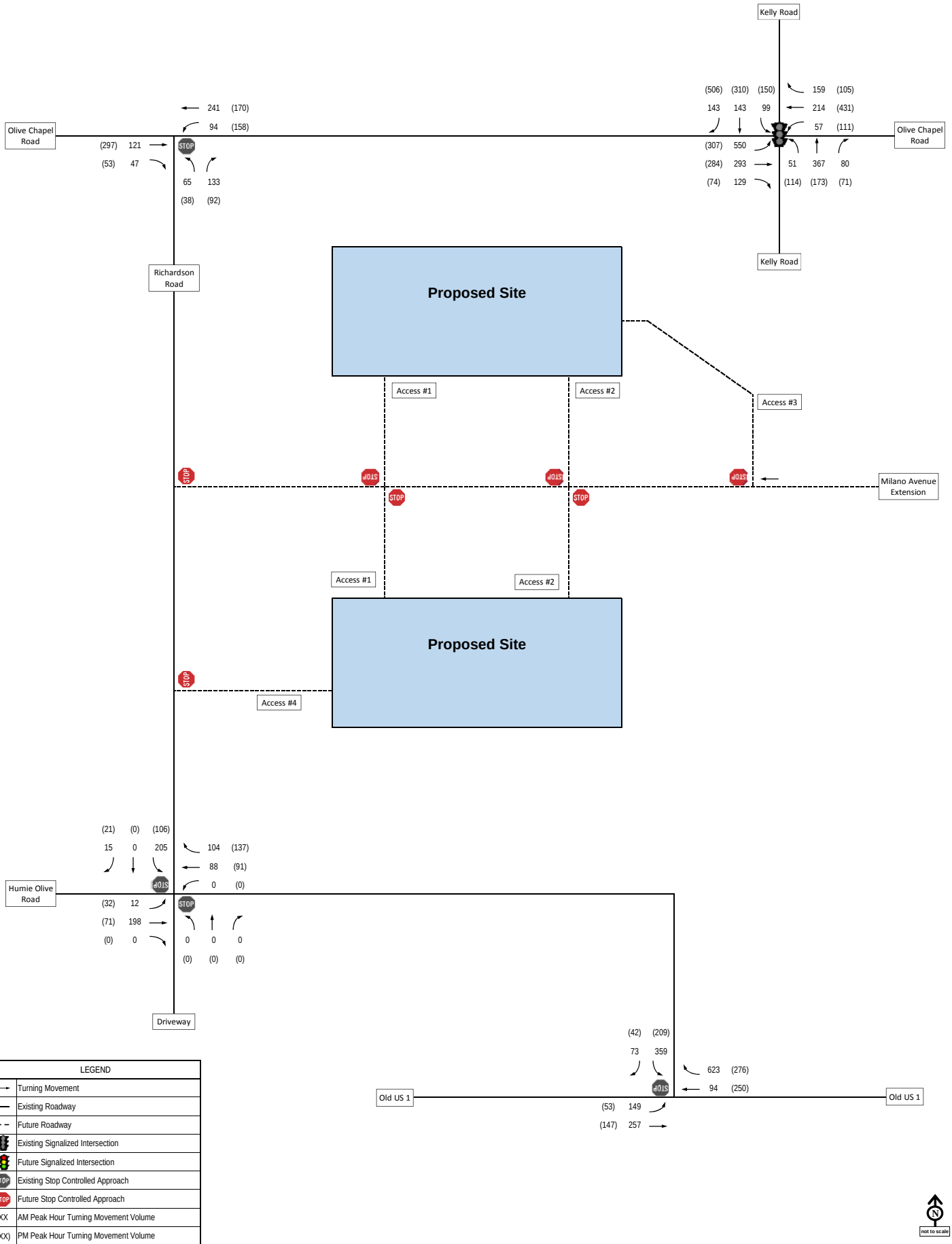


Figure 5

No-Build (2020) AM and PM P ng Movement Volumes

Goodwin-MacNair Property
Apex, NC

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

APEX BARBECUE ROAD

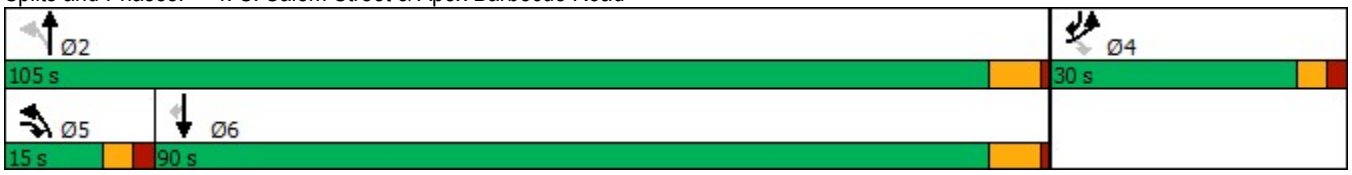
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	283	181	139	341	245	179
Future Volume (vph)	283	181	139	341	245	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.371			
Satd. Flow (perm)	1770	1583	691	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	314	201	154	379	272	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	201	154	379	272	199
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	17.6	31.5	29.5	29.5	15.7	38.3
Actuated g/C Ratio	0.31	0.55	0.52	0.52	0.27	0.67
v/c Ratio	0.58	0.23	0.29	0.39	0.53	0.19
Control Delay	22.0	7.5	9.1	10.0	22.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	7.5	9.1	10.0	22.6	4.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	A	A	B	C	A
Approach Delay	16.4			9.8	14.8	
Approach LOS	B			A	B	
Queue Length 50th (ft)	88	31	26	72	79	21
Queue Length 95th (ft)	171	67	54	131	149	42
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	776	904	546	1863	1863	1268
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	0.40	0.22	0.28	0.20	0.15	0.16

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 57.2
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 48.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



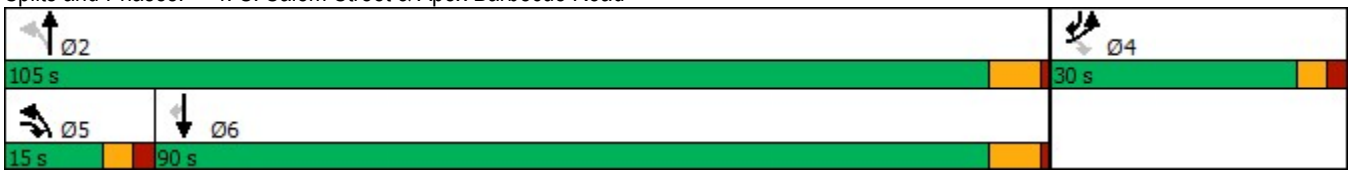
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	226	76	74	325	265	232
Future Volume (vph)	226	76	74	325	265	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	251	84	82	361	294	258
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	84	82	361	294	258
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	12.2	25.1	25.7	25.7	16.3	35.1
Actuated g/C Ratio	0.25	0.52	0.53	0.53	0.34	0.73
v/c Ratio	0.56	0.10	0.15	0.36	0.47	0.22
Control Delay	22.5	7.5	6.4	7.9	17.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	7.5	6.4	7.9	17.5	4.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	A	A	A	B	A
Approach Delay	18.7			7.6	11.2	
Approach LOS	B			A	B	
Queue Length 50th (ft)	63	12	10	50	68	24
Queue Length 95th (ft)	135	32	28	107	145	50
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	946	908	614	1863	1863	1447
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	0.27	0.09	0.13	0.19	0.16	0.18

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 48.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 44.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



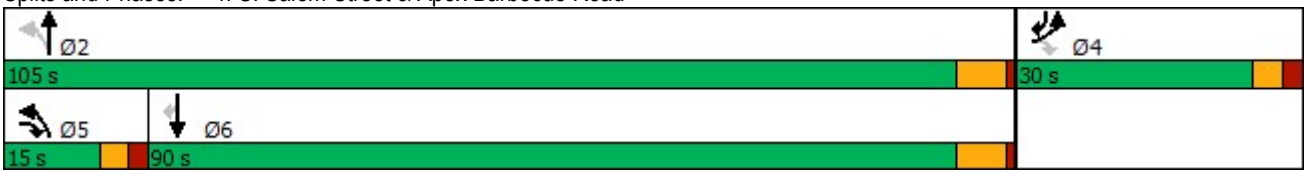
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	338	216	166	541	486	214
Future Volume (vph)	338	216	166	541	486	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.139			
Satd. Flow (perm)	1770	1583	259	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	376	240	184	601	540	238
Shared Lane Traffic (%)						
Lane Group Flow (vph)	376	240	184	601	540	238
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.2	39.5	40.6	40.6	26.3	56.5
Actuated g/C Ratio	0.33	0.52	0.53	0.53	0.35	0.74
v/c Ratio	0.64	0.29	0.57	0.60	0.84	0.20
Control Delay	29.5	12.9	17.2	14.7	35.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	12.9	17.2	14.7	35.2	3.4
LOS	C	B	B	B	D	A
Approach Delay	23.0			15.3	25.5	
Approach LOS	C			B	C	
Queue Length 50th (ft)	152	60	41	179	233	27

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	#294	132	84	268	349	46
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	587	841	339	1863	1858	1179
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	0.64	0.29	0.54	0.32	0.29	0.20

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 75.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



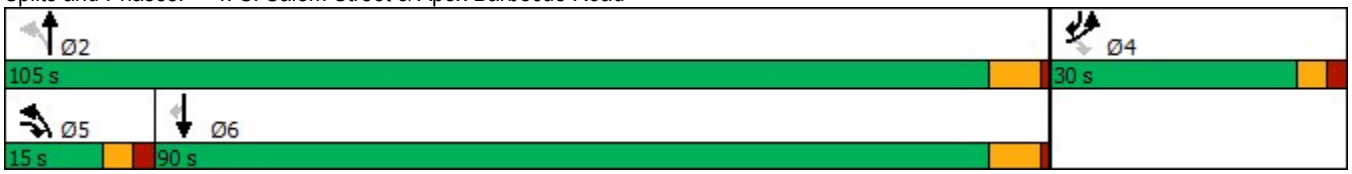
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	96	94	701	584	277
Future Volume (vph)	270	96	94	701	584	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.143			
Satd. Flow (perm)	1770	1583	266	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	300	107	104	779	649	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	300	107	104	779	649	308
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	19.7	32.9	45.7	45.7	32.5	57.3
Actuated g/C Ratio	0.26	0.43	0.60	0.60	0.43	0.76
v/c Ratio	0.65	0.16	0.33	0.69	0.81	0.26
Control Delay	34.2	15.7	9.4	14.4	28.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	15.7	9.4	14.4	28.4	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	A	B	C	A
Approach Delay	29.4			13.8	20.3	
Approach LOS	C			B	C	
Queue Length 50th (ft)	121	28	18	222	252	31
Queue Length 95th (ft)	254	75	42	395	441	58
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	602	734	365	1863	1821	1326
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	0.50	0.15	0.28	0.42	0.36	0.23

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 75.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 19.4 Intersection LOS: B
Intersection Capacity Utilization 64.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



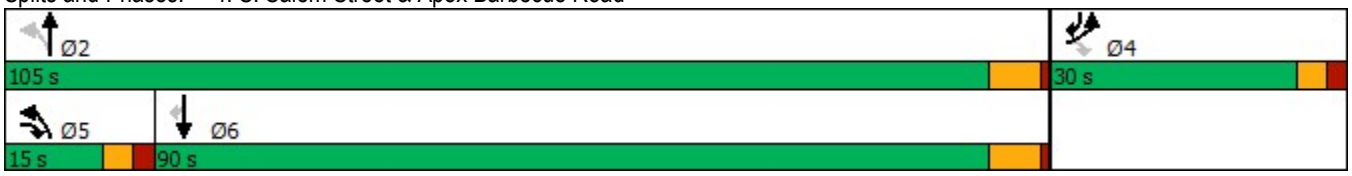
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	369	236	181	579	513	234
Future Volume (vph)	369	236	181	579	513	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.129			
Satd. Flow (perm)	1770	1583	240	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	410	262	201	643	570	260
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	262	201	643	570	260
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.3	39.8	42.8	42.8	28.3	58.6
Actuated g/C Ratio	0.32	0.51	0.55	0.55	0.36	0.75
v/c Ratio	0.72	0.33	0.64	0.63	0.85	0.22
Control Delay	34.1	14.3	20.9	15.1	35.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	14.3	20.9	15.1	35.3	3.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	C	B	D	A
Approach Delay	26.4			16.5	25.3	
Approach LOS	C			B	C	
Queue Length 50th (ft)	176	71	46	198	251	30
Queue Length 95th (ft)	#372	156	105	293	373	50
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	571	818	329	1863	1843	1186
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	0.72	0.32	0.61	0.35	0.31	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 78.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 22.4 Intersection LOS: C
Intersection Capacity Utilization 70.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



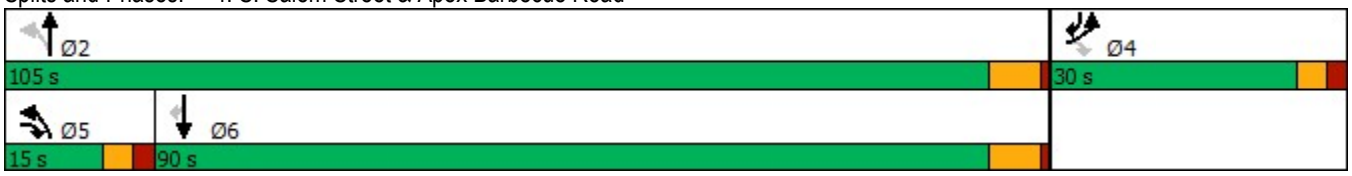
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	104	103	737	614	303
Future Volume (vph)	295	104	103	737	614	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.107			
Satd. Flow (perm)	1770	1583	199	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	116	114	819	682	337
Shared Lane Traffic (%)						
Lane Group Flow (vph)	328	116	114	819	682	337
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	24.0	37.3	48.3	48.3	35.0	64.2
Actuated g/C Ratio	0.29	0.45	0.59	0.59	0.42	0.78
v/c Ratio	0.64	0.16	0.42	0.75	0.86	0.27
Control Delay	34.4	16.4	12.0	17.5	33.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	16.4	12.0	17.5	33.7	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	B	B	C	A
Approach Delay	29.7			16.9	23.6	
Approach LOS	C			B	C	
Queue Length 50th (ft)	141	33	24	283	304	35
Queue Length 95th (ft)	#311	86	45	428	474	65
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	545	753	310	1863	1792	1257
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	0.60	0.15	0.37	0.44	0.38	0.27

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 82.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



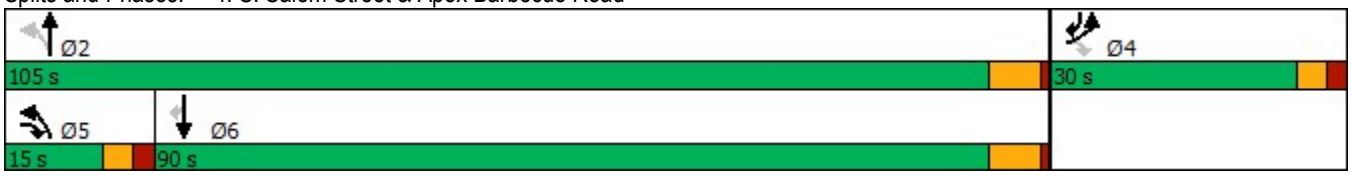
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	359	238	173	563	493	220
Future Volume (vph)	359	238	173	563	493	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.137			
Satd. Flow (perm)	1770	1583	255	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			1929	1058	
Travel Time (s)	19.7			23.9	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	399	264	192	626	548	244
Shared Lane Traffic (%)						
Lane Group Flow (vph)	399	264	192	626	548	244
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.2	39.6	41.2	41.2	26.8	57.1
Actuated g/C Ratio	0.33	0.52	0.54	0.54	0.35	0.75
v/c Ratio	0.68	0.32	0.60	0.62	0.84	0.21
Control Delay	31.5	13.5	18.5	15.2	35.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	13.5	18.5	15.2	35.3	3.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	B	B	D	A
Approach Delay	24.4			15.9	25.5	
Approach LOS	C			B	C	
Queue Length 50th (ft)	165	69	43	190	237	28
Queue Length 95th (ft)	#340	148	92	284	356	47
Internal Link Dist (ft)	1222			1849	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	583	835	337	1863	1855	1181
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	0.68	0.32	0.57	0.34	0.30	0.21

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 76.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 67.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



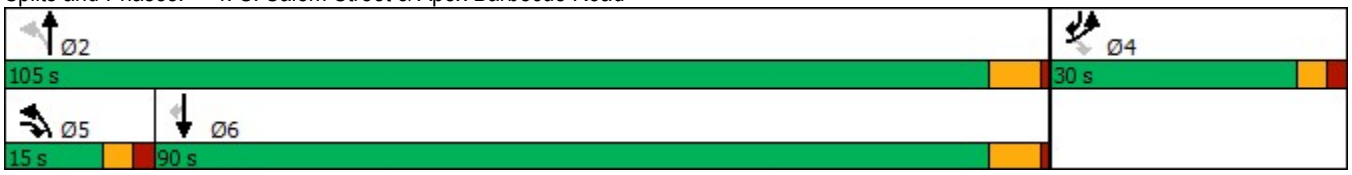
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	281	108	114	713	603	297
Future Volume (vph)	281	108	114	713	603	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.126			
Satd. Flow (perm)	1770	1583	235	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			1929	1058	
Travel Time (s)	19.7			23.9	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	312	120	127	792	670	330
Shared Lane Traffic (%)						
Lane Group Flow (vph)	312	120	127	792	670	330
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	21.4	35.0	47.9	47.9	34.3	60.8
Actuated g/C Ratio	0.27	0.44	0.60	0.60	0.43	0.76
v/c Ratio	0.66	0.17	0.42	0.71	0.83	0.27
Control Delay	35.3	16.4	11.1	15.2	30.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	16.4	11.1	15.2	30.6	3.3

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	D	B	B	B	C	A
Approach Delay	30.0			14.6	21.6	
Approach LOS	C			B	C	
Queue Length 50th (ft)	132	33	25	246	284	36
Queue Length 95th (ft)	274	87	49	404	462	63
Internal Link Dist (ft)	1222			1849	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	571	731	339	1863	1798	1295
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	0.55	0.16	0.37	0.43	0.37	0.25

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 79.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



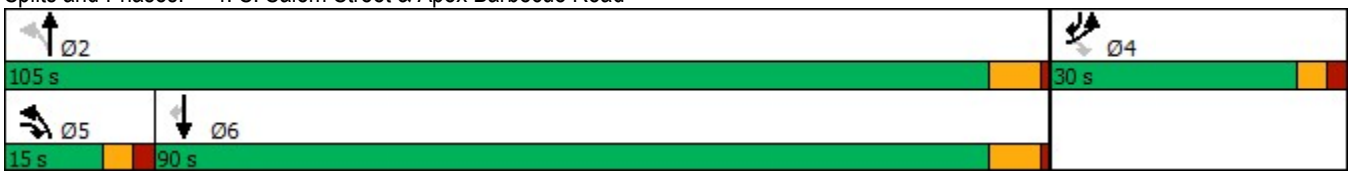
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	421	325	212	655	676	247
Future Volume (vph)	421	325	212	655	676	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.088			
Satd. Flow (perm)	1770	1583	164	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	361	236	728	751	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	468	361	236	728	751	274
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.4	40.3	56.4	56.4	41.4	71.9
Actuated g/C Ratio	0.28	0.44	0.61	0.61	0.45	0.78
v/c Ratio	0.96	0.52	0.86	0.64	0.90	0.22
Control Delay	68.1	24.7	50.4	13.8	37.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	24.7	50.4	13.8	37.0	3.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	E	C	D	B	D	A
Approach Delay	49.2			22.7	27.9	
Approach LOS	D			C	C	
Queue Length 50th (ft)	268	148	82	241	385	32
Queue Length 95th (ft)	#588	308	#241	340	543	50
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	488	699	277	1832	1705	1237
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	0.96	0.52	0.85	0.40	0.44	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 91.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.4 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



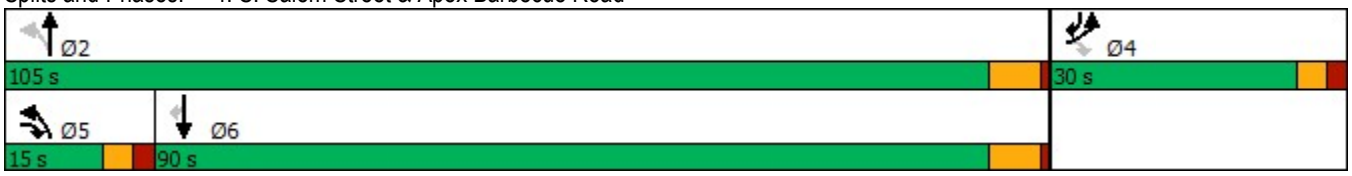
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	345	151	227	879	724	334
Future Volume (vph)	345	151	227	879	724	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.079			
Satd. Flow (perm)	1770	1583	147	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	383	168	252	977	804	371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	383	168	252	977	804	371
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.5	40.4	61.5	61.5	46.5	77.1
Actuated g/C Ratio	0.26	0.42	0.63	0.63	0.48	0.79
v/c Ratio	0.83	0.26	0.98	0.83	0.90	0.30
Control Delay	52.8	23.1	76.9	20.4	36.8	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	23.1	76.9	20.4	36.8	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	D	C	E	C	D	A
Approach Delay	43.7			32.0	26.2	
Approach LOS	D			C	C	
Queue Length 50th (ft)	221	65	103	414	432	47
Queue Length 95th (ft)	#499	152	#302	587	600	69
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	463	663	263	1795	1634	1256
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	0.83	0.25	0.96	0.54	0.49	0.30

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 97.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



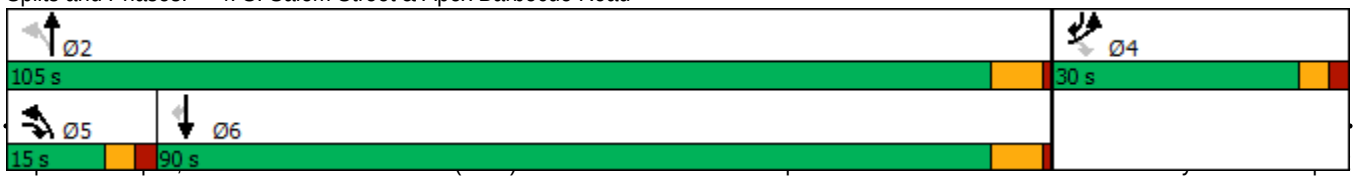
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	421	325	212	655	676	247
Future Volume (vph)	421	325	212	655	676	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375	0	275			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.088			
Satd. Flow (perm)	1770	1583	164	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	361	236	728	751	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	468	361	236	728	751	274
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	1	1	0
Detector Template						
Leading Detector (ft)	40	40	40	426	426	0
Trailing Detector (ft)	0	0	0	420	420	0
Detector 1 Position(ft)	0	0	0	420	420	0
Detector 1 Size(ft)	40	40	40	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	3.0	10.0	15.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.4	40.3	56.4	56.4	41.4	71.9
Actuated g/C Ratio	0.28	0.44	0.61	0.61	0.45	0.78
v/c Ratio	0.96	0.52	0.86	0.64	0.90	0.22
Control Delay	68.1	24.7	50.4	13.8	37.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	24.7	50.4	13.8	37.0	3.0
LOS	E	C	D	B	D	A
Approach Delay	49.2			22.7	27.9	
Approach LOS	D			C	C	
Queue Length 50th (ft)	268	148	82	241	385	32
Queue Length 95th (ft)	#588	308	#241	340	543	50
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	375		275			475
Base Capacity (vph)	488	699	277	1832	1705	1237
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	0.96	0.52	0.85	0.40	0.44	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 91.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.4 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



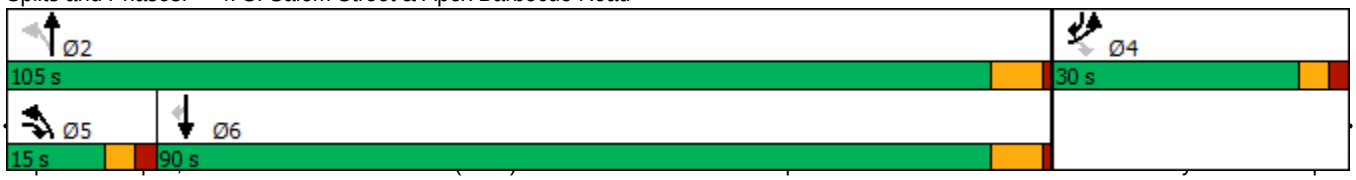
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	345	151	227	879	724	334
Future Volume (vph)	345	151	227	879	724	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375	0	300			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.079			
Satd. Flow (perm)	1770	1583	147	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	383	168	252	977	804	371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	383	168	252	977	804	371
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	1	1	0
Detector Template						
Leading Detector (ft)	40	40	40	426	426	0
Trailing Detector (ft)	0	0	0	420	420	0
Detector 1 Position(ft)	0	0	0	420	420	0
Detector 1 Size(ft)	40	40	40	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	3.0	10.0	15.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.5	40.4	61.5	61.5	46.5	77.1
Actuated g/C Ratio	0.26	0.42	0.63	0.63	0.48	0.79
v/c Ratio	0.83	0.26	0.98	0.83	0.90	0.30
Control Delay	52.8	23.1	76.9	20.4	36.8	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	23.1	76.9	20.4	36.8	3.2
LOS	D	C	E	C	D	A
Approach Delay	43.7			32.0	26.2	
Approach LOS	D			C	C	
Queue Length 50th (ft)	221	65	103	414	432	47
Queue Length 95th (ft)	#499	152	#302	587	600	69
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	375		300			475
Base Capacity (vph)	463	663	263	1795	1634	1256
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	0.83	0.25	0.96	0.54	0.49	0.30

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 97.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



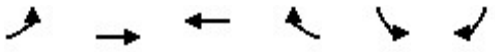
APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

NORTHBOUND NC-540 RAMPS



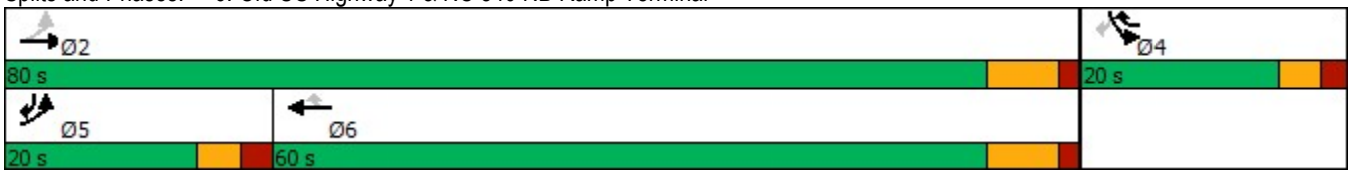
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	251	362	253	173	118	134
Future Volume (vph)	251	362	253	173	118	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.406				0.950	
Satd. Flow (perm)	756	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	279	402	281	192	131	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	402	281	192	131	149
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	32.4	32.4	16.5	29.6	8.0	23.9
Actuated g/C Ratio	0.64	0.64	0.33	0.59	0.16	0.47
v/c Ratio	0.40	0.34	0.46	0.21	0.47	0.20
Control Delay	5.7	5.1	17.4	6.2	26.3	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.7	5.1	17.4	6.2	26.3	8.4

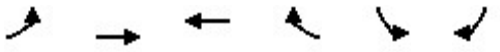
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	B	A	C	A
Approach Delay		5.4	12.9		16.8	
Approach LOS		A	B		B	
Queue Length 50th (ft)	26	40	62	22	35	23
Queue Length 95th (ft)	60	88	141	56	86	52
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	788	1863	1839	1149	530	883
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	0.35	0.22	0.15	0.17	0.25	0.17

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 50.5
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 10.1 Intersection LOS: B
Intersection Capacity Utilization 46.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Old US Highway 1 & NC 540 NB Ramp Terminal





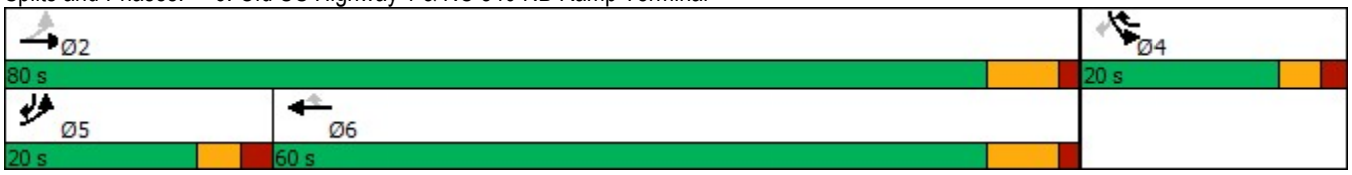
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	340	321	20	59	177
Future Volume (vph)	52	340	321	20	59	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.383				0.950	
Satd. Flow (perm)	713	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	378	357	22	66	197
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	378	357	22	66	197
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	31.3	33.7	18.4	30.8	7.4	14.5
Actuated g/C Ratio	0.73	0.78	0.43	0.71	0.17	0.34
v/c Ratio	0.08	0.26	0.45	0.02	0.22	0.37
Control Delay	3.3	3.7	12.8	3.4	19.6	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.3	3.7	12.8	3.4	19.6	12.1

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	B	A	B	B
Approach Delay		3.7	12.2		14.0	
Approach LOS		A	B		B	
Queue Length 50th (ft)	5	37	73	2	16	31
Queue Length 95th (ft)	13	68	134	7	45	76
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	893	1863	1863	1383	628	807
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	0.06	0.20	0.19	0.02	0.11	0.24

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 43.1
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 9.2 Intersection LOS: A
Intersection Capacity Utilization 41.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: Old US Highway 1 & NC 540 NB Ramp Terminal



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	576	566	495	207	141	312
Future Volume (vph)	576	566	495	207	141	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.181				0.950	
Satd. Flow (perm)	337	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	640	629	550	230	157	347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	640	629	550	230	157	347
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	45.8	45.8	25.4	40.4	10.0	30.4
Actuated g/C Ratio	0.69	0.69	0.38	0.61	0.15	0.46
v/c Ratio	1.13	0.49	0.77	0.24	0.59	0.48
Control Delay	97.8	6.4	25.7	6.0	37.5	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.8	6.4	25.7	6.0	37.5	16.6
LOS	F	A	C	A	D	B
Approach Delay		52.5	19.9		23.1	
Approach LOS		D	B		C	
Queue Length 50th (ft)	~229	89	181	36	58	89

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (ft)	#536	190	322	61	132	206
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	567	1831	1575	1098	411	729
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	1.13	0.34	0.35	0.21	0.38	0.48

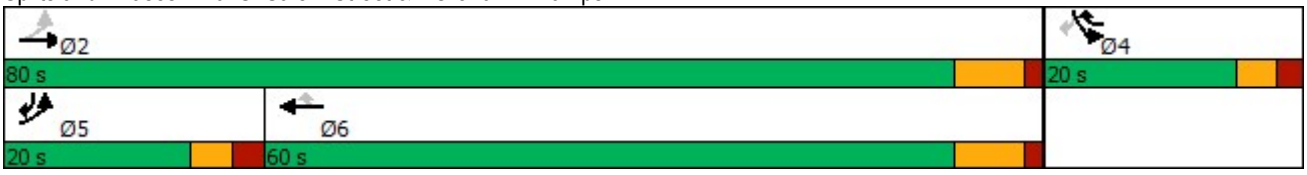
Intersection Summary

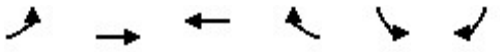
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 66
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.13
Intersection Signal Delay: 36.7 Intersection LOS: D
Intersection Capacity Utilization 78.3% ICU Level of Service D
Analysis Period (min) 15

~ 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.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





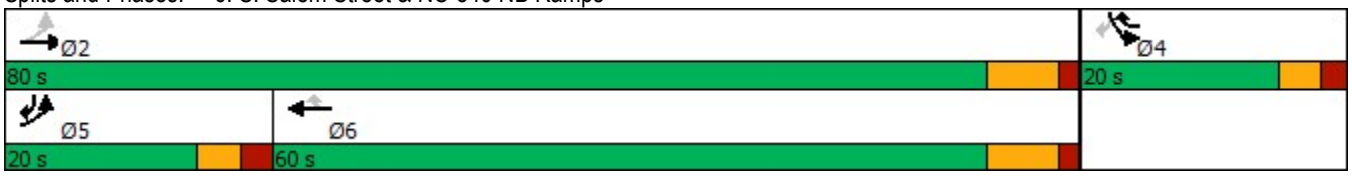
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	331	725	656	24	70	392
Future Volume (vph)	331	725	656	24	70	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.123				0.950	
Satd. Flow (perm)	229	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	806	729	27	78	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	806	729	27	78	436
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	53.4	55.2	32.5	46.7	8.7	25.4
Actuated g/C Ratio	0.78	0.80	0.47	0.68	0.13	0.37
v/c Ratio	0.70	0.54	0.83	0.03	0.35	0.75
Control Delay	23.6	5.3	25.0	4.0	38.2	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	5.3	25.0	4.0	38.2	31.2

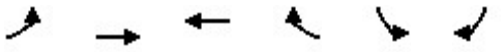
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	C	A	C	A	D	C
Approach Delay		11.0	24.2		32.3	
Approach LOS		B	C		C	
Queue Length 50th (ft)	82	111	260	4	32	152
Queue Length 95th (ft)	#282	226	432	10	88	#400
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	544	1769	1473	1250	421	604
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	0.68	0.46	0.49	0.02	0.19	0.72

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 68.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 19.6 Intersection LOS: B
Intersection Capacity Utilization 71.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	603	606	523	226	154	327
Future Volume (vph)	603	606	523	226	154	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.163				0.950	
Satd. Flow (perm)	304	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	670	673	581	251	171	363
Shared Lane Traffic (%)						
Lane Group Flow (vph)	670	673	581	251	171	363
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	47.4	47.4	26.9	42.5	10.5	31.0
Actuated g/C Ratio	0.70	0.70	0.40	0.62	0.15	0.46
v/c Ratio	1.24	0.52	0.79	0.25	0.63	0.50
Control Delay	141.5	6.8	26.7	5.9	40.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.5	6.8	26.7	5.9	40.0	18.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	A	C	A	D	B
Approach Delay		74.0	20.5		25.1	
Approach LOS		E	C		C	
Queue Length 50th (ft)	~286	104	201	40	67	101
Queue Length 95th (ft)	#607	210	344	66	148	229
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	542	1820	1534	1101	399	719
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	1.24	0.37	0.38	0.23	0.43	0.50

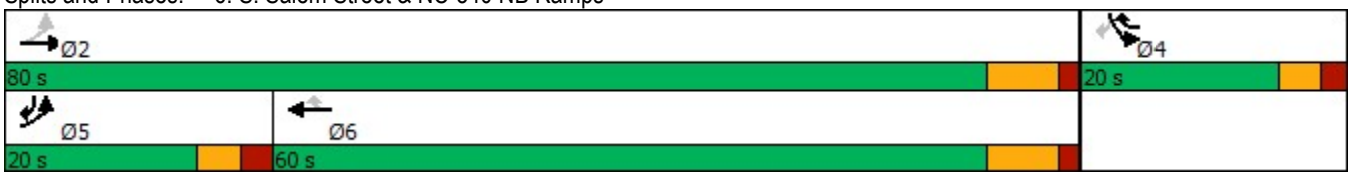
Intersection Summary

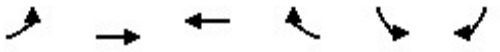
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 68.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.24
Intersection Signal Delay: 47.9 Intersection LOS: D
Intersection Capacity Utilization 82.0% ICU Level of Service D
Analysis Period (min) 15

~ 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.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





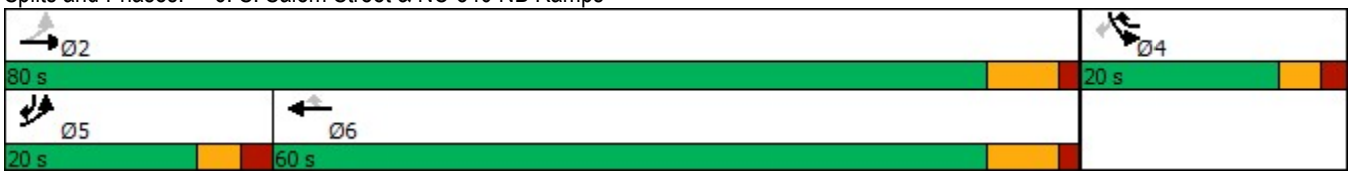
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	337	763	692	26	77	412
Future Volume (vph)	337	763	692	26	77	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.107				0.950	
Satd. Flow (perm)	199	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	4447		1132	
Travel Time (s)		17.2	55.1		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	374	848	769	29	86	458
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	848	769	29	86	458
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	56.6	58.3	35.1	49.5	8.9	26.2
Actuated g/C Ratio	0.78	0.81	0.49	0.69	0.12	0.36
v/c Ratio	0.74	0.56	0.85	0.03	0.39	0.80
Control Delay	28.5	5.6	26.3	3.8	40.6	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	5.6	26.3	3.8	40.6	35.5

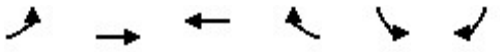
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	C	A	C	A	D	D
Approach Delay		12.6	25.5		36.3	
Approach LOS		B	C		D	
Queue Length 50th (ft)	100	123	285	4	37	176
Queue Length 95th (ft)	#326	258	479	10	97	#444
Internal Link Dist (ft)		1304	4367		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	509	1741	1421	1245	398	579
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	0.73	0.49	0.54	0.02	0.22	0.79

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 72.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 73.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	576	592	582	272	161	312
Future Volume (vph)	576	592	582	272	161	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.142				0.950	
Satd. Flow (perm)	265	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	2516		1132	
Travel Time (s)		17.2	31.2		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	640	658	647	302	179	347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	640	658	647	302	179	347
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	51.9	51.9	31.4	47.6	11.1	31.7
Actuated g/C Ratio	0.71	0.71	0.43	0.65	0.15	0.43
v/c Ratio	1.27	0.50	0.81	0.29	0.67	0.51
Control Delay	157.1	6.5	27.3	5.9	44.7	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	157.1	6.5	27.3	5.9	44.7	20.5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	A	C	A	D	C
Approach Delay		80.7	20.5		28.8	
Approach LOS		F	C		C	
Queue Length 50th (ft)	~307	108	242	49	76	108
Queue Length 95th (ft)	#639	198	395	79	168	248
Internal Link Dist (ft)		1304	2436		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	504	1767	1439	1121	372	683
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	1.27	0.37	0.45	0.27	0.48	0.51

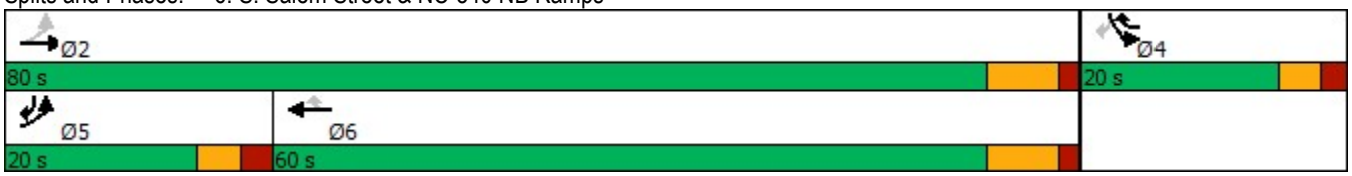
Intersection Summary

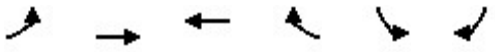
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 73.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 50.3 Intersection LOS: D
Intersection Capacity Utilization 84.0% ICU Level of Service E
Analysis Period (min) 15

~ 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.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





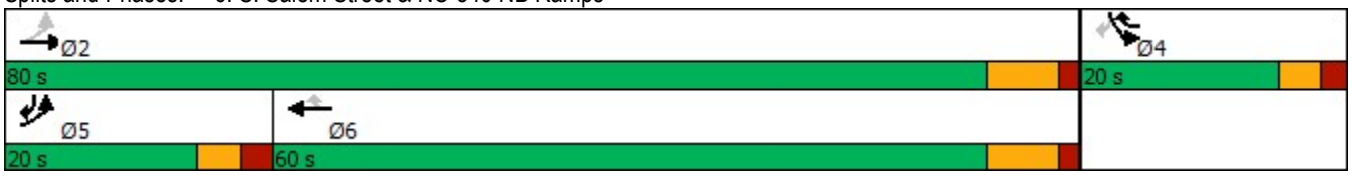
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	331	804	702	59	129	392
Future Volume (vph)	331	804	702	59	129	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.098				0.950	
Satd. Flow (perm)	183	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	2516		1132	
Travel Time (s)		17.2	31.2		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	893	780	66	143	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	893	780	66	143	436
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	57.7	57.7	37.9	53.5	10.5	30.3
Actuated g/C Ratio	0.73	0.73	0.48	0.68	0.13	0.39
v/c Ratio	0.86	0.65	0.87	0.06	0.61	0.71
Control Delay	41.2	8.1	29.6	3.9	47.2	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	8.1	29.6	3.9	47.2	31.2

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	D	A	C	A	D	C
Approach Delay		17.8	27.6		35.2	
Approach LOS		B	C		D	
Queue Length 50th (ft)	118	169	319	9	68	181
Queue Length 95th (ft)	#345	331	526	19	149	#402
Internal Link Dist (ft)		1304	2436		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	450	1682	1362	1183	353	631
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	0.82	0.53	0.57	0.06	0.41	0.69

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 78.6
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 24.6 Intersection LOS: C
Intersection Capacity Utilization 74.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	603	809	739	375	253	327
Future Volume (vph)	603	809	739	375	253	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.084				0.950	
Satd. Flow (perm)	156	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	1271		1132	
Travel Time (s)		17.2	15.8		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	670	899	821	417	281	363
Shared Lane Traffic (%)						
Lane Group Flow (vph)	670	899	821	417	281	363
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	64.0	64.0	43.7	64.0	15.2	35.4
Actuated g/C Ratio	0.72	0.72	0.49	0.72	0.17	0.40
v/c Ratio	1.74	0.67	0.90	0.37	0.94	0.58
Control Delay	365.0	9.7	34.4	5.7	78.5	28.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	365.0	9.7	34.4	5.7	78.5	28.0
LOS	F	A	C	A	E	C
Approach Delay		161.4	24.7		50.0	
Approach LOS		F	C		D	
Queue Length 50th (ft)	~531	230	398	75	162	162
Queue Length 95th (ft)	#820	336	577	114	#358	296
Internal Link Dist (ft)		1304	1191		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	386	1580	1161	1134	300	628
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	1.74	0.57	0.71	0.37	0.94	0.58

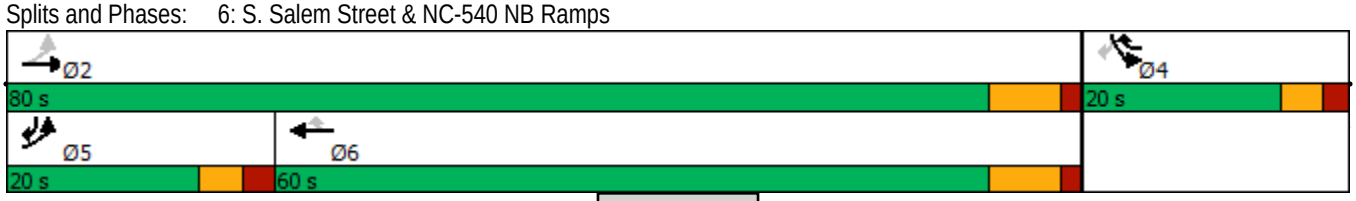
Intersection Summary

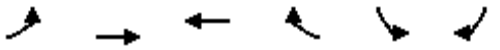
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 89.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.74
Intersection Signal Delay: 91.6 Intersection LOS: F
Intersection Capacity Utilization 98.8% ICU Level of Service F
Analysis Period (min) 15

~ 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.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	337	966	925	145	204	412
Future Volume (vph)	337	966	925	145	204	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	1271		1132	
Travel Time (s)		17.2	15.8		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	374	1073	1028	161	227	458
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	1073	1028	161	227	458
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	75.0	75.0	55.0	74.3	14.2	34.3
Actuated g/C Ratio	0.76	0.76	0.55	0.75	0.14	0.35
v/c Ratio	1.09	0.76	1.00	0.14	0.90	0.84
Control Delay	103.8	11.8	50.7	3.8	78.0	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.8	11.8	50.7	3.8	78.0	45.4
LOS	F	B	D	A	E	D
Approach Delay		35.6	44.3		56.2	
Approach LOS		D	D		E	
Queue Length 50th (ft)	~219	335	~627	24	143	264
Queue Length 95th (ft)	#403	511	#931	41	#274	#434
Internal Link Dist (ft)		1304	1191		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	344	1408	1032	1196	267	546
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	1.09	0.76	1.00	0.13	0.85	0.84

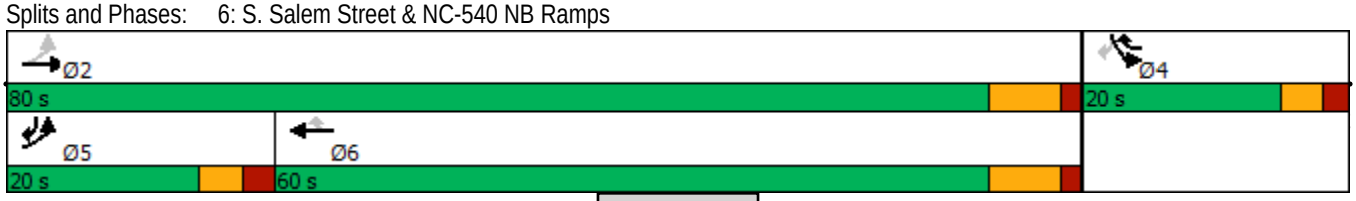
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 99.3
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 43.0 Intersection LOS: D
Intersection Capacity Utilization 91.2% ICU Level of Service F
Analysis Period (min) 15

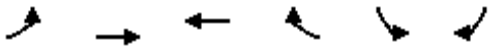
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	603	809	739	375	253	327
Future Volume (vph)	603	809	739	375	253	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.080				0.950	
Satd. Flow (perm)	149	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	1271		1132	
Travel Time (s)		17.2	15.8		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	670	899	821	417	281	363
Shared Lane Traffic (%)						
Lane Group Flow (vph)	670	899	821	417	281	363
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	38.0	89.0	51.0	21.0	21.0	38.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	34.5%	80.9%	46.4%	19.1%	19.1%	34.5%
Maximum Green (s)	32.3	82.0	44.0	15.8	15.8	32.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	C-Min	Min	None	None	None
Act Effct Green (s)	84.0	84.0	46.0	67.0	16.0	54.0
Actuated g/C Ratio	0.76	0.76	0.42	0.61	0.15	0.49
v/c Ratio	1.12	0.63	1.05	0.43	1.09	0.47
Control Delay	90.2	9.2	79.6	13.2	128.0	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.2	9.2	79.6	13.2	128.0	21.0
LOS	F	A	E	B	F	C
Approach Delay		43.8	57.2		67.7	
Approach LOS		D	E		E	
Queue Length 50th (ft)	~479	349	~636	146	~224	163
Queue Length 95th (ft)	m#572	m364	#873	215	#392	245
Internal Link Dist (ft)		1304	1191		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	600	1422	779	964	257	777
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	1.12	0.63	1.05	0.43	1.09	0.47

Intersection Summary

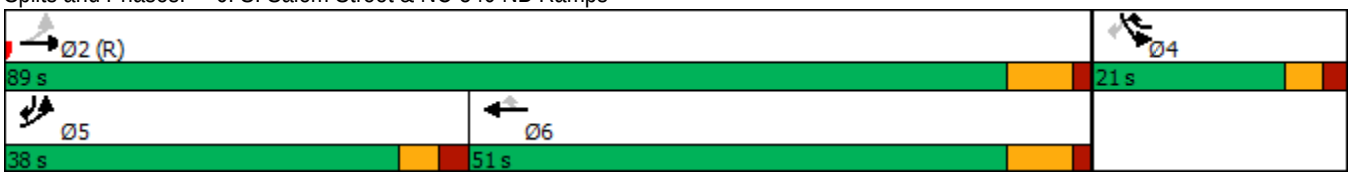
Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 50 (45%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 53.1 Intersection LOS: D
Intersection Capacity Utilization 98.8% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

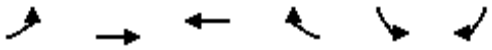
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	337	966	925	145	204	412
Future Volume (vph)	337	966	925	145	204	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	650			250	0	150
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				83		91
Link Speed (mph)		55	55		25	
Link Distance (ft)		1384	1271		1132	
Travel Time (s)		17.2	15.8		30.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	374	1073	1028	161	227	458
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	1073	1028	161	227	458
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	12.7	21.0	21.0	12.2	12.2	12.7
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.3	73.0	53.0	14.8	14.8	14.3
Yellow Time (s)	3.2	5.4	5.4	3.1	3.1	3.2
All-Red Time (s)	2.5	1.6	1.6	2.1	2.1	2.5
Lost Time Adjust (s)	-0.7	-2.0	-2.0	-0.2	-0.2	-0.7
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.1	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	C-Min	Min	None	None	None
Act Effct Green (s)	75.7	75.7	55.0	74.3	14.3	35.0
Actuated g/C Ratio	0.76	0.76	0.55	0.74	0.14	0.35
v/c Ratio	1.06	0.76	1.00	0.13	0.90	0.75
Control Delay	82.5	7.9	52.9	2.0	78.7	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.5	7.9	52.9	2.0	78.7	31.5
LOS	F	A	D	A	E	C
Approach Delay		27.2	46.0		47.1	
Approach LOS		C	D		D	
Queue Length 50th (ft)	~217	201	~627	11	143	207
Queue Length 95th (ft)	m#312	m410	#931	26	#274	332
Internal Link Dist (ft)		1304	1191		1052	
Turn Bay Length (ft)	650			250		150
Base Capacity (vph)	353	1410	1024	1208	265	613
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	1.06	0.76	1.00	0.13	0.86	0.75

Intersection Summary

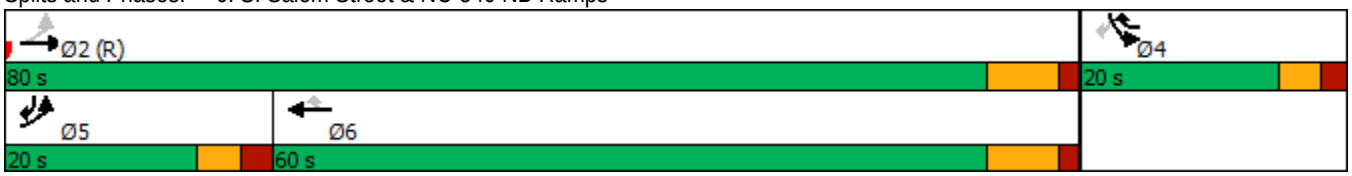
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 90 (90%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.06
Intersection Signal Delay: 38.0 Intersection LOS: D
Intersection Capacity Utilization 91.2% ICU Level of Service F
Analysis Period (min) 15

~ 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.

Splits and Phases: 6: S. Salem Street & NC-540 NB Ramps



APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET / OLD US HWY 1

&

SOUTHBOUND NC-540 RAMPS

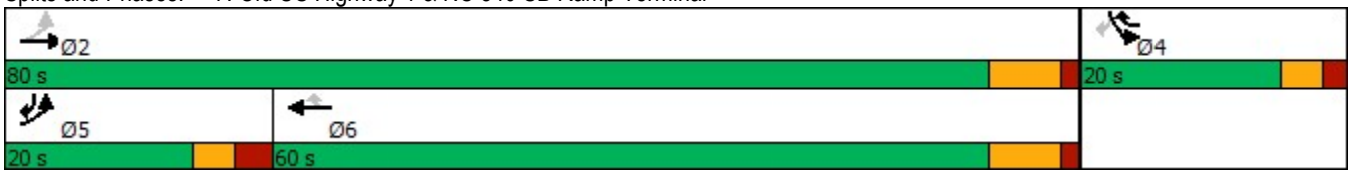
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	177	582	306	81	31	31
Future Volume (vph)	177	582	306	81	31	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.379				0.950	
Satd. Flow (perm)	706	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	197	647	340	90	34	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	197	647	340	90	34	34
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	13.0
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	14.0
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	3.1
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	2.9
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	30.8	32.1	17.0	29.3	7.2	17.9
Actuated g/C Ratio	0.68	0.71	0.38	0.65	0.16	0.40
v/c Ratio	0.29	0.49	0.48	0.09	0.12	0.05
Control Delay	4.5	5.9	14.9	4.4	19.5	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	5.9	14.9	4.4	19.5	8.1

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	B	A	B	A
Approach Delay		5.6	12.7		13.8	
Approach LOS		A	B		B	
Queue Length 50th (ft)	17	77	70	8	8	5
Queue Length 95th (ft)	34	134	139	23	29	18
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	841	1863	1863	1292	597	857
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	0.23	0.35	0.18	0.07	0.06	0.04

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 45.1
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 8.3 Intersection LOS: A
Intersection Capacity Utilization 44.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Old US Highway 1 & NC 540 SB Ramp Terminal



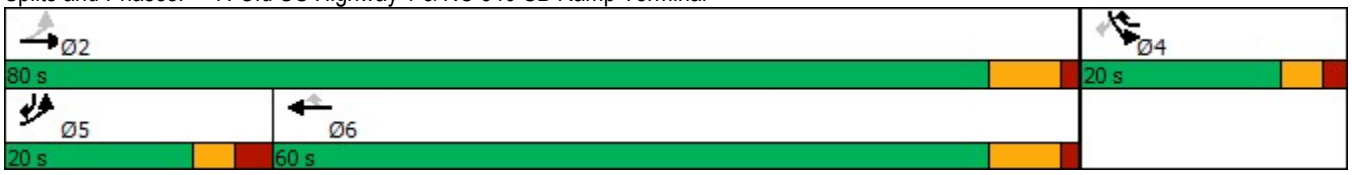
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	137	208	455	43	159	277
Future Volume (vph)	137	208	455	43	159	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.234				0.950	
Satd. Flow (perm)	436	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	152	231	506	48	177	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	231	506	48	177	308
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	13.0
Total Split (s)	20.0	80.0	60.0	20.0	20.0	20.0
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	20.0%
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	14.0
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	3.1
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	2.9
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	None	None
Act Effct Green (s)	37.5	37.5	22.4	37.5	9.9	25.0
Actuated g/C Ratio	0.65	0.65	0.39	0.65	0.17	0.43
v/c Ratio	0.30	0.19	0.70	0.05	0.58	0.45
Control Delay	5.6	4.6	21.4	3.9	32.5	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	4.6	21.4	3.9	32.5	15.1

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	C	A	C	B
Approach Delay		5.0	19.9		21.4	
Approach LOS		A	B		C	
Queue Length 50th (ft)	15	24	130	4	53	67
Queue Length 95th (ft)	41	59	289	16	139	165
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	641	1849	1706	1181	476	840
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	0.24	0.12	0.30	0.04	0.37	0.37

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 57.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 16.4 Intersection LOS: B
Intersection Capacity Utilization 52.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Old US Highway 1 & NC 540 SB Ramp Terminal



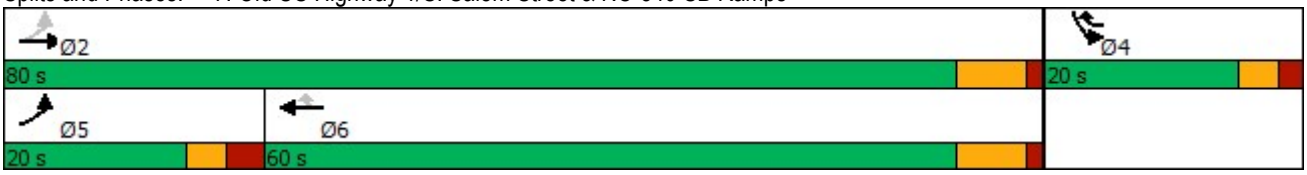
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	333	1105	711	97	37	258
Future Volume (vph)	333	1105	711	97	37	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.125				0.950	
Satd. Flow (perm)	233	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	370	1228	790	108	41	287
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	1228	790	108	41	287
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	56.1	57.9	36.3	49.9	8.0	70.6
Actuated g/C Ratio	0.79	0.82	0.51	0.71	0.11	1.00
v/c Ratio	0.75	0.80	0.82	0.10	0.20	0.18
Control Delay	26.0	10.5	23.1	4.3	38.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	10.5	23.1	4.3	38.8	0.3
LOS	C	B	C	A	D	A
Approach Delay		14.1	20.8		5.1	
Approach LOS		B	C		A	
Queue Length 50th (ft)	86	278	297	15	18	0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Queue Length 95th (ft)	#268	520	453	29	55	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	546	1748	1433	1308	416	1583
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	0.68	0.70	0.55	0.08	0.10	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 70.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 15.2 Intersection LOS: B
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	364	835	998	51	190	683
Future Volume (vph)	364	835	998	51	190	683
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	404	928	1109	57	211	759
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	928	1109	57	211	759
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	75.1	75.1	55.0	73.7	13.6	98.7
Actuated g/C Ratio	0.76	0.76	0.56	0.75	0.14	1.00
v/c Ratio	1.17	0.65	1.07	0.05	0.86	0.48
Control Delay	131.2	8.6	71.6	3.4	73.7	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.2	8.6	71.6	3.4	73.7	1.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	A	E	A	E	A
Approach Delay		45.8	68.3		16.9	
Approach LOS		D	E		B	
Queue Length 50th (ft)	~260	245	~796	8	132	0
Queue Length 95th (ft)	#448	360	#1043	17	#248	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	346	1417	1038	1204	269	1583
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	1.17	0.65	1.07	0.05	0.78	0.48

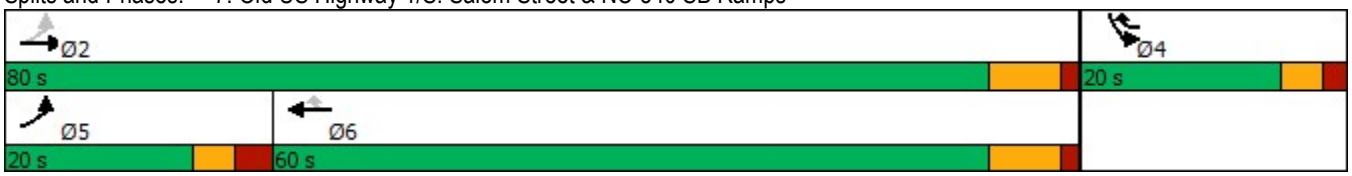
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 98.7
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.17
Intersection Signal Delay: 45.3 Intersection LOS: D
Intersection Capacity Utilization 95.7% ICU Level of Service F
Analysis Period (min) 15

~ 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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps



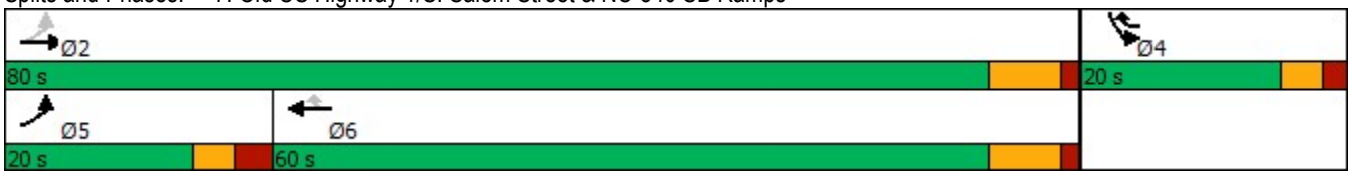
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	353	1169	745	106	40	261
Future Volume (vph)	353	1169	745	106	40	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.124				0.950	
Satd. Flow (perm)	231	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	392	1299	828	118	44	290
Shared Lane Traffic (%)						
Lane Group Flow (vph)	392	1299	828	118	44	290
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	64.2	65.7	43.1	56.1	7.7	78.7
Actuated g/C Ratio	0.82	0.83	0.55	0.71	0.10	1.00
v/c Ratio	0.79	0.83	0.81	0.10	0.25	0.18
Control Delay	30.1	12.1	22.0	4.1	42.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	12.1	22.0	4.1	42.6	0.3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	C	B	C	A	D	A
Approach Delay		16.3	19.8		5.8	
Approach LOS		B	B		A	
Queue Length 50th (ft)	116	332	322	17	23	0
Queue Length 95th (ft)	#303	#684	498	31	59	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	497	1672	1340	1322	355	1583
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	0.79	0.78	0.62	0.09	0.12	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 78.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 77.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	379	858	1049	56	207	713
Future Volume (vph)	379	858	1049	56	207	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	421	953	1166	62	230	792
Shared Lane Traffic (%)						
Lane Group Flow (vph)	421	953	1166	62	230	792
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	75.0	75.0	55.0	74.3	14.3	99.3
Actuated g/C Ratio	0.76	0.76	0.55	0.75	0.14	1.00
v/c Ratio	1.22	0.68	1.13	0.05	0.91	0.50
Control Delay	152.9	9.3	95.0	3.4	79.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	152.9	9.3	95.0	3.4	79.8	1.1

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	A	F	A	E	A
Approach Delay		53.3	90.4		18.8	
Approach LOS		D	F		B	
Queue Length 50th (ft)	~283	258	~872	9	145	0
Queue Length 95th (ft)	#475	382	#1121	18	#279	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	344	1407	1032	1196	267	1583
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	1.22	0.68	1.13	0.05	0.86	0.50

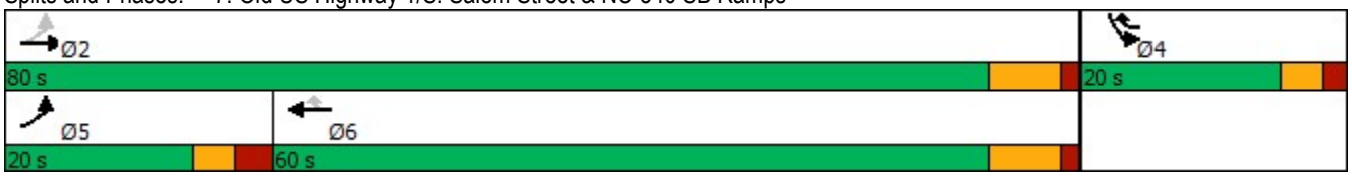
Intersection Summary

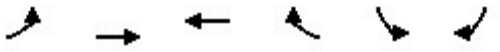
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 99.3
Natural Cycle: 140
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 56.1 Intersection LOS: E
Intersection Capacity Utilization 100.2% ICU Level of Service G
Analysis Period (min) 15

~ 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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps





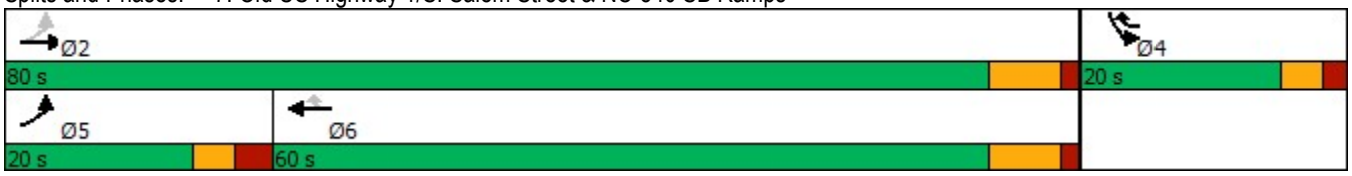
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	333	1111	733	162	57	258
Future Volume (vph)	333	1111	733	162	57	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.107				0.950	
Satd. Flow (perm)	199	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	370	1234	814	180	63	287
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	1234	814	180	63	287
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	58.1	58.1	39.0	52.2	8.0	76.5
Actuated g/C Ratio	0.76	0.76	0.51	0.68	0.10	1.00
v/c Ratio	0.85	0.87	0.86	0.17	0.34	0.18
Control Delay	37.3	14.8	26.2	4.5	42.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	14.8	26.2	4.5	42.1	0.3

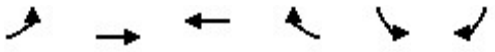
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	D	B	C	A	D	A
Approach Delay		20.0	22.3		7.8	
Approach LOS		C	C		A	
Queue Length 50th (ft)	101	283	312	27	28	0
Queue Length 95th (ft)	#308	607	504	46	76	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	470	1721	1389	1235	360	1583
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	0.79	0.72	0.59	0.15	0.17	0.18

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 76.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	364	855	1010	85	249	683
Future Volume (vph)	364	855	1010	85	249	683
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	404	950	1122	94	277	759
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	950	1122	94	277	759
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	75.0	75.0	55.0	75.0	15.0	100.0
Actuated g/C Ratio	0.75	0.75	0.55	0.75	0.15	1.00
v/c Ratio	1.18	0.68	1.10	0.08	1.05	0.48
Control Delay	137.7	9.5	82.0	3.5	110.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.7	9.5	82.0	3.5	110.4	1.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	A	F	A	F	A
Approach Delay		47.7	75.9		30.3	
Approach LOS		D	E		C	
Queue Length 50th (ft)	~260	257	~813	13	~192	0
Queue Length 95th (ft)	#448	379	#1061	25	#353	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	341	1397	1024	1187	265	1583
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	1.18	0.68	1.10	0.08	1.05	0.48

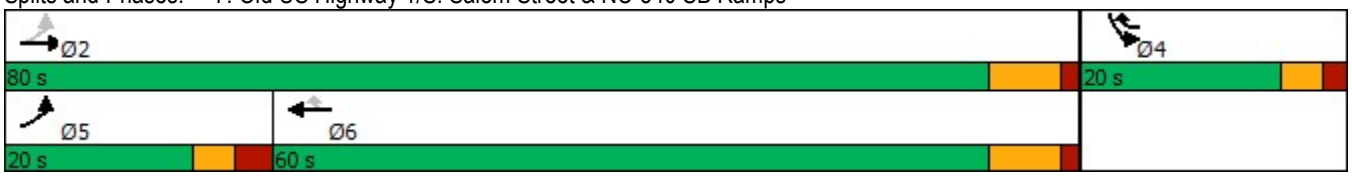
Intersection Summary

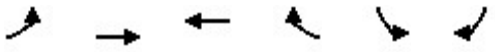
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.18
Intersection Signal Delay: 52.2 Intersection LOS: D
Intersection Capacity Utilization 99.6% ICU Level of Service F
Analysis Period (min) 15

~ 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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	353	1271	805	262	141	261
Future Volume (vph)	353	1271	805	262	141	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.102				0.950	
Satd. Flow (perm)	190	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	392	1412	894	291	157	290
Shared Lane Traffic (%)						
Lane Group Flow (vph)	392	1412	894	291	157	290
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	75.1	75.1	55.1	71.7	11.6	96.7
Actuated g/C Ratio	0.78	0.78	0.57	0.74	0.12	1.00
v/c Ratio	1.00	0.98	0.84	0.25	0.74	0.18
Control Delay	70.3	31.2	27.2	4.5	61.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	31.2	27.2	4.5	61.8	0.3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	E	C	C	A	E	A
Approach Delay		39.7	21.6		21.9	
Approach LOS		D	C		C	
Queue Length 50th (ft)	~166	653	431	47	95	0
Queue Length 95th (ft)	#376	#1209	#744	74	162	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	392	1446	1060	1229	274	1583
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	1.00	0.98	0.84	0.24	0.57	0.18

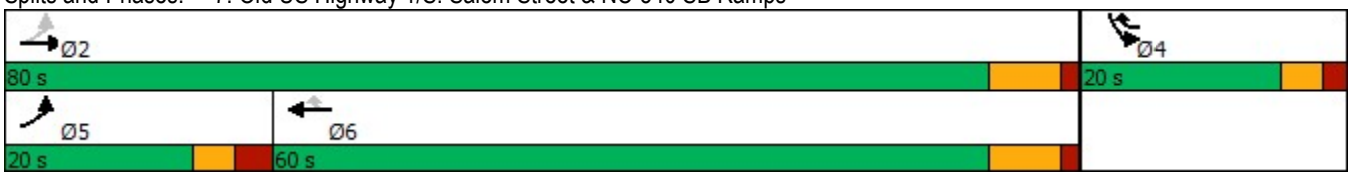
Intersection Summary

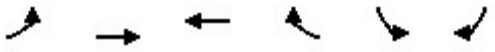
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 96.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 83.0% ICU Level of Service E
Analysis Period (min) 15

~ 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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	379	937	1131	207	331	713
Future Volume (vph)	379	937	1131	207	331	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	175
Storage Lanes	1			1	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	127	1863	1863	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	421	1041	1257	230	368	792
Shared Lane Traffic (%)						
Lane Group Flow (vph)	421	1041	1257	230	368	792
Turn Type	pm+pt	NA	NA	pm+ov	Prot	Free
Protected Phases	5	2	6	4	4	
Permitted Phases	2			6		Free
Detector Phase	5	2	6	4	4	
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	
Total Split (s)	20.0	80.0	60.0	20.0	20.0	
Total Split (%)	20.0%	80.0%	60.0%	20.0%	20.0%	
Maximum Green (s)	14.0	73.2	53.2	14.9	14.9	
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	
Recall Mode	None	Min	Min	None	None	
Act Effct Green (s)	75.0	75.0	55.0	75.0	15.0	100.0
Actuated g/C Ratio	0.75	0.75	0.55	0.75	0.15	1.00
v/c Ratio	1.23	0.75	1.23	0.19	1.39	0.50
Control Delay	156.7	11.3	135.2	4.1	230.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	156.7	11.3	135.2	4.1	230.8	1.1

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	F	B	F	A	F	A
Approach Delay		53.2	114.9		74.0	
Approach LOS		D	F		E	
Queue Length 50th (ft)	~283	312	~993	36	~314	0
Queue Length 95th (ft)	#475	470	#1246	58	#491	0
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		175
Base Capacity (vph)	341	1397	1024	1187	265	1583
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	1.23	0.75	1.23	0.19	1.39	0.50

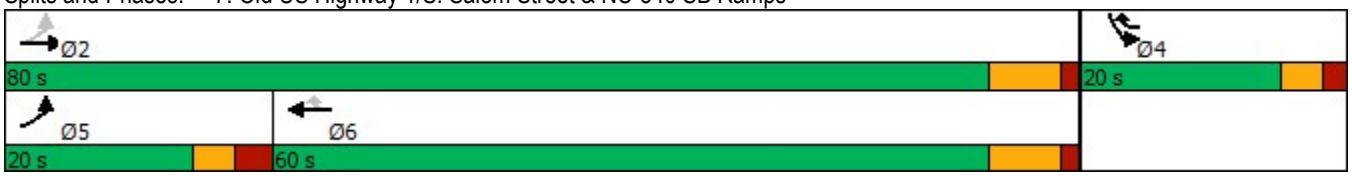
Intersection Summary

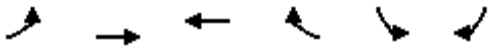
Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 81.4 Intersection LOS: F
Intersection Capacity Utilization 111.4% ICU Level of Service H
Analysis Period (min) 15

~ 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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps





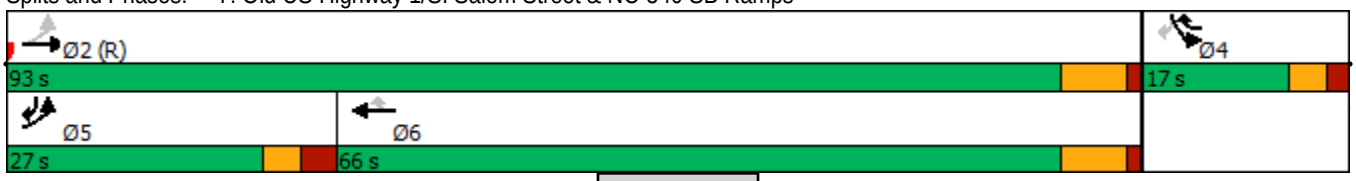
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	353	1271	805	262	141	261
Future Volume (vph)	353	1271	805	262	141	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	375
Storage Lanes	1			2	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3539	1583	1770	1583
Flt Permitted	0.258				0.950	
Satd. Flow (perm)	481	1863	3539	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	392	1412	894	291	157	290
Shared Lane Traffic (%)						
Lane Group Flow (vph)	392	1412	894	291	157	290
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	13.0
Total Split (s)	27.0	93.0	66.0	17.0	17.0	27.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	24.5%	84.5%	60.0%	15.5%	15.5%	24.5%
Maximum Green (s)	21.0	86.2	59.2	11.9	11.9	21.0
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	3.1
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	2.9
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	C-Min	Min	None	None	None
Act Effct Green (s)	88.6	88.6	70.0	86.4	11.4	30.0
Actuated g/C Ratio	0.81	0.81	0.64	0.79	0.10	0.27
v/c Ratio	0.72	0.94	0.40	0.23	0.86	0.67
Control Delay	11.8	23.3	9.7	7.3	86.8	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	23.3	9.7	7.3	86.8	43.0
LOS	B	C	A	A	F	D
Approach Delay		20.8	9.1		58.4	
Approach LOS		C	A		E	
Queue Length 50th (ft)	56	649	176	80	110	183
Queue Length 95th (ft)	107	#1243	m263	m136	#223	249
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		375
Base Capacity (vph)	645	1501	2252	1252	193	552
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	0.61	0.94	0.40	0.23	0.81	0.53

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 83.0% ICU Level of Service E
Analysis Period (min) 15
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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps



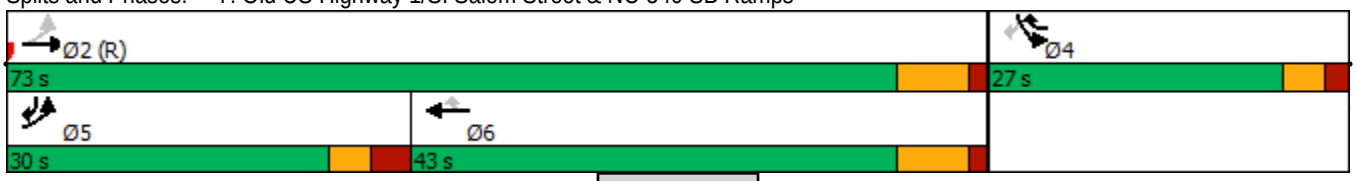
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	379	937	1131	207	331	713
Future Volume (vph)	379	937	1131	207	331	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			200	0	375
Storage Lanes	1			2	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	3539	1583	1770	1583
Flt Permitted	0.095				0.950	
Satd. Flow (perm)	177	1863	3539	1583	1770	1583
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		55	55		25	
Link Distance (ft)		547	1384		1259	
Travel Time (s)		6.8	17.2		34.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	421	1041	1257	230	368	792
Shared Lane Traffic (%)						
Lane Group Flow (vph)	421	1041	1257	230	368	792
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		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
Number of Detectors	1	1	1	0	1	1
Detector Template						
Leading Detector (ft)	40	426	426	0	40	40
Trailing Detector (ft)	0	420	420	0	0	0
Detector 1 Position(ft)	0	420	420	0	0	0
Detector 1 Size(ft)	40	6	6	20	40	40
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	15.0	0.0	0.0	0.0	0.0	15.0
Turn Type	pm+pt	NA	NA	pm+ov	Prot	pm+ov
Protected Phases	5	2	6	4	4	5
Permitted Phases	2			6		4
Detector Phase	5	2	6	4	4	5
Switch Phase						
Minimum Initial (s)	7.0	14.0	14.0	7.0	7.0	7.0
Minimum Split (s)	13.0	20.8	20.8	12.1	12.1	13.0
Total Split (s)	30.0	73.0	43.0	27.0	27.0	30.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Total Split (%)	30.0%	73.0%	43.0%	27.0%	27.0%	30.0%
Maximum Green (s)	24.0	66.2	36.2	21.9	21.9	24.0
Yellow Time (s)	3.1	5.4	5.4	3.1	3.1	3.1
All-Red Time (s)	2.9	1.4	1.4	2.0	2.0	2.9
Lost Time Adjust (s)	-1.0	-1.8	-1.8	-0.1	-0.1	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	1.0	6.0	6.0	1.0	1.0	1.0
Minimum Gap (s)	1.0	3.4	3.4	1.0	1.0	1.0
Time Before Reduce (s)	0.0	15.0	15.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	30.0	30.0	0.0	0.0	0.0
Recall Mode	None	C-Min	Min	None	None	None
Act Effct Green (s)	68.4	68.4	37.7	64.3	21.6	52.3
Actuated g/C Ratio	0.68	0.68	0.38	0.64	0.22	0.52
v/c Ratio	0.80	0.82	0.94	0.23	0.96	0.96
Control Delay	36.2	18.3	32.6	5.6	77.8	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	18.3	32.6	5.6	77.8	47.0
LOS	D	B	C	A	E	D
Approach Delay		23.5	28.4		56.8	
Approach LOS		C	C		E	
Queue Length 50th (ft)	195	427	363	30	232	463
Queue Length 95th (ft)	#352	643	m396	m40	#409	#736
Internal Link Dist (ft)		467	1304		1179	
Turn Bay Length (ft)	300			200		375
Base Capacity (vph)	529	1274	1344	1024	389	827
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	0.80	0.82	0.94	0.22	0.95	0.96

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 83.7% ICU Level of Service E
Analysis Period (min) 15
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.

Splits and Phases: 7: Old US Highway 1/S. Salem Street & NC-540 SB Ramps



APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

KELLY ROAD

Intersection	
Int Delay, s/veh	14.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	224	671	294	35	88	51
Future Vol, veh/h	224	671	294	35	88	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	525	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	249	746	327	39	98	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	366	0	-	0	1591	347
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	1244	-
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	1193	-	-	-	118	696
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	272	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1193	-	-	-	~ 93	696
Mov Cap-2 Maneuver	-	-	-	-	~ 93	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	272	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	124.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1193	-	-	-	93	696
HCM Lane V/C Ratio	0.209	-	-	-	1.051	0.081
HCM Control Delay (s)	8.8	-	-	-	191.1	10.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.8	-	-	-	6.4	0.3

Notes

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

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	285	595	119	60	190
Future Vol, veh/h	57	285	595	119	60	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	525	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	317	661	132	67	211

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	793	0	-	0	1170	727
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	443	-
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	828	-	-	-	213	424
Stage 1	-	-	-	-	478	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	828	-	-	-	197	424
Mov Cap-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	828	-	-	-	197	424
HCM Lane V/C Ratio	0.076	-	-	-	0.338	0.498
HCM Control Delay (s)	9.7	-	-	-	32.3	21.6
HCM Lane LOS	A	-	-	-	D	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.4	2.7

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1441	782	177	0	237
Future Vol, veh/h	0	1441	782	177	0	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1601	869	197	0	263

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	435
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	570
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	570
HCM Lane V/C Ratio	-	-	-	0.462
HCM Control Delay (s)	-	-	-	16.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.4

Intersection	
Int Delay, s/veh	12.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1241	1385	273	0	342
Future Vol, veh/h	0	1241	1385	273	0	342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1379	1539	303	0	380

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	770
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	~ 344
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 344
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	114.9
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	344
HCM Lane V/C Ratio	-	-	-	1.105
HCM Control Delay (s)	-	-	-	114.9
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	14.4

Notes

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1526	815	181	0	243
Future Vol, veh/h	0	1526	815	181	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1696	906	201	0	270

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	453
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	555
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	555
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	555
HCM Lane V/C Ratio	-	-	-	0.486
HCM Control Delay (s)	-	-	-	17.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.6

Intersection	
Int Delay, s/veh	15.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1279	1451	286	0	353
Future Vol, veh/h	0	1279	1451	286	0	353
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1421	1612	318	0	392

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	806
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	~ 326
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 326
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	151.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	326
HCM Lane V/C Ratio	-	-	-	1.203
HCM Control Delay (s)	-	-	-	151.6
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	17

Notes

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1447	804	177	0	237
Future Vol, veh/h	0	1447	804	177	0	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1608	893	197	0	263

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	447
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	560
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	560
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	560
HCM Lane V/C Ratio	-	-	-	0.47
HCM Control Delay (s)	-	-	-	17
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.5

Intersection	
Int Delay, s/veh	12.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1261	1397	273	0	342
Future Vol, veh/h	0	1261	1397	273	0	342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1401	1552	303	0	380

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	776
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	~ 341
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 341
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	118.5
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	341
HCM Lane V/C Ratio	-	-	-	1.114
HCM Control Delay (s)	-	-	-	118.5
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	14.6

Notes

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1628	882	181	0	243
Future Vol, veh/h	0	1628	882	181	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1809	980	201	0	270

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	490
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	525
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	525
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	525
HCM Lane V/C Ratio	-	-	-	0.514
HCM Control Delay (s)	-	-	-	18.9
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.9

Intersection	
Int Delay, s/veh	20.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1358	1562	286	0	353
Future Vol, veh/h	0	1358	1562	286	0	353
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1509	1736	318	0	392

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	868
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	~ 296
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 296
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	202.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	296
HCM Lane V/C Ratio	-	-	-	1.325
HCM Control Delay (s)	-	-	-	202.6
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	19.6

Notes

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

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

KELLY ROAD

&

APEX BARBECUE ROAD

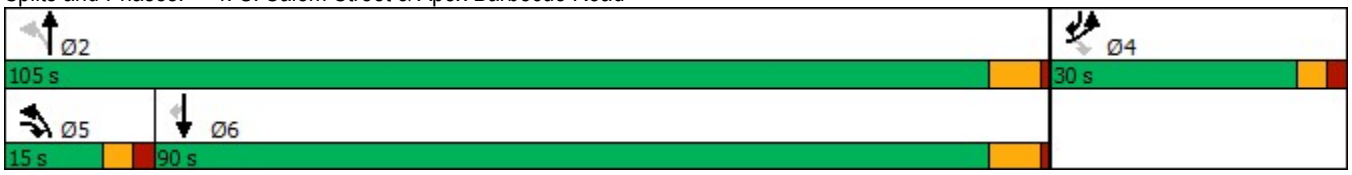
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	283	181	139	341	245	179
Future Volume (vph)	283	181	139	341	245	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.371			
Satd. Flow (perm)	1770	1583	691	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	314	201	154	379	272	199
Shared Lane Traffic (%)						
Lane Group Flow (vph)	314	201	154	379	272	199
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	17.6	31.5	29.5	29.5	15.7	38.3
Actuated g/C Ratio	0.31	0.55	0.52	0.52	0.27	0.67
v/c Ratio	0.58	0.23	0.29	0.39	0.53	0.19
Control Delay	22.0	7.5	9.1	10.0	22.6	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	7.5	9.1	10.0	22.6	4.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	A	A	B	C	A
Approach Delay	16.4			9.8	14.8	
Approach LOS	B			A	B	
Queue Length 50th (ft)	88	31	26	72	79	21
Queue Length 95th (ft)	171	67	54	131	149	42
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	776	904	546	1863	1863	1268
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	0.40	0.22	0.28	0.20	0.15	0.16

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 57.2
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 13.6 Intersection LOS: B
Intersection Capacity Utilization 48.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



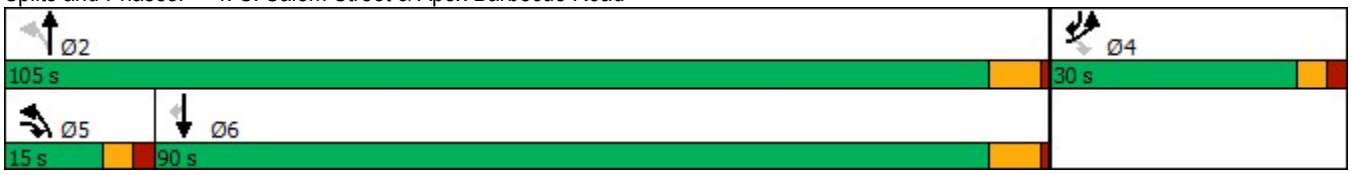
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	226	76	74	325	265	232
Future Volume (vph)	226	76	74	325	265	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.397			
Satd. Flow (perm)	1770	1583	740	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	251	84	82	361	294	258
Shared Lane Traffic (%)						
Lane Group Flow (vph)	251	84	82	361	294	258
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	12.2	25.1	25.7	25.7	16.3	35.1
Actuated g/C Ratio	0.25	0.52	0.53	0.53	0.34	0.73
v/c Ratio	0.56	0.10	0.15	0.36	0.47	0.22
Control Delay	22.5	7.5	6.4	7.9	17.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.5	7.5	6.4	7.9	17.5	4.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	A	A	A	B	A
Approach Delay	18.7			7.6	11.2	
Approach LOS	B			A	B	
Queue Length 50th (ft)	63	12	10	50	68	24
Queue Length 95th (ft)	135	32	28	107	145	50
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	946	908	614	1863	1863	1447
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	0.27	0.09	0.13	0.19	0.16	0.18

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 48.3
Natural Cycle: 50
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.9 Intersection LOS: B
Intersection Capacity Utilization 44.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



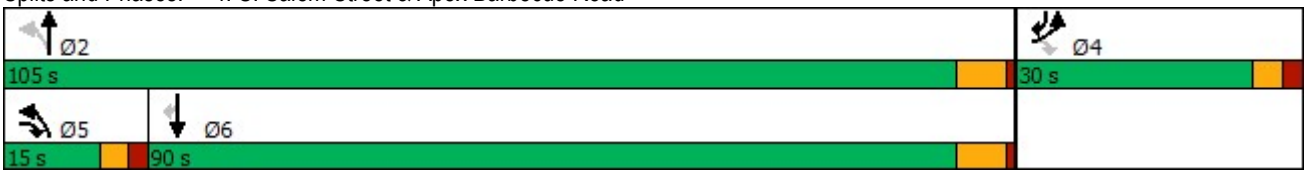
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	338	216	166	541	486	214
Future Volume (vph)	338	216	166	541	486	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.139			
Satd. Flow (perm)	1770	1583	259	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	376	240	184	601	540	238
Shared Lane Traffic (%)						
Lane Group Flow (vph)	376	240	184	601	540	238
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.2	39.5	40.6	40.6	26.3	56.5
Actuated g/C Ratio	0.33	0.52	0.53	0.53	0.35	0.74
v/c Ratio	0.64	0.29	0.57	0.60	0.84	0.20
Control Delay	29.5	12.9	17.2	14.7	35.2	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.5	12.9	17.2	14.7	35.2	3.4
LOS	C	B	B	B	D	A
Approach Delay	23.0			15.3	25.5	
Approach LOS	C			B	C	
Queue Length 50th (ft)	152	60	41	179	233	27

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	#294	132	84	268	349	46
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	587	841	339	1863	1858	1179
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	0.64	0.29	0.54	0.32	0.29	0.20

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 75.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



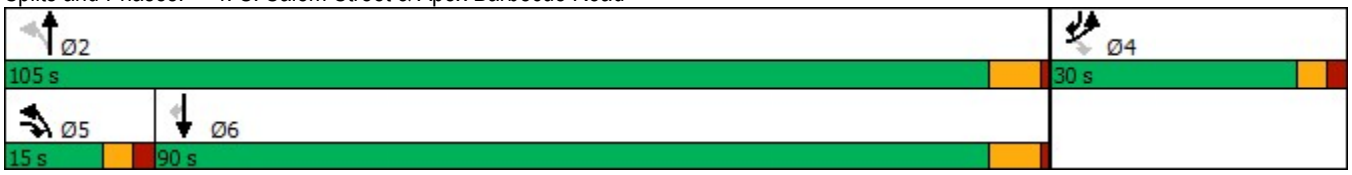
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	96	94	701	584	277
Future Volume (vph)	270	96	94	701	584	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.143			
Satd. Flow (perm)	1770	1583	266	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	300	107	104	779	649	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	300	107	104	779	649	308
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	19.7	32.9	45.7	45.7	32.5	57.3
Actuated g/C Ratio	0.26	0.43	0.60	0.60	0.43	0.76
v/c Ratio	0.65	0.16	0.33	0.69	0.81	0.26
Control Delay	34.2	15.7	9.4	14.4	28.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	15.7	9.4	14.4	28.4	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	A	B	C	A
Approach Delay	29.4			13.8	20.3	
Approach LOS	C			B	C	
Queue Length 50th (ft)	121	28	18	222	252	31
Queue Length 95th (ft)	254	75	42	395	441	58
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	602	734	365	1863	1821	1326
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	0.50	0.15	0.28	0.42	0.36	0.23

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 75.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 19.4 Intersection LOS: B
Intersection Capacity Utilization 64.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



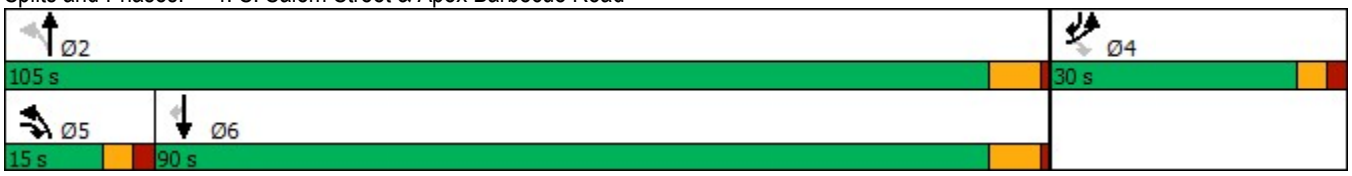
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	369	236	181	579	513	234
Future Volume (vph)	369	236	181	579	513	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.129			
Satd. Flow (perm)	1770	1583	240	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	410	262	201	643	570	260
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	262	201	643	570	260
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.3	39.8	42.8	42.8	28.3	58.6
Actuated g/C Ratio	0.32	0.51	0.55	0.55	0.36	0.75
v/c Ratio	0.72	0.33	0.64	0.63	0.85	0.22
Control Delay	34.1	14.3	20.9	15.1	35.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	14.3	20.9	15.1	35.3	3.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	C	B	D	A
Approach Delay	26.4			16.5	25.3	
Approach LOS	C			B	C	
Queue Length 50th (ft)	176	71	46	198	251	30
Queue Length 95th (ft)	#372	156	105	293	373	50
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	571	818	329	1863	1843	1186
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	0.72	0.32	0.61	0.35	0.31	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 78.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 22.4 Intersection LOS: C
Intersection Capacity Utilization 70.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



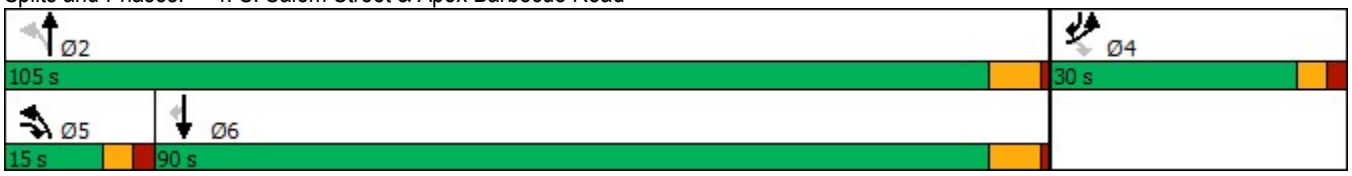
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	295	104	103	737	614	303
Future Volume (vph)	295	104	103	737	614	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.107			
Satd. Flow (perm)	1770	1583	199	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			4447	1058	
Travel Time (s)	19.7			55.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	328	116	114	819	682	337
Shared Lane Traffic (%)						
Lane Group Flow (vph)	328	116	114	819	682	337
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	24.0	37.3	48.3	48.3	35.0	64.2
Actuated g/C Ratio	0.29	0.45	0.59	0.59	0.42	0.78
v/c Ratio	0.64	0.16	0.42	0.75	0.86	0.27
Control Delay	34.4	16.4	12.0	17.5	33.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	16.4	12.0	17.5	33.7	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	B	B	C	A
Approach Delay	29.7			16.9	23.6	
Approach LOS	C			B	C	
Queue Length 50th (ft)	141	33	24	283	304	35
Queue Length 95th (ft)	#311	86	45	428	474	65
Internal Link Dist (ft)	1222			4367	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	545	753	310	1863	1792	1257
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	0.60	0.15	0.37	0.44	0.38	0.27

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 82.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



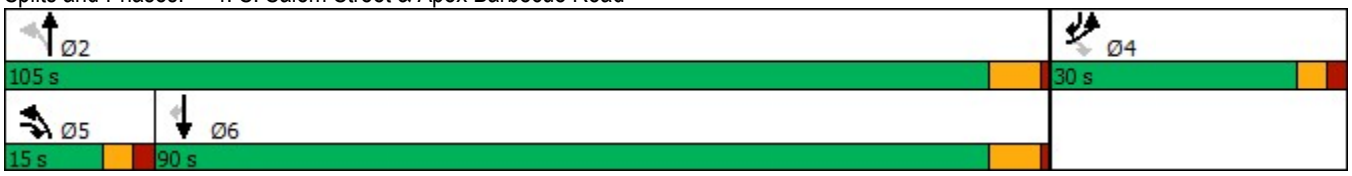
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	359	238	173	563	493	220
Future Volume (vph)	359	238	173	563	493	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.137			
Satd. Flow (perm)	1770	1583	255	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			1929	1058	
Travel Time (s)	19.7			23.9	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	399	264	192	626	548	244
Shared Lane Traffic (%)						
Lane Group Flow (vph)	399	264	192	626	548	244
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.2	39.6	41.2	41.2	26.8	57.1
Actuated g/C Ratio	0.33	0.52	0.54	0.54	0.35	0.75
v/c Ratio	0.68	0.32	0.60	0.62	0.84	0.21
Control Delay	31.5	13.5	18.5	15.2	35.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	13.5	18.5	15.2	35.3	3.4

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	C	B	B	B	D	A
Approach Delay	24.4			15.9	25.5	
Approach LOS	C			B	C	
Queue Length 50th (ft)	165	69	43	190	237	28
Queue Length 95th (ft)	#340	148	92	284	356	47
Internal Link Dist (ft)	1222			1849	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	583	835	337	1863	1855	1181
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	0.68	0.32	0.57	0.34	0.30	0.21

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 76.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 67.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



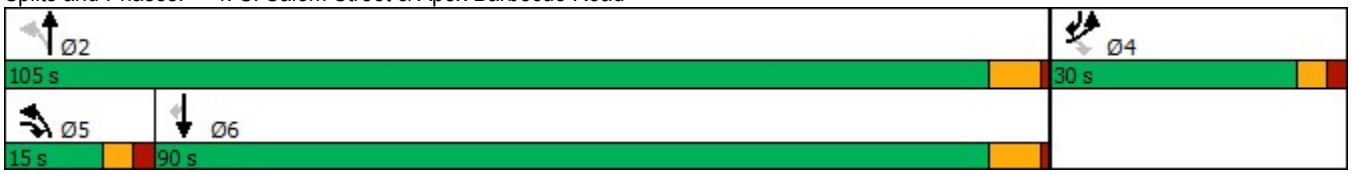
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	281	108	114	713	603	297
Future Volume (vph)	281	108	114	713	603	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.126			
Satd. Flow (perm)	1770	1583	235	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	1302			1929	1058	
Travel Time (s)	19.7			23.9	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	312	120	127	792	670	330
Shared Lane Traffic (%)						
Lane Group Flow (vph)	312	120	127	792	670	330
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	21.4	35.0	47.9	47.9	34.3	60.8
Actuated g/C Ratio	0.27	0.44	0.60	0.60	0.43	0.76
v/c Ratio	0.66	0.17	0.42	0.71	0.83	0.27
Control Delay	35.3	16.4	11.1	15.2	30.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	16.4	11.1	15.2	30.6	3.3

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	D	B	B	B	C	A
Approach Delay	30.0			14.6	21.6	
Approach LOS	C			B	C	
Queue Length 50th (ft)	132	33	25	246	284	36
Queue Length 95th (ft)	274	87	49	404	462	63
Internal Link Dist (ft)	1222			1849	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	571	731	339	1863	1798	1295
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	0.55	0.16	0.37	0.43	0.37	0.25

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 79.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



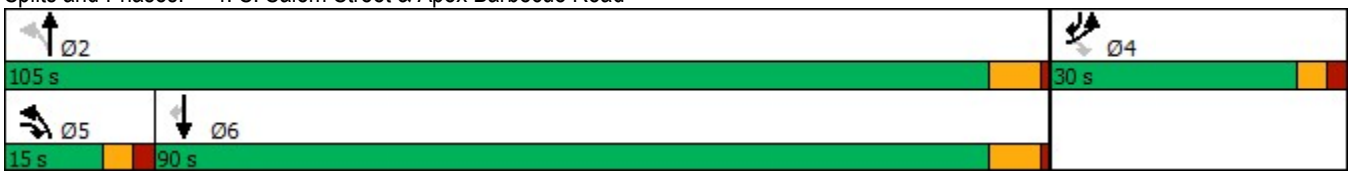
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	421	325	212	655	676	247
Future Volume (vph)	421	325	212	655	676	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.088			
Satd. Flow (perm)	1770	1583	164	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	361	236	728	751	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	468	361	236	728	751	274
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.4	40.3	56.4	56.4	41.4	71.9
Actuated g/C Ratio	0.28	0.44	0.61	0.61	0.45	0.78
v/c Ratio	0.96	0.52	0.86	0.64	0.90	0.22
Control Delay	68.1	24.7	50.4	13.8	37.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	24.7	50.4	13.8	37.0	3.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	E	C	D	B	D	A
Approach Delay	49.2			22.7	27.9	
Approach LOS	D			C	C	
Queue Length 50th (ft)	268	148	82	241	385	32
Queue Length 95th (ft)	#588	308	#241	340	543	50
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	488	699	277	1832	1705	1237
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	0.96	0.52	0.85	0.40	0.44	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 91.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.4 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



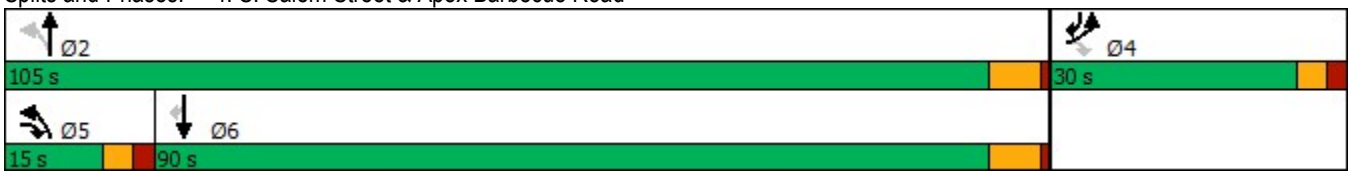
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	345	151	227	879	724	334
Future Volume (vph)	345	151	227	879	724	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.079			
Satd. Flow (perm)	1770	1583	147	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	383	168	252	977	804	371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	383	168	252	977	804	371
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.5	40.4	61.5	61.5	46.5	77.1
Actuated g/C Ratio	0.26	0.42	0.63	0.63	0.48	0.79
v/c Ratio	0.83	0.26	0.98	0.83	0.90	0.30
Control Delay	52.8	23.1	76.9	20.4	36.8	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	23.1	76.9	20.4	36.8	3.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
LOS	D	C	E	C	D	A
Approach Delay	43.7			32.0	26.2	
Approach LOS	D			C	C	
Queue Length 50th (ft)	221	65	103	414	432	47
Queue Length 95th (ft)	#499	152	#302	587	600	69
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	75		175			475
Base Capacity (vph)	463	663	263	1795	1634	1256
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	0.83	0.25	0.96	0.54	0.49	0.30

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 97.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



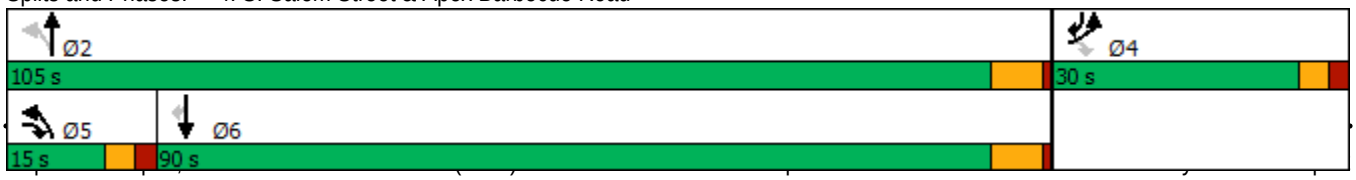
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	421	325	212	655	676	247
Future Volume (vph)	421	325	212	655	676	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375	0	275			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.088			
Satd. Flow (perm)	1770	1583	164	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	468	361	236	728	751	274
Shared Lane Traffic (%)						
Lane Group Flow (vph)	468	361	236	728	751	274
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	1	1	0
Detector Template						
Leading Detector (ft)	40	40	40	426	426	0
Trailing Detector (ft)	0	0	0	420	420	0
Detector 1 Position(ft)	0	0	0	420	420	0
Detector 1 Size(ft)	40	40	40	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	3.0	10.0	15.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.4	40.3	56.4	56.4	41.4	71.9
Actuated g/C Ratio	0.28	0.44	0.61	0.61	0.45	0.78
v/c Ratio	0.96	0.52	0.86	0.64	0.90	0.22
Control Delay	68.1	24.7	50.4	13.8	37.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.1	24.7	50.4	13.8	37.0	3.0
LOS	E	C	D	B	D	A
Approach Delay	49.2			22.7	27.9	
Approach LOS	D			C	C	
Queue Length 50th (ft)	268	148	82	241	385	32
Queue Length 95th (ft)	#588	308	#241	340	543	50
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	375		275			475
Base Capacity (vph)	488	699	277	1832	1705	1237
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	0.96	0.52	0.85	0.40	0.44	0.22

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 91.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.4 Intersection LOS: C
Intersection Capacity Utilization 83.1% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



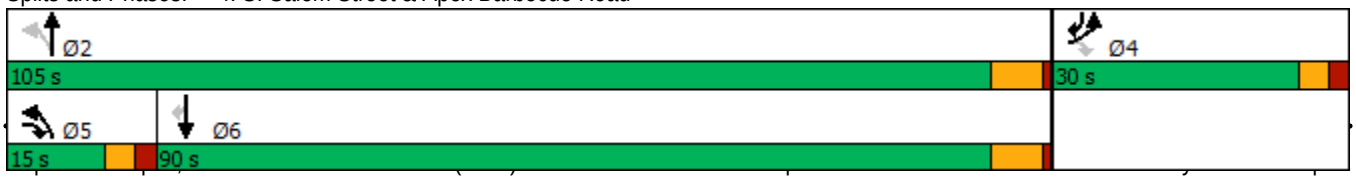
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	345	151	227	879	724	334
Future Volume (vph)	345	151	227	879	724	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375	0	300			475
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.079			
Satd. Flow (perm)	1770	1583	147	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	45			55	55	
Link Distance (ft)	397			334	1058	
Travel Time (s)	6.0			4.1	13.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	383	168	252	977	804	371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	383	168	252	977	804	371
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	1	1	0
Detector Template						
Leading Detector (ft)	40	40	40	426	426	0
Trailing Detector (ft)	0	0	0	420	420	0
Detector 1 Position(ft)	0	0	0	420	420	0
Detector 1 Size(ft)	40	40	40	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	3.0	10.0	15.0	0.0	0.0	0.0
Turn Type	Prot	pm+ov	pm+pt	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4	2			6
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	12.3	12.1	12.1	20.1	20.1	12.3
Total Split (s)	30.0	15.0	15.0	105.0	90.0	30.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Total Split (%)	22.2%	11.1%	11.1%	77.8%	66.7%	22.2%
Maximum Green (s)	24.7	9.9	9.9	98.9	83.9	24.7
Yellow Time (s)	3.0	3.0	3.0	5.1	5.1	3.0
All-Red Time (s)	2.3	2.1	2.1	1.0	1.0	2.3
Lost Time Adjust (s)	-0.3	-0.1	-0.1	-1.1	-1.1	-0.3
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	2.0	2.0	2.0	6.0	6.0	2.0
Minimum Gap (s)	2.0	2.0	2.0	3.4	3.4	2.0
Time Before Reduce (s)	0.0	0.0	0.0	15.0	15.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	45.0	45.0	0.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	25.5	40.4	61.5	61.5	46.5	77.1
Actuated g/C Ratio	0.26	0.42	0.63	0.63	0.48	0.79
v/c Ratio	0.83	0.26	0.98	0.83	0.90	0.30
Control Delay	52.8	23.1	76.9	20.4	36.8	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	23.1	76.9	20.4	36.8	3.2
LOS	D	C	E	C	D	A
Approach Delay	43.7			32.0	26.2	
Approach LOS	D			C	C	
Queue Length 50th (ft)	221	65	103	414	432	47
Queue Length 95th (ft)	#499	152	#302	587	600	69
Internal Link Dist (ft)	317			254	978	
Turn Bay Length (ft)	375		300			475
Base Capacity (vph)	463	663	263	1795	1634	1256
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	0.83	0.25	0.96	0.54	0.49	0.30

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 97.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: S. Salem Street & Apex Barbecue Road



APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

APEX BARBECUE ROAD

&

SCOTTS RIDGE TRAIL / WOODALL CREST DRIVE

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	10	339	4	4	346	15	9	4	16	84	4	61
Future Vol, veh/h	10	339	4	4	346	15	9	4	16	84	4	61
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	377	4	4	384	17	10	4	18	93	4	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	401	0	0	381	0	0	838	810	379	813	804	393
Stage 1	-	-	-	-	-	-	401	401	-	401	401	-
Stage 2	-	-	-	-	-	-	437	409	-	412	403	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1158	-	-	1177	-	-	286	314	668	297	316	656
Stage 1	-	-	-	-	-	-	626	601	-	626	601	-
Stage 2	-	-	-	-	-	-	598	596	-	617	600	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1158	-	-	1177	-	-	251	310	668	283	312	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	251	310	-	283	312	-
Stage 1	-	-	-	-	-	-	620	596	-	620	599	-
Stage 2	-	-	-	-	-	-	530	594	-	590	595	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	14.8	22.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	399	1158	-	-	1177	-	-	370
HCM Lane V/C Ratio	0.081	0.01	-	-	0.004	-	-	0.447
HCM Control Delay (s)	14.8	8.1	-	-	8.1	-	-	22.4
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	2.2

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	270	6	18	353	47	4	4	12	37	4	20
Future Vol, veh/h	49	270	6	18	353	47	4	4	12	37	4	20
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	300	7	20	392	52	4	4	13	41	4	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	444	0	0	307	0	0	883	896	304	878	873	418
Stage 1	-	-	-	-	-	-	412	412	-	458	458	-
Stage 2	-	-	-	-	-	-	471	484	-	420	415	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1116	-	-	1254	-	-	266	280	736	268	289	635
Stage 1	-	-	-	-	-	-	617	594	-	583	567	-
Stage 2	-	-	-	-	-	-	573	552	-	611	592	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1116	-	-	1254	-	-	241	262	736	247	271	635
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	262	-	247	271	-
Stage 1	-	-	-	-	-	-	587	565	-	555	558	-
Stage 2	-	-	-	-	-	-	540	543	-	566	564	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.3	14.2	19.8
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	415	1116	-	-	1254	-	-	311
HCM Lane V/C Ratio	0.054	0.049	-	-	0.016	-	-	0.218
HCM Control Delay (s)	14.2	8.4	-	-	7.9	-	-	19.8
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.8

Intersection

Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	366	12	5	321	18	27	4	19	100	4	89
Future Vol, veh/h	23	366	12	5	321	18	27	4	19	100	4	89
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	407	13	6	357	20	30	4	21	111	4	99

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	377	0	0	420	0	0	897	855	414	857	851	367
Stage 1	-	-	-	-	-	-	466	466	-	379	379	-
Stage 2	-	-	-	-	-	-	431	389	-	478	472	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1181	-	-	1139	-	-	261	296	638	277	297	678
Stage 1	-	-	-	-	-	-	577	562	-	643	615	-
Stage 2	-	-	-	-	-	-	603	608	-	568	559	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1181	-	-	1139	-	-	216	288	638	259	289	678
Mov Cap-2 Maneuver	-	-	-	-	-	-	216	288	-	259	289	-
Stage 1	-	-	-	-	-	-	564	550	-	629	612	-
Stage 2	-	-	-	-	-	-	509	605	-	533	547	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	20	28.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	296	1181	-	-	1139	-	-	363
HCM Lane V/C Ratio	0.188	0.022	-	-	0.005	-	-	0.591
HCM Control Delay (s)	20	8.1	-	-	8.2	-	-	28.3
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	3.6

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	351	27	21	339	56	17	4	14	44	4	42
Future Vol, veh/h	79	351	27	21	339	56	17	4	14	44	4	42
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	390	30	23	377	62	19	4	16	49	4	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	439	0	0	420	0	0	1061	1066	405	1045	1050	408
Stage 1	-	-	-	-	-	-	581	581	-	454	454	-
Stage 2	-	-	-	-	-	-	480	485	-	591	596	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1121	-	-	1139	-	-	202	222	646	207	227	643
Stage 1	-	-	-	-	-	-	499	500	-	586	569	-
Stage 2	-	-	-	-	-	-	567	552	-	493	492	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1121	-	-	1139	-	-	171	200	646	184	205	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	200	-	184	205	-
Stage 1	-	-	-	-	-	-	460	461	-	540	558	-
Stage 2	-	-	-	-	-	-	511	541	-	439	453	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.4	22.2	25.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	248	1121	-	-	1139	-	-	278
HCM Lane V/C Ratio	0.157	0.078	-	-	0.02	-	-	0.36
HCM Control Delay (s)	22.2	8.5	-	-	8.2	-	-	25.1
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0.1	-	-	1.6

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	396	12	5	345	20	28	4	21	110	4	96
Future Vol, veh/h	24	396	12	5	345	20	28	4	21	110	4	96
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	440	13	6	383	22	31	4	23	122	4	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	405	0	0	453	0	0	963	918	447	920	913	394
Stage 1	-	-	-	-	-	-	501	501	-	406	406	-
Stage 2	-	-	-	-	-	-	462	417	-	514	507	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1154	-	-	1108	-	-	235	272	612	251	273	655
Stage 1	-	-	-	-	-	-	552	543	-	622	598	-
Stage 2	-	-	-	-	-	-	580	591	-	543	539	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1154	-	-	1108	-	-	190	264	612	233	265	655
Mov Cap-2 Maneuver	-	-	-	-	-	-	190	264	-	233	265	-
Stage 1	-	-	-	-	-	-	539	531	-	608	595	-
Stage 2	-	-	-	-	-	-	479	588	-	506	527	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	22.1	38.1
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	269	1154	-	-	1108	-	-	331
HCM Lane V/C Ratio	0.219	0.023	-	-	0.005	-	-	0.705
HCM Control Delay (s)	22.1	8.2	-	-	8.3	-	-	38.1
HCM Lane LOS	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	5.1

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	377	28	23	364	61	17	4	16	48	4	44
Future Vol, veh/h	84	377	28	23	364	61	17	4	16	48	4	44
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	419	31	26	404	68	19	4	18	53	4	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	472	0	0	450	0	0	1138	1145	435	1122	1126	438
Stage 1	-	-	-	-	-	-	621	621	-	490	490	-
Stage 2	-	-	-	-	-	-	517	524	-	632	636	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1090	-	-	1110	-	-	179	200	621	183	205	619
Stage 1	-	-	-	-	-	-	475	479	-	560	549	-
Stage 2	-	-	-	-	-	-	541	530	-	468	472	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	1110	-	-	149	179	621	160	183	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	149	179	-	160	183	-
Stage 1	-	-	-	-	-	-	435	438	-	512	536	-
Stage 2	-	-	-	-	-	-	483	518	-	412	432	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.4	24.2	30.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	228	1090	-	-	1110	-	-	244
HCM Lane V/C Ratio	0.18	0.086	-	-	0.023	-	-	0.437
HCM Control Delay (s)	24.2	8.6	-	-	8.3	-	-	30.7
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.6	0.3	-	-	0.1	-	-	2.1

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	367	17	10	325	18	45	4	34	100	4	89
Future Vol, veh/h	23	367	17	10	325	18	45	4	34	100	4	89
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	408	19	11	361	20	50	4	38	111	4	99

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	381	0	0	427	0	0	915	873	418	884	872	371
Stage 1	-	-	-	-	-	-	470	470	-	393	393	-
Stage 2	-	-	-	-	-	-	445	403	-	491	479	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1177	-	-	1132	-	-	253	289	635	266	289	675
Stage 1	-	-	-	-	-	-	574	560	-	632	606	-
Stage 2	-	-	-	-	-	-	592	600	-	559	555	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1177	-	-	1132	-	-	208	280	635	241	280	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	208	280	-	241	280	-
Stage 1	-	-	-	-	-	-	561	548	-	618	600	-
Stage 2	-	-	-	-	-	-	497	594	-	510	543	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.2	22.9	31.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	292	1177	-	-	1132	-	-	344
HCM Lane V/C Ratio	0.316	0.022	-	-	0.01	-	-	0.623
HCM Control Delay (s)	22.9	8.1	-	-	8.2	-	-	31.3
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0	-	-	4

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	79	355	43	35	341	56	26	4	22	44	4	42
Future Vol, veh/h	79	355	43	35	341	56	26	4	22	44	4	42
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	394	48	39	379	62	29	4	24	49	4	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	441	0	0	442	0	0	1108	1113	418	1096	1106	410
Stage 1	-	-	-	-	-	-	594	594	-	488	488	-
Stage 2	-	-	-	-	-	-	514	519	-	608	618	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1119	-	-	1118	-	-	187	208	635	191	210	642
Stage 1	-	-	-	-	-	-	491	493	-	561	550	-
Stage 2	-	-	-	-	-	-	543	533	-	483	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1119	-	-	1118	-	-	156	185	635	165	187	642
Mov Cap-2 Maneuver	-	-	-	-	-	-	156	185	-	165	187	-
Stage 1	-	-	-	-	-	-	452	454	-	517	531	-
Stage 2	-	-	-	-	-	-	482	514	-	424	443	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0.7	25.5	27.9
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	233	1119	-	-	1118	-	-	255
HCM Lane V/C Ratio	0.248	0.078	-	-	0.035	-	-	0.392
HCM Control Delay (s)	25.5	8.5	-	-	8.3	-	-	27.9
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.9	0.3	-	-	0.1	-	-	1.8

Intersection

Int Delay, s/veh 44.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	582	18	9	419	28	46	4	34	140	4	96
Future Vol, veh/h	24	582	18	9	419	28	46	4	34	140	4	96
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	647	20	10	466	31	51	4	38	156	4	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	497	0	0	667	0	0	1268	1228	657	1234	1223	482
Stage 1	-	-	-	-	-	-	711	711	-	502	502	-
Stage 2	-	-	-	-	-	-	557	517	-	732	721	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1067	-	-	923	-	-	145	178	465	~ 153	179	584
Stage 1	-	-	-	-	-	-	424	436	-	552	542	-
Stage 2	-	-	-	-	-	-	515	534	-	413	432	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1067	-	-	923	-	-	113	172	465	~ 134	173	584
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	172	-	~ 134	173	-
Stage 1	-	-	-	-	-	-	413	425	-	538	536	-
Stage 2	-	-	-	-	-	-	413	528	-	366	421	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.2	50.9	241.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	167	1067	-	-	923	-	-	195
HCM Lane V/C Ratio	0.559	0.025	-	-	0.011	-	-	1.368
HCM Control Delay (s)	50.9	8.5	-	-	8.9	-	-	241.1
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.9	0.1	-	-	0	-	-	15.4

Notes

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

Intersection												
Int Delay, s/veh	14.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	491	41	32	561	92	24	4	22	63	4	44
Future Vol, veh/h	84	491	41	32	561	92	24	4	22	63	4	44
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	250	-	-	125	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	546	46	36	623	102	27	4	24	70	4	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	725	0	0	592	0	0	1528	1552	569	1515	1524	674
Stage 1	-	-	-	-	-	-	755	755	-	746	746	-
Stage 2	-	-	-	-	-	-	773	797	-	769	778	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	878	-	-	984	-	-	96	113	522	98	118	455
Stage 1	-	-	-	-	-	-	401	417	-	405	421	-
Stage 2	-	-	-	-	-	-	392	399	-	394	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	878	-	-	984	-	-	74	97	522	81	102	455
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	97	-	81	102	-
Stage 1	-	-	-	-	-	-	358	373	-	362	405	-
Stage 2	-	-	-	-	-	-	333	384	-	332	364	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	0.4	56.4	156
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	878	-	-	984	-	-	121
HCM Lane V/C Ratio	0.452	0.106	-	-	0.036	-	-	1.019
HCM Control Delay (s)	56.4	9.6	-	-	8.8	-	-	156
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2	0.4	-	-	0.1	-	-	6.9

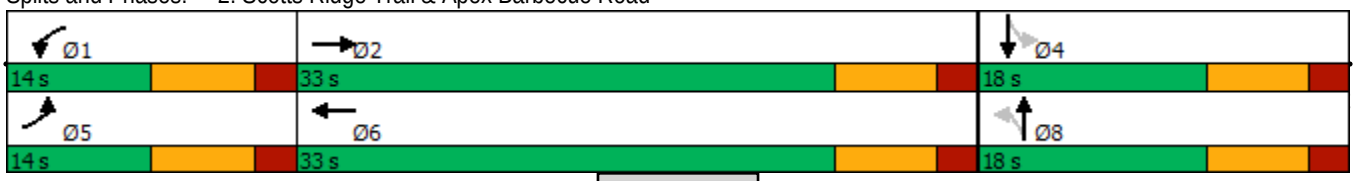
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	582	18	9	419	28	46	4	34	140	4	96
Future Volume (vph)	24	582	18	9	419	28	46	4	34	140	4	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.991			0.945			0.946	
Flt Protected	0.950			0.950				0.973			0.972	
Satd. Flow (prot)	1770	1855	0	1770	1846	0	0	1713	0	0	1713	0
Flt Permitted	0.950			0.950				0.727			0.775	
Satd. Flow (perm)	1770	1855	0	1770	1846	0	0	1280	0	0	1366	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		2580			931			1103			1486	
Travel Time (s)		39.1			14.1			30.1			40.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	647	20	10	466	31	51	4	38	156	4	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	667	0	10	497	0	0	93	0	0	267	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			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
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	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	
Total Split (s)	14.0	33.0		14.0	33.0		18.0	18.0		18.0	18.0	
Total Split (%)	21.5%	50.8%		21.5%	50.8%		27.7%	27.7%		27.7%	27.7%	
Maximum Green (s)	7.0	26.0		7.0	26.0		11.0	11.0		11.0	11.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	9.4	26.4		9.4	24.1			13.5			13.5	
Actuated g/C Ratio	0.18	0.50		0.18	0.46			0.26			0.26	
v/c Ratio	0.09	0.72		0.03	0.59			0.28			0.76	
Control Delay	23.8	17.0		23.6	15.2			22.6			41.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	23.8	17.0		23.6	15.2			22.6			41.1	
LOS	C	B		C	B			C			D	
Approach Delay		17.3			15.4			22.6			41.1	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	6	124		2	80			21			68	
Queue Length 95th (ft)	30	#412		16	239			71			#240	
Internal Link Dist (ft)		2500			851			1023			1406	
Turn Bay Length (ft)	250			125								
Base Capacity (vph)	315	1105		315	1021			329			351	
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	0.09	0.60		0.03	0.49			0.28			0.76	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 52.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Scotts Ridge Trail & Apex Barbecue Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	491	41	32	561	92	24	4	22	63	4	44
Future Volume (vph)	84	491	41	32	561	92	24	4	22	63	4	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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			0.979			0.941			0.946	
Flt Protected	0.950			0.950				0.976			0.972	
Satd. Flow (prot)	1770	1840	0	1770	1824	0	0	1711	0	0	1713	0
Flt Permitted	0.950			0.950				0.841			0.793	
Satd. Flow (perm)	1770	1840	0	1770	1824	0	0	1474	0	0	1397	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		2580			931			1103			1486	
Travel Time (s)		39.1			14.1			30.1			40.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	93	546	46	36	623	102	27	4	24	70	4	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	592	0	36	725	0	0	55	0	0	123	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			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
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	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	19.0		14.0	19.0		14.0	14.0		14.0	14.0	
Total Split (s)	15.0	54.0		14.0	53.0		22.0	22.0		22.0	22.0	
Total Split (%)	16.7%	60.0%		15.6%	58.9%		24.4%	24.4%		24.4%	24.4%	
Maximum Green (s)	8.0	47.0		7.0	46.0		15.0	15.0		15.0	15.0	
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0			-2.0			-2.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Act Effct Green (s)	10.8	39.2		10.1	35.5			14.1			14.1	
Actuated g/C Ratio	0.15	0.55		0.14	0.50			0.20			0.20	
v/c Ratio	0.35	0.59		0.14	0.80			0.19			0.45	
Control Delay	38.8	14.9		36.8	23.9			31.2			36.6	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	38.8	14.9		36.8	23.9			31.2			36.6	
LOS	D	B		D	C			C			D	
Approach Delay		18.2			24.5			31.2			36.6	
Approach LOS		B			C			C			D	
Queue Length 50th (ft)	41	194		16	276			23			53	
Queue Length 95th (ft)	99	316		48	450			60			118	
Internal Link Dist (ft)		2500			851			1023			1406	
Turn Bay Length (ft)	250			125								
Base Capacity (vph)	277	1274		249	1245			392			372	
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	0.34	0.46		0.14	0.58			0.14			0.33	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 71.7
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 23.0 Intersection LOS: C
Intersection Capacity Utilization 62.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Scotts Ridge Trail & Apex Barbecue Road

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

APEX BARBECUE ROAD

&

TOWN SIDE DRIVE

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	360	244	74	128	121
Future Vol, veh/h	79	360	244	74	128	121
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	400	271	82	142	134

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	353	0	-	0	888	312
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	576	-
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	1206	-	-	-	314	728
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1206	-	-	-	284	728
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1206	-	-	-	284	728
HCM Lane V/C Ratio	0.073	-	-	-	0.501	0.185
HCM Control Delay (s)	8.2	0	-	-	29.7	11.1
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	2.6	0.7

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	61	258	354	52	44	64
Future Vol, veh/h	61	258	354	52	44	64
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	287	393	58	49	71

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	451	0	-	0	845	422
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	423	-
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	1109	-	-	-	333	632
Stage 1	-	-	-	-	662	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1109	-	-	-	309	632
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	661	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1109	-	-	-	309	632
HCM Lane V/C Ratio	0.061	-	-	-	0.158	0.113
HCM Control Delay (s)	8.5	0	-	-	18.8	11.4
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6	0.4

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	138	334	129	88	153	208
Future Vol, veh/h	138	334	129	88	153	208
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	371	143	98	170	231

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	241	0	-	0	869	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	677	-
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	1326	-	-	-	322	850
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1326	-	-	-	275	850
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1326	-	-	-	275	850
HCM Lane V/C Ratio	0.116	-	-	-	0.618	0.272
HCM Control Delay (s)	8.1	0	-	-	37.2	10.8
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	3.8	1.1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	151	259	264	68	58	146
Future Vol, veh/h	151	259	264	68	58	146
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	168	288	293	76	64	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	369	0	-	0	955	331
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	624	-
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	1190	-	-	-	287	711
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1190	-	-	-	239	711
Mov Cap-2 Maneuver	-	-	-	-	239	-
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	534	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1190	-	-	-	239	711
HCM Lane V/C Ratio	0.141	-	-	-	0.27	0.228
HCM Control Delay (s)	8.5	0	-	-	25.5	11.6
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.1	0.9

Intersection	
Int Delay, s/veh	11.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	147	380	148	97	167	222
Future Vol, veh/h	147	380	148	97	167	222
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	422	164	108	186	247

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	272	0	-	0	966	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	748	-
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	1291	-	-	-	282	822
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	468	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1291	-	-	-	235	822
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	468	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	32.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1291	-	-	-	235	822
HCM Lane V/C Ratio	0.127	-	-	-	0.79	0.3
HCM Control Delay (s)	8.2	0	-	-	60.6	11.2
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	5.8	1.3

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	158	337	296	74	62	154
Future Vol, veh/h	158	337	296	74	62	154
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	176	374	329	82	69	171

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	411	0	-	0	1096	370
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	726	-
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	1148	-	-	-	236	676
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	479	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1148	-	-	-	190	676
Mov Cap-2 Maneuver	-	-	-	-	190	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	479	-

Approach	EB	WB	SB
HCM Control Delay, s	2.8	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1148	-	-	-	190	676
HCM Lane V/C Ratio	0.153	-	-	-	0.363	0.253
HCM Control Delay (s)	8.7	0	-	-	34.3	12.1
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.5	1

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	138	350	138	88	153	208
Future Vol, veh/h	138	350	138	88	153	208
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	153	389	153	98	170	231

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	251	0	-	0	897	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	695	-
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	1314	-	-	-	310	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1314	-	-	-	264	839
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	495	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	23.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1314	-	-	-	264	839
HCM Lane V/C Ratio	0.117	-	-	-	0.644	0.275
HCM Control Delay (s)	8.1	0	-	-	40.4	10.9
HCM Lane LOS	A	A	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	4	1.1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	151	271	280	68	58	146
Future Vol, veh/h	151	271	280	68	58	146
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	168	301	311	76	64	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	387	0	-	0	986	349
Stage 1	-	-	-	-	349	-
Stage 2	-	-	-	-	637	-
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	1171	-	-	-	275	694
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1171	-	-	-	228	694
Mov Cap-2 Maneuver	-	-	-	-	228	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1171	-	-	-	228	694
HCM Lane V/C Ratio	0.143	-	-	-	0.283	0.234
HCM Control Delay (s)	8.6	0	-	-	26.9	11.8
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.1	0.9

Intersection

Int Delay, s/veh	50.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	147	609	234	104	197	222
Future Vol, veh/h	147	609	234	104	197	222
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	163	677	260	116	219	247

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	376	0	-	0	1321	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	1003	-
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	1182	-	-	-	~ 173	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	355	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1182	-	-	-	~ 135	723
Mov Cap-2 Maneuver	-	-	-	-	~ 135	-
Stage 1	-	-	-	-	575	-
Stage 2	-	-	-	-	355	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	180.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1182	-	-	-	135	723
HCM Lane V/C Ratio	0.138	-	-	-	1.621	0.341
HCM Control Delay (s)	8.5	0	-	-	$ 369	12.5
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	15.7	1.5

Notes

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

Intersection	
Int Delay, s/veh	10.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	158	472	533	105	77	154
Future Vol, veh/h	158	472	533	105	77	154
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	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	176	524	592	117	86	171

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	709	0	-	0	1527	651
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	876	-
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	890	-	-	-	129	469
Stage 1	-	-	-	-	519	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	93	469
Mov Cap-2 Maneuver	-	-	-	-	93	-
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	62.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	890	-	-	-	93	469
HCM Lane V/C Ratio	0.197	-	-	-	0.92	0.365
HCM Control Delay (s)	10	0	-	-	153.6	17
HCM Lane LOS	B	A	-	-	F	C
HCM 95th %tile Q(veh)	0.7	-	-	-	5.2	1.6

APPENDIX L

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

SITE DRIVE 1

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	130	39	714	724	7
Future Vol, veh/h	22	130	39	714	724	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	144	43	793	804	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1683	804	812	0	-	0
Stage 1	804	-	-	-	-	-
Stage 2	879	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	104	383	814	-	-	-
Stage 1	440	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	98	383	814	-	-	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	406	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.8	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	814	-	98	383	-	-
HCM Lane V/C Ratio	0.053	-	0.249	0.377	-	-
HCM Control Delay (s)	9.7	-	53.5	20	-	-
HCM Lane LOS	A	-	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.9	1.7	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	69	118	815	692	19
Future Vol, veh/h	12	69	118	815	692	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	77	131	906	769	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1937	769	790	0	-	0
Stage 1	769	-	-	-	-	-
Stage 2	1168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	72	401	830	-	-	-
Stage 1	457	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	61	401	830	-	-	-
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	385	-	-	-	-	-
Stage 2	296	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.5	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	830	-	61	401	-	-
HCM Lane V/C Ratio	0.158	-	0.219	0.191	-	-
HCM Control Delay (s)	10.1	-	79.8	16.1	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.6	-	0.7	0.7	-	-

Intersection	
Int Delay, s/veh	10.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	121	93	814	866	63
Future Vol, veh/h	53	121	93	814	866	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	134	103	904	962	70

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2072	962	1032	0	-	0
Stage 1	962	-	-	-	-	-
Stage 2	1110	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	59	310	673	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 50	310	673	-	-	-
Mov Cap-2 Maneuver	~ 50	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	315	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	113.9	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	673	-	50	310	-	-
HCM Lane V/C Ratio	0.154	-	1.178	0.434	-	-
HCM Control Delay (s)	11.3	-	$ 316.4	25.2	-	-
HCM Lane LOS	B	-	F	D	-	-
HCM 95th %tile Q(veh)	0.5	-	5.3	2.1	-	-

Notes

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

Intersection	
Int Delay, s/veh	105.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	140	128	118	966	827	62
Future Vol, veh/h	140	128	118	966	827	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	200	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	142	131	1073	919	69

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2254	919	988	0	-	0
Stage 1	919	-	-	-	-	-
Stage 2	1335	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 46	329	699	-	-	-
Stage 1	389	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 37	329	699	-	-	-
Mov Cap-2 Maneuver	~ 37	-	-	-	-	-
Stage 1	316	-	-	-	-	-
Stage 2	245	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 879.8	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	699	-	37	329	-	-
HCM Lane V/C Ratio	0.188	-	4.204	0.432	-	-
HCM Control Delay (s)	11.3	-	$ 1662.2	24	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.7	-	18.1	2.1	-	-

Notes

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	121	93	814	866	63
Future Volume (vph)	53	121	93	814	866	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	200			100
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	1159			803	1010	
Travel Time (s)	31.6			10.0	12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	59	134	103	904	962	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	134	103	904	962	70
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	20.0	18.0	18.0	100.0	82.0	20.0
Total Split (%)	16.7%	15.0%	15.0%	83.3%	68.3%	16.7%
Maximum Green (s)	13.0	11.0	11.0	93.0	75.0	13.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	None	None
Act Effct Green (s)	11.9	24.7	12.7	74.6	54.3	71.8
Actuated g/C Ratio	0.13	0.27	0.14	0.83	0.60	0.80
v/c Ratio	0.25	0.31	0.41	0.59	0.86	0.06
Control Delay	46.5	32.1	49.6	6.0	24.5	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	32.1	49.6	6.0	24.5	2.7
LOS	D	C	D	A	C	A
Approach Delay	36.5			10.5	23.1	
Approach LOS	D			B	C	
Queue Length 50th (ft)	33	61	58	179	451	9
Queue Length 95th (ft)	85	139	136	322	717	17
Internal Link Dist (ft)	1079			723	930	
Turn Bay Length (ft)	100		200			100
Base Capacity (vph)	330	466	286	1736	1529	1342
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	0.18	0.29	0.36	0.52	0.63	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 90.2
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 18.6 Intersection LOS: B
Intersection Capacity Utilization 69.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: S. Salem Street & Site Drive 1

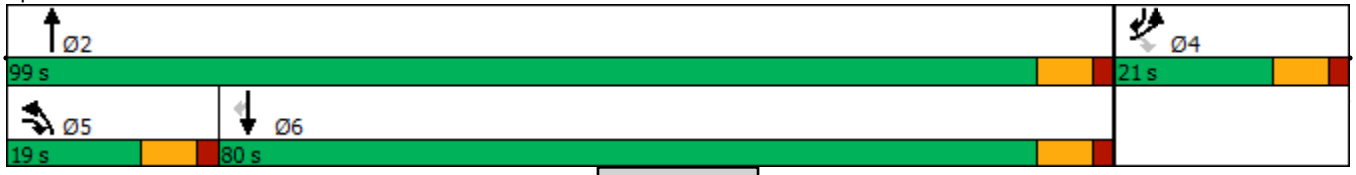
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	140	128	118	966	827	62
Future Volume (vph)	140	128	118	966	827	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	200			100
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	1159			803	1010	
Travel Time (s)	31.6			10.0	12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	156	142	131	1073	919	69
Shared Lane Traffic (%)						
Lane Group Flow (vph)	156	142	131	1073	919	69
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	21.0	19.0	19.0	99.0	80.0	21.0
Total Split (%)	17.5%	15.8%	15.8%	82.5%	66.7%	17.5%
Maximum Green (s)	14.0	12.0	12.0	92.0	73.0	14.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	None	None
Act Effct Green (s)	14.5	32.6	13.0	74.2	56.1	75.7
Actuated g/C Ratio	0.15	0.33	0.13	0.75	0.57	0.76
v/c Ratio	0.60	0.27	0.57	0.77	0.87	0.06
Control Delay	54.3	29.8	55.3	11.7	28.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	29.8	55.3	11.7	28.5	2.8
LOS	D	C	E	B	C	A
Approach Delay	42.7			16.4	26.7	
Approach LOS	D			B	C	
Queue Length 50th (ft)	96	67	81	352	492	9
Queue Length 95th (ft)	#200	143	#174	505	686	18
Internal Link Dist (ft)	1079			723	930	
Turn Bay Length (ft)	100		200			100
Base Capacity (vph)	297	546	260	1686	1433	1244
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	0.53	0.26	0.50	0.64	0.64	0.06

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 99.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 70.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: S. Salem Street & Site Drive 1



APPENDIX M

CAPACITY ANALYSIS CALCULATIONS

APEX BARBECUE ROAD

&

SITE DRIVE 2

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	569	4	8	385	4	28
Future Vol, veh/h	569	4	8	385	4	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	632	4	9	428	4	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	636	0	1078	632
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	446	-
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	-	-	947	-	242	480
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	645	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	947	-	240	480
Mov Cap-2 Maneuver	-	-	-	-	240	-
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	240	480	-	-	947	-
HCM Lane V/C Ratio	0.019	0.065	-	-	0.009	-
HCM Control Delay (s)	20.3	13	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	374	4	26	385	4	15
Future Vol, veh/h	374	4	26	385	4	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	416	4	29	428	4	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	420	0	902	416
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	486	-
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	-	-	1139	-	308	637
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1139	-	300	637
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	300	637	-	-	1139	-
HCM Lane V/C Ratio	0.015	0.026	-	-	0.025	-
HCM Control Delay (s)	17.2	10.8	-	-	8.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	737	30	9	450	58	31
Future Vol, veh/h	737	30	9	450	58	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	819	33	10	500	64	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	852	0	1339	819
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	520	-
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	-	-	787	-	168	375
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	787	-	166	375
Mov Cap-2 Maneuver	-	-	-	-	166	-
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	589	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	31.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	166	375	-	-	787	-
HCM Lane V/C Ratio	0.388	0.092	-	-	0.013	-
HCM Control Delay (s)	39.8	15.6	-	-	9.6	-
HCM Lane LOS	E	C	-	-	A	-
HCM 95th %tile Q(veh)	1.7	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	12

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	446	103	50	511	163	34
Future Vol, veh/h	446	103	50	511	163	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	496	114	56	568	181	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	610	0	1176	496
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	680	-
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	-	-	969	-	211	574
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	969	-	199	574
Mov Cap-2 Maneuver	-	-	-	-	199	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	474	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	77.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	199	574	-	-	969	-
HCM Lane V/C Ratio	0.91	0.066	-	-	0.057	-
HCM Control Delay (s)	91.3	11.7	-	-	8.9	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	7.2	0.2	-	-	0.2	-

APPENDIX N

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

SITE DRIVE 3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	0	867	917	61
Future Vol, veh/h	0	12	0	867	917	61
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	-	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	13	0	963	1019	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1019	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	288	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	288	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	288	-	-
HCM Lane V/C Ratio	-	0.046	-	-
HCM Control Delay (s)	-	18.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	41	0	1106	848	43
Future Vol, veh/h	0	41	0	1106	848	43
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	-	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	46	0	1229	942	48

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	942	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	319	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	319	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	319	-	-
HCM Lane V/C Ratio	-	0.143	-	-
HCM Control Delay (s)	-	18.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

APPENDIX O

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

SITE DRIVE 4

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	74	80	906	956	31
Future Vol, veh/h	0	74	80	906	956	31
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	150	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	89	1007	1062	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1062	1096	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	272	637	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	272	637	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.9	0.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	637	-	272	-	-
HCM Lane V/C Ratio	0.14	-	0.302	-	-
HCM Control Delay (s)	11.6	-	23.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.2	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	69	79	1083	929	26
Future Vol, veh/h	0	69	79	1083	929	26
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	150	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	77	88	1203	1032	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1032	1061	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	4.12	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	0	283	657	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	283	657	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.4	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	657	-	283	-	-
HCM Lane V/C Ratio	0.134	-	0.271	-	-
HCM Control Delay (s)	11.3	-	22.4	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.1	-	-

APPENDIX P

CAPACITY ANALYSIS CALCULATIONS

APEX BARBECUE ROAD

&

SITE DRIVE 5

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑		↱
Traffic Vol, veh/h	738	30	0	459	0	8
Future Vol, veh/h	738	30	0	459	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	820	33	0	510	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	820
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	375
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	375
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	375	-	-	-
HCM Lane V/C Ratio	0.024	-	-	-
HCM Control Delay (s)	14.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection						
Int Delay, s/veh	0.4					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↑		↱
Traffic Vol, veh/h	458	22	0	561	0	38
Future Vol, veh/h	458	22	0	561	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	509	24	0	623	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	509
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	564
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	564
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	564	-	-	-
HCM Lane V/C Ratio	0.075	-	-	-
HCM Control Delay (s)	11.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

APPENDIX Q

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

SITE DRIVE 6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	0	867	971	30
Future Vol, veh/h	0	7	0	867	971	30
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	-	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	8	0	963	1079	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1079	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	265	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	265	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	265	-	-
HCM Lane V/C Ratio	-	0.029	-	-
HCM Control Delay (s)	-	19	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	38	0	1106	853	22
Future Vol, veh/h	0	38	0	1106	853	22
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	-	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	0	1229	948	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	948	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	316	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	316	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	316	-	-
HCM Lane V/C Ratio	-	0.134	-	-
HCM Control Delay (s)	-	18.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

APPENDIX R

CAPACITY ANALYSIS CALCULATIONS

S. SALEM STREET

&

SITE DRIVE 7

Intersection	
Int Delay, s/veh	21.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	149	129	933	965	65
Future Vol, veh/h	53	149	129	933	965	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	250	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	166	143	1037	1072	72

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2395	1072	1144	0	-	0
Stage 1	1072	-	-	-	-	-
Stage 2	1323	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 37	268	611	-	-	-
Stage 1	329	-	-	-	-	-
Stage 2	249	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 28	268	611	-	-	-
Mov Cap-2 Maneuver	~ 28	-	-	-	-	-
Stage 1	252	-	-	-	-	-
Stage 2	249	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	240.5	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	611	-	28	268	-	-
HCM Lane V/C Ratio	0.235	-	2.103	0.618	-	-
HCM Control Delay (s)	12.7	-	$ 809.9	37.9	-	-
HCM Lane LOS	B	-	F	E	-	-
HCM 95th %tile Q(veh)	0.9	-	7	3.8	-	-

Notes

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

Intersection	
Int Delay, s/veh	164

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	141	147	149	1021	923	75
Future Vol, veh/h	141	147	149	1021	923	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	250	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	163	166	1134	1026	83

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2492	1026	1109	0	-	0
Stage 1	1026	-	-	-	-	-
Stage 2	1466	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 32	285	630	-	-	-
Stage 1	346	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 24	285	630	-	-	-
Mov Cap-2 Maneuver	~ 24	-	-	-	-	-
Stage 1	255	-	-	-	-	-
Stage 2	212	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 1392	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	630	-	24	285	-	-
HCM Lane V/C Ratio	0.263	-	6.528	0.573	-	-
HCM Control Delay (s)	12.7	-	$ 2808.6	33.3	-	-
HCM Lane LOS	B	-	F	D	-	-
HCM 95th %tile Q(veh)	1.1	-	19.6	3.3	-	-

Notes

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

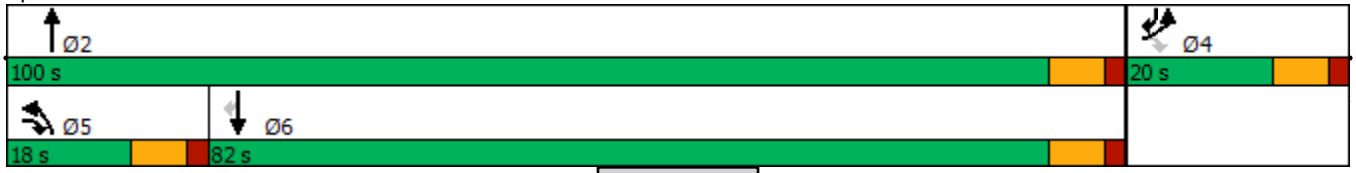
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	149	129	933	965	65
Future Volume (vph)	53	149	129	933	965	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	250			100
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	1521			1271	429	
Travel Time (s)	41.5			15.8	5.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	59	166	143	1037	1072	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	59	166	143	1037	1072	72
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	20.0	18.0	18.0	100.0	82.0	20.0
Total Split (%)	16.7%	15.0%	15.0%	83.3%	68.3%	16.7%
Maximum Green (s)	13.0	11.0	11.0	93.0	75.0	13.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	11.9	25.6	13.3	84.7	64.1	81.5
Actuated g/C Ratio	0.12	0.25	0.13	0.84	0.64	0.81
v/c Ratio	0.28	0.41	0.61	0.66	0.90	0.06
Control Delay	51.1	37.4	60.2	7.1	28.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	37.4	60.2	7.1	28.5	2.5
LOS	D	D	E	A	C	A
Approach Delay	41.0			13.5	26.9	
Approach LOS	D			B	C	
Queue Length 50th (ft)	41	100	101	248	583	9
Queue Length 95th (ft)	85	170	#209	438	#1017	17
Internal Link Dist (ft)	1441			1191	349	
Turn Bay Length (ft)	150		250			100
Base Capacity (vph)	287	415	248	1645	1404	1351
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	0.21	0.40	0.58	0.63	0.76	0.05

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 100.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 21.9 Intersection LOS: C
Intersection Capacity Utilization 76.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: S. Salem Street & Site Drive 7



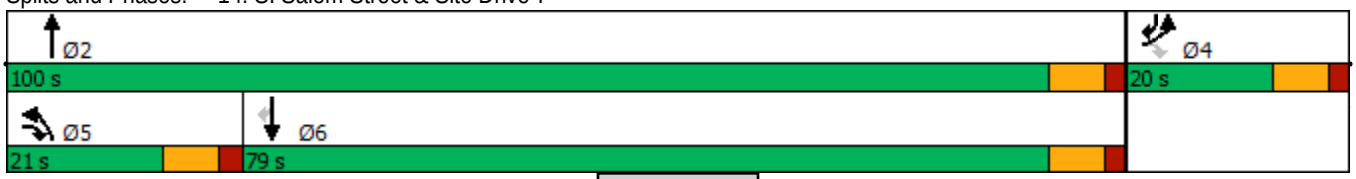
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	141	147	149	1021	923	75
Future Volume (vph)	141	147	149	1021	923	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0	250			100
Storage Lanes	1	1	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Right Turn on Red		No				No
Satd. Flow (RTOR)						
Link Speed (mph)	25			55	55	
Link Distance (ft)	1521			1271	429	
Travel Time (s)	41.5			15.8	5.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	157	163	166	1134	1026	83
Shared Lane Traffic (%)						
Lane Group Flow (vph)	157	163	166	1134	1026	83
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	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
Number of Detectors	1	1	1	2	2	1
Detector Template	Left	Right	Left	Thru	Thru	Right
Leading Detector (ft)	20	20	20	100	100	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	20	6	6	20
Detector 1 Type	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
Detector 1 Queue (s)	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
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot	pm+ov	Prot	NA	NA	pm+ov
Protected Phases	4	5	5	2	6	4
Permitted Phases		4				6

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Detector Phase	4	5	5	2	6	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	14.0	14.0	7.0
Minimum Split (s)	14.0	14.0	14.0	21.0	21.0	14.0
Total Split (s)	20.0	21.0	21.0	100.0	79.0	20.0
Total Split (%)	16.7%	17.5%	17.5%	83.3%	65.8%	16.7%
Maximum Green (s)	13.0	14.0	14.0	93.0	72.0	13.0
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	Min	Min	None
Act Effct Green (s)	14.3	34.4	15.0	85.8	65.7	85.1
Actuated g/C Ratio	0.13	0.31	0.14	0.78	0.60	0.77
v/c Ratio	0.69	0.33	0.69	0.78	0.93	0.07
Control Delay	64.7	33.6	63.7	11.7	35.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	33.6	63.7	11.7	35.0	3.1
LOS	E	C	E	B	D	A
Approach Delay	48.8			18.3	32.6	
Approach LOS	D			B	C	
Queue Length 50th (ft)	119	98	125	383	635	12
Queue Length 95th (ft)	#213	161	#219	560	#983	23
Internal Link Dist (ft)	1441			1191	349	
Turn Bay Length (ft)	150		250			100
Base Capacity (vph)	245	512	262	1582	1276	1235
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	0.64	0.32	0.63	0.72	0.80	0.07

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 110.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 77.1% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: S. Salem Street & Site Drive 7



PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 20CZ01 Depot 499 PUD and 2045 Land Use Map Amendment

Planning Board Meeting Date: July 13, 2020

Report Requirements:

Per NCGS 160A-387, all proposed amendments to the zoning ordinance or zoning map shall have a written report provided from the Planning Board to the Town Council within 30 days of referral of the amendment to the Planning Board, or the Town Council may proceed in its consideration of the amendment without the Planning Board report. Furthermore, in no case is the Town Council bound by the recommendations, if any, of the Planning Board.

Per NCGS 160A-383, the Planning Board shall advise and comment on whether the proposed zoning amendment is consistent with all applicable officially adopted plans, and provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Town Council.

PROJECT DESCRIPTION:

Acreage: ±200.8 acres

PIN(s): 0731459383, 0731554102, 0731564395, 0731641147, 0731645370, 0731646532, 0731657166, 0731676714, 0731750984, 0731761944, 0731766588, 0731873224

Current Zoning: Residential Agricultural (RA) & Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01)

Proposed Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ)

Current 2045 Land Use Map: Mixed Use: High Density Residential/Office Employment/Commercial Services; Medium/High Density Residential; Office Employment; Office Employment/Commercial Services

Proposed 2045 Land Use Map: Amendment requested for a ±5.41 acre portion of PIN 0731761944 from Office Employment to High Density Residential

Town Limits: ETJ

Applicable Officially Adopted Plans:

The Board must state whether the project is consistent or inconsistent with the following officially adopted plans, if applicable. Applicable plans have a check mark next to them.

☑ 2045 Land Use Map
☐ Consistent ☑ Inconsistent Reason: Not consistent due to recommended denial of 2045 Land Use Map amendment.

☑ Apex Transportation Plan
☐ Consistent ☑ Inconsistent Reason: Not consistent due to recommended change to Apex Transportation Plan amendment (keep two overpasses)

☑ Parks, Recreation, Open Space, and Greenways Plan
☑ Consistent ☐ Inconsistent Reason:

Legislative Considerations:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1. *Consistency with 2045 Land Use Plan*. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Plan.
   ☐ Consistent ☑ Inconsistent Reason:

Recommended denial of amendment to the 2045 LUM.

2. *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
   ☐ Consistent ☑ Inconsistent Reason:

Recommended denial of amendment to the 2045 LUM.

3. *Zoning district supplemental standards*. The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 *Supplemental Standards*, if applicable.
   ☑ Consistent ☐ Inconsistent Reason:

4. *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.
   ☐ Consistent ☑ Inconsistent Reason:

Not consistent due to overpasses on Transportation Plan recommended amendment.

5. *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
   ☑ Consistent ☐ Inconsistent Reason:

6. *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
   ☐ Consistent ☑ Inconsistent Reason:

Developer and WCPSS said school will not fit with the Transportation Plan the way they have designed it.

7. *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.
   ☐ Consistent ☑ Inconsistent Reason:

Doesn't meet Transportation Plan.

8. *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
   ☑ Consistent ☐ Inconsistent Reason:

9. *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
   ☑ Consistent ☐ Inconsistent Reason:

10. *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.
    ☑ Consistent ☐ Inconsistent Reason:

Planning Board Recommendation:

Motion: Recommend denial of LUM amendment and rezoning.

Introduced by Planning Board member: Mark Steele - LUM; Tim Royal - rezoning

Seconded by Planning Board member: Reginald Skinner - LUM; Mark Steele - rezoning

☐ *Approval*: the project is consistent with all applicable officially adopted plans and the applicable legislative considerations listed above.

☐ *Approval with conditions*: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above, so the following conditions are recommended to be included in the project in order to make it fully consistent:

☑ *Denial*: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above.

With 6 Planning Board Member(s) voting "aye"

With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

Note to Town Council: Loved the product; like to see them go back to drawing board to see if the school will fit somewhere else on the property. Transportation Plan is priority; traffic was cited as a priority by citizens during 2045 Land Use Plan process.

This report reflects the recommendation of the Planning Board, this the 13th day of July 2020.

Attest:

Michael Marks Digitally signed by Michael Marks Date: 2020.07.14 08:01:05 -04'00'

Michael Marks, Planning Board Chair

Dianne Khin Digitally signed by Dianne Khin Date: 2020.07.13 19:24:07 -04'00'

Dianne Khin, Planning Director

http://www.apexnc.org/DocumentCer
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TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION
OF PUBLIC HEARINGS
CONDITIONAL ZONING #20CZ01
Depot 499 PUD

Pursuant to the provisions of North Carolina General Statutes Section 160A-364 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board and Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant/Authorized Agent: Stephen Dorn, Lennar
Property Addresses: 0 Kelly Rd; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem St; 0 and 6401 Apex Barbecue Rd
Acreage: ±200.8 acres
Property Identification Numbers (PINs): 0731459383, 0731554102, 0731564395, 0731641147, 0731645370, 0731646532, 0731657166, 0731676714, 0731750984, 0731761944, 0731766588, 0731873224
Current 2045 Land Use Map Designation: Mixed Use: High Density Residential/Office Employment/Commercial Services: Medium/High Density Residential: Office Employment; Office Employment/Commercial Services
Proposed 2045 Land Use Map Designation: Amendment requested for a ±5.41 acre portion of PIN 0731761944 from Office Employment to High Density Residential
Existing Zoning of Properties: Residential Agricultural (RA) & Neighborhood Business-Conditional Zoning (B1-CZ #09CZ01)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
73 Hunter Street, Apex, North Carolina
Council Chambers, 2nd Floor

Planning Board Public Hearing Date and Time: July 13, 2020 4:30 PM
If you would like to speak during the public hearing, you may sign-in ahead of time by emailing your name and address to bonnie.brock@apexnc.org.
If you are unable to attend, you may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. You may share comments by noon on Friday, July 10, 2020, following instructions in the Remote Participation policy. The policy includes options to provide comments by email (public.hearing@apexnc.org, 350-word limit) or voicemail (919-372-7300, 3-minute limit).

Town Council Public Hearing Date and Time: July 21, 2020 6:00 PM
If you are unable to attend, you may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. You may share comments by noon on Monday, July 20, 2020, following instructions in the Remote Participation policy. The policy includes options to provide comments by email (public.hearing@apexnc.org, 350-word limit) or voicemail (919-372-7300, 3-minute limit).

Vicinity Map:

Property owners within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may appear at the public hearing and be heard with respect to the application. Maps showing the location for the above site(s) to be considered in addition to a copy of the 2045 Land Use Map can be inspected at the Apex Town Hall or call 919-249-3426, Department of Planning and Community Development, for further information. To view the petition and related documents on-line: https://www.apexnc.org/DocumentCenter/View/30258.

Published Dates: June 26, 2020 – July 21, 2020 ...g and Community Development

2:44 PM
6/26/2020

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS

CONDITIONAL ZONING #20CZ01
Depot 499 PUD

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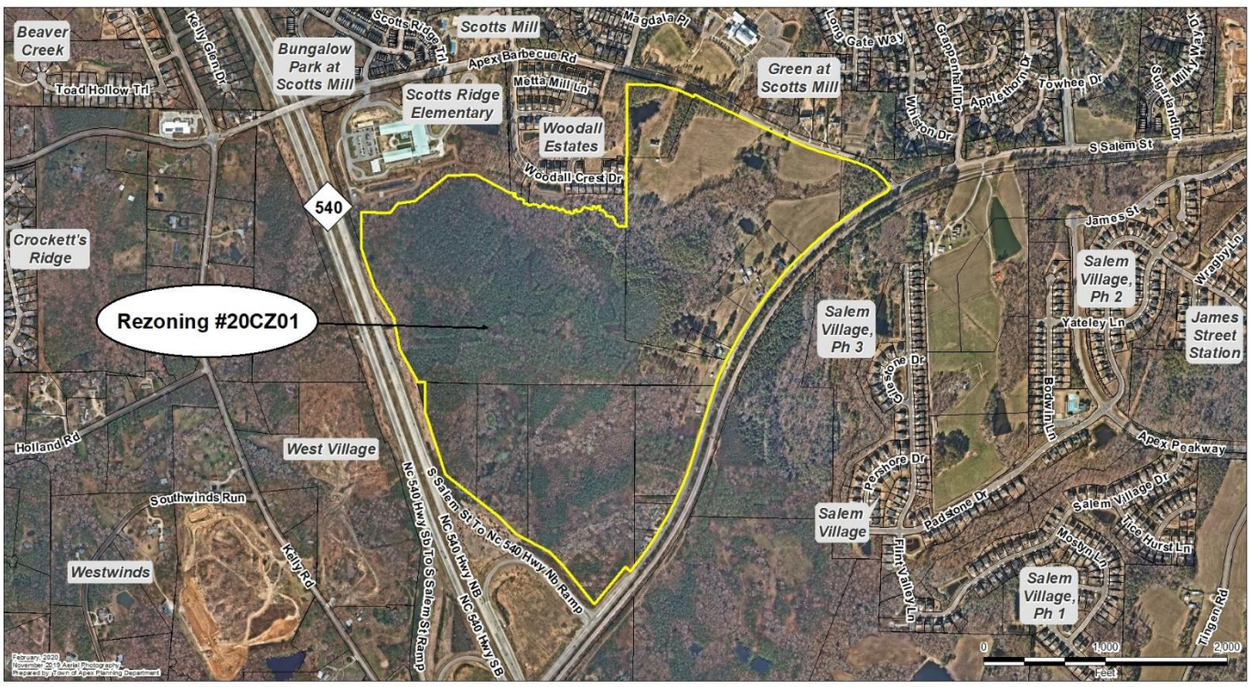
Vicinity Map:



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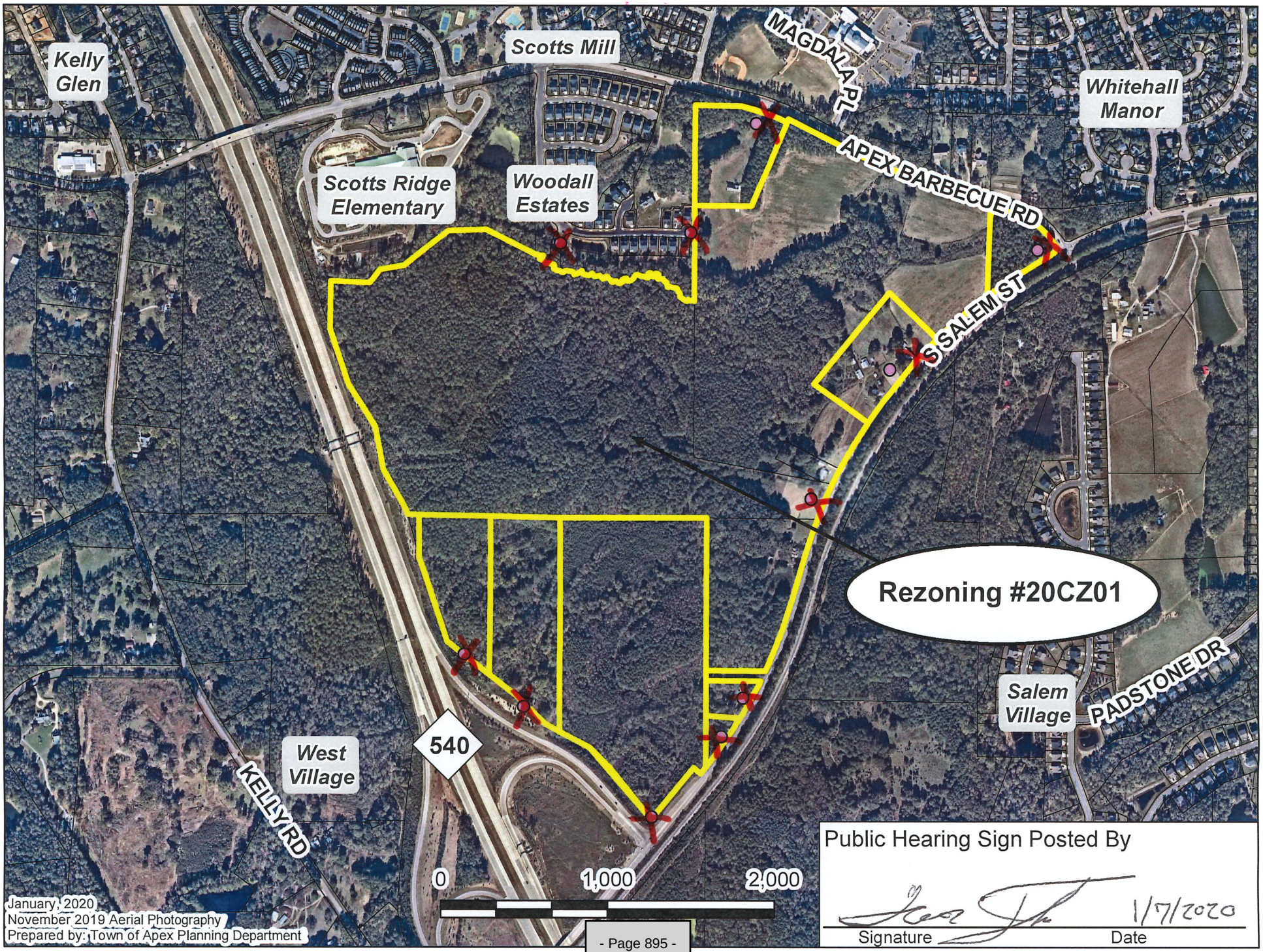
Published Dates: June 26, 2020 – July 21, 2020

Dianne F. Khin, AICP
Director of Planning and Community Development



Public Hearing Sign Posted By

Signature

1/7/2020

Date

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice

Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name:	Rezoning #20CZ01 Depot 499 PUD
Project Location:	0 Kelly Rd; 1216, 1300, 1330, 1420, 1525, and 1604 S. Salem St; 0 and 6401 Apex Barbecue Rd
Applicant or Authorized Agent:	Stephen Dorn
Firm:	Lennar

This is to certify that I, as Planning Director, mailed or caused to have mailed by first class postage for the above mentioned project **June 26, 2020** a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners within 300' of the land subject to notification. I further certify that I relied on information provided to me by the above-mentioned person as to accuracy and mailing addresses of property owners within 300' of the land subject to notification.

6/26/2020
Date

Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Jeri Chastain Pederson, a Notary Public for the above State and County, this the 26 day of June, 2020.

Jeri Chastain Pederson
Notary Public

JERI CHASTAIN PEDERSON
Notary Public
Wake County, North Carolina
My Commission Expires
March 10, 2024

My Commission Expires: 03/10/2024

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING
Meeting Date: July 21, 2020

Item Details

Presenter(s): Amanda Bunce, Current Planning Manager
Department(s): Planning and Community Development

Requested Motion

Public Hearing and possible motion regarding various amendments to the Unified Development Ordinance.

Approval Recommended?

The Planning and Community Development Department recommends approval.
The Planning Board heard these amendments at their July 13, 2020 meeting and unanimously recommended approval.

Item Details

UDO Amendments Summary

Requested by the Planning Committee:

1. Amendments to Sec. 2.3.4.F *Planned Development Districts, Standards* in order to increase the RCA reduction that can be approved by Town Council and add additional performance standards for such reduction in the Planned Unit Development-Conditional Zoning and Traditional Neighborhood-Conditional Zoning districts.

2. Amendments to Sec. 8.1.2.A *Resource Conservation Area, Establishment of RCA* in order to reduce the ratio of off-site RCA to on-site RCA and to amend the standards and process for the approval of off-site RCA.

3. Amendments to Sec. 8.1.2.C *Resource Conservation Area, Size of the RCA* in order to decrease the amount of RCA required inside the Apex Peakway and increase the amount of RCA required south and west of NC 540 with certain exemptions. Amendments to Sec. 8.2.6 *Buffering* in order to update section references based on changes in Sec. 8.1.2.C.

Requested by Planning Staff:

4. Amendments to Sec. 4.2.1 *Use Table, General* in order to add subsection I *Prohibited Uses in Residential Districts* in order to prohibit parking on residential property that is not accessory to the residential use.

5. Amendments to Sec. 6.3.1.G.5 *Small Town Character Overlay District, Residential Building Standards* in order to exempt multi-family dwellings over four (4) units from the prohibition on slab on grade foundations.

6. Amendments to Sec. 9.1.2.B *Design Standards, Applicability* in order to expand the applicability of the design standards for residential development to all zoning districts while retaining the exemption for one- and two-family dwellings.

Attachments

- Staff Report
- Ordinance
- Legal Notice

Requested by the Planning Committee:

1. Amendments to Sec. 2.3.4.F *Planned Development Districts, Standards* in order to increase the RCA reduction that can be approved by Town Council and add additional performance standards for such reduction in the Planned Unit Development-Conditional Zoning and Traditional Neighborhood-Conditional Zoning districts.

2.3.4.F *Planned Development Districts, Standards*

1) Planned Unit Development (PUD-CZ) District
In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:
…

c) *RCA.* The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 *Resource Conservation Area*, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than ~~two percent (2%)~~ **10%** provided that **the PD Plan for PUD-CZ includes one or more of the following**:

i) ~~The PD Plan for PUD-CZ includes a~~**A** non-residential component; ~~or~~

ii) ~~The PD Plan for PUD-CZ has a~~**A**n overall density of ~~6~~ **7** residential units per acre or more~~.~~**; or**

iii) Environmental measures including but not limited to the following:

(a) The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;

(b) The installation of a geothermal system for a certain number or percentage of units within the development; or

(c) Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).

…

2) Traditional Neighborhood District (TND-CZ)

In approving a Planned Development (PD) Zoning District designation for a TND-CZ, the Town Council shall find the zoning district designation and PD Plan for TND-CZ complies with the following standards:

…

b) *Development parameters*

…

(viii) *RCA*. The PD Plan for TND-CZ shall demonstrate compliance with Sec. 8.1.2 Resource Conservation Area, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than ~~two percent (2%)~~ **10% provided that the PD Plan for TND-CZ includes one or more environmental measure including but not limited to the following**:

(a) **The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;**

(b) **The installation of a geothermal system for a certain number or percentage of units within the development; or**

(c) **Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).**

…

2. Amendments to Sec. 8.1.2.A *Resource Conservation Area, Establishment of RCA* in order to reduce the ratio of off-site RCA to on-site RCA and to amend the standards and process for the approval of off-site RCA.

Note: The proposed reduction to the ratio of off-site RCA to on-site RCA and changes to standards for off-site RCA are not proposed at this time in order to allow staff and the Planning Committee to further study the appropriate ratio and standards.

8.1.2 Resource Conservation Area

…

A) Establishment of RCA

1) *Off-site RCA.* RCA may be established outside of the limits of the development site provided that ~~the Town Council finds through a quasi-judicial public hearing that~~ all of the following criteria are met by the off-site RCA:

…

3. Amendments to Sec. 8.1.2.C *Resource Conservation Area, Size of the RCA* in order to decrease the amount of RCA required inside Apex Peakway and increase the amount of RCA required south and west of NC 540 with certain exemptions. Amendments to Sec. 8.2.6 *Buffering* in order to update section references based on changes in Sec. 8.1.2.C.

8.1.2 Resource Conservation Area

…

C) *Size of the RCA*

The size of the RCA for each development site shall be calculated by the applicant and staff based on the following:

1) *Planned Developments*

The RCA for all planned developments shall be determined by the Town Council per Sec. 2.3.4.F.1.c and per Sec. 8.1.2.C.4, 5, 6**, 7**, or ~~9~~**10** as applicable, based on the criteria set forth in subsection B. above.

2) *Small Town Character Overlay District*

All development meeting the criteria of Sec. 6.3 *Small Town Character Overlay District* shall be exempt from Sec. 8.1 *Resource Conservation.*

3) *Low Density Single-Family Residential Developments (maximum of two dwelling units per gross acre)*

Low density single-family residential developments with a maximum of two (2) dwelling units per gross acre shall be exempt from Sec. 8.1 *Resource Conservation*.

4) *Development located north and east of NC 540* ***and outside Apex Peakway***

All developments which do not meet the criteria of subsections 8.1.2.C.2, 3, or ~~9~~**10** and which are located north and east of NC 540 **and outside existing and future Apex Peakway** shall provide buffers and RCA equal to or greater than 20% of the gross site acreage.

5) *Development located south and west of NC 540*

All developments which do not meet the criteria of subsections 8.1.2.C.~~2,~~ 3~~,~~ ~~4,~~ or ~~9~~**10** and which are located south and west of NC 540 shall provide buffers and RCA equal to or greater than ~~25~~**30**% of the gross site acreage **for single-family and townhome uses and 25% of the gross site acreage for multi-family, mixed-use, and non-residential uses**.

6) ***Development located inside Apex Peakway***

All developments which do not meet the criteria of subsections 8.1.2.C.2, 3, or 10 and which are located inside existing and future Apex Peakway shall provide buffers and RCA equal to or greater than 10% of the gross site acreage.

~~6~~**7**) *Resource Conservation Area Exchanged for Reduced Width Buffers*

…

~~7~~**8**) *Maximum Built-Upon Area*

…

~~8~~**9**) Notwithstanding…

~~9~~**10**) *North Carolina Certified Sites*
…

8.2.6.B *Buffering*

…

3) Type and Width Buffer Required

…

b) *Reduced Width Buffers in Exchange for Resource Conservation Area*
Required buffers may be exchanged for Resource Conservation Area in accordance with Sec. 8.1.2.C.~~6~~**7**.

…

Requested by Planning Staff:

4. Amendments to Sec. 4.2.1 *Use Table, General* in order to add subsection 4.2.1.I *Prohibited Uses in Residential Districts* in order to prohibit parking on residential property that is not accessory to the residential use.

4.2.1 *Use Table, General*

…

I) ***Prohibited Uses in Residential Districts***
In addition to the uses listed in subsection H above, parking that is not accessory to the residential use is prohibited. This includes, but is not limited to, student parking, parking for a nearby special event, and off-site parking for another use. For the purpose of this Section, student parking is defined as parking at a residence or on a residential lot, for the purpose of coming and going from a vehicle to a school or from a school to a vehicle. This definition of student parking shall not apply to students who reside at the home.

5. Amendments to Sec. 6.3.1.G.5 *Small Town Character Overlay District, Residential Building Standards* in order to exempt multi-family dwellings over four (4) units from the prohibition on slab on grade foundations.

6.3.1 Small Town Character Overlay District

…

G) *Residential Building Standards*

…

5) **Except for multi-family structures containing more than four (4) units,** ~~N~~no slab-on-grade foundations are permitted. **Raised** ~~F~~foundations around the principal structure shall be fully enclosed.

6. Amendments to Sec. 9.1.2.B *Design Standards, Applicability* in order to expand the applicability of the design standards for residential development to all zoning districts while retaining the exemption for one- and two-family dwellings.

9.1 Design Standards, General

…

9.1.2 Applicability

…

B) These design standards shall also be applicable to residential development, with the exception of one- and two-family dwellings, in ~~the PUD-CZ, SD-CZ, and TND-CZ planned development districts and the MORR district~~ **all zoning districts**.

PLANNING STAFF RECOMMENDATION:
Planning staff recommends approval of the proposed UDO amendments.

PLANNING BOARD RECOMMENDATION:
The Planning Board heard these amendments at their July 13, 2020 meeting and unanimously recommended approval.

PLANNING BOARD REPORT TO TOWN COUNCIL
Unified Development Ordinance Amendments

Planning Board Meeting Date: July 13, 2020

Report Requirements:
Per NCGS 160A-387, all proposed amendments to the zoning ordinance or zoning map shall have a written report provided from the Planning Board to the Town Council within 30 days of referral of the amendment to the Planning Board, or the Town Council may proceed in its consideration of the amendment without the Planning Board report. Furthermore, in no case is the Town Council bound by the recommendations, if any, of the Planning Board.

Planning Board Recommendation:

Motion: Motion to recommend approval as presented.

Introduced by Planning Board member: Tina Sherman

Seconded by Planning Board member: Reginald Skinner

☑ Approval of the proposed UDO amendment(s)
☐ Approval of the proposed UDO amendment(s) with the following conditions:

☐ Denial of the proposed UDO amendment(s)

With 6 Planning Board Member(s) voting "aye"
With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

This report reflects the recommendation of the Planning Board, this the 13th day of July 2020.

Attest:

Michael Marks Digitally signed by Michael Marks Date: 2020.07.14 08:03:15 -04'00'
Michael Marks, Planning Board Chair

Dianne Khin Digitally signed by Dianne Khin Date: 2020.07.13 19:41:05 -04'00'
Dianne Khin, Planning Director

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARING

AMENDMENTS TO THE UNIFIED DEVELOPMENT ORDINANCE (UDO)

Notice is hereby given of a public hearing before the Town Council of the Town of Apex for the purpose of soliciting comments relative to the following amendment(s) to the Unified Development Ordinance:

Requested by Planning Committee:

1. Amendments to Sec. 2.3.4.F *Planned Development Districts, Standards* in order to increase the RCA reduction that can be approved by Town Council and add additional performance standards for such reduction in the Planned Unit Development-Conditional Zoning, Traditional Neighborhood-Conditional Zoning, and Major Employment Center-Conditional Zoning districts.
2. Amendments to Sec. 8.1.2.A *Resource Conservation Area, Establishment of RCA* in order to reduce the ratio of off-site RCA to on-site RCA and to amend the standards and process for the approval of off-site RCA.
3. Amendments to Sec. 8.1.2.C *Resource Conservation Area, Size of the RCA* in order to decrease the amount of RCA required inside Apex Peakway and increase the amount of RCA required south and west of NC 540 with certain exemptions. Amendments to Sec. 8.2.6 *Buffering* in order to update section references based on changes in Sec. 8.1.2.C.

Requested by Planning Staff:

4. Amendments to Sec. 4.2.1 *Use Table, General* in order to add subsection 4.2.1.I *Prohibited Uses in Residential Districts* in order to prohibit parking on residential property that is not accessory to the residential use.
5. Amendments to Sec. 6.3.1.G.5 *Small Town Character Overlay District, Residential Building Standards* in order to exempt multi-family dwellings over four (4) units from the prohibition on slab on grade foundations.
6. Amendments to Sec. 9.1.2.B *Design Standards, Applicability* in order to expand the applicability of the design standards for residential development to all zoning districts while retaining the exemption for one- and two-family dwellings.

Public Hearing Location: Apex Town Hall
73 Hunter Street, Apex, North Carolina
Council Chambers, 2nd Floor

Town Council Public Hearing Date and Time: July 21, 2020 6:00 PM

You may view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov.

If you are unable to attend, you may share comments by noon on Monday, July 20, 2020, following instructions in the Remote Participation policy. The policy includes options to provide comments by email (public.hearing@apexnc.org, 350-word limit) or voicemail (919-372-7300, 3-minute limit).

The UDO can be accessed online at: http://www.apexnc.org/233.

Dianne F. Khin, AICP
Director of Planning and Community Development

Published Dates: June 26-July 21, 2020

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TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARING

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2. Amendments to Sec. 8.1.2.A *Resource Conservation Area, Establishment of RCA* in order to reduce the ratio of off-site RCA to on-site RCA and to amend the standards and process for the approval of off-site RCA.
3. Amendments to Sec. 8.1.2.C *Resource Conservation Area, Size of the RCA* in order to decrease the amount of RCA required inside Apex Peakway and increase the amount of RCA required south and west of NC 540 with certain exemptions. Amendments to Sec. 8.2.6 *Buffering* in order to update section references based on changes in Sec. 8.1.2.C.

Requested by Planning Staff:

4. Amendments to Sec. 4.2.1 *Use Table, General* in order to add subsection 4.2.1.I *Prohibited Uses in Residential Districts* in order to prohibit parking on residential property that is not accessory to the residential use.
5. Amendments to Sec. 6.3.1.G.5 *Small Town Character Overlay District, Residential Building Standards* in order to exempt multi-family dwellings over four (4) units from the prohibition on slab on grade foundations.
6. Amendments to Sec. 9.1.2.B *Design Standards, Applicability* in order to expand the applicability of the design standards for residential development to all zoning districts while retaining the exemption for one- and two-family dwellings.

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The UDO can be accessed online at: http://www.apexnc.org/233.

Dianne F. Khin, AICP
Director of Planning and Community Development

Published Dates: June 26-July 21, 2020

2:44 PM
6/26/2020

AN ORDINANCE TO AMEND CERTAIN SECTIONS OF THE UNIFIED DEVELOPMENT ORDINANCE

BE IT ORDAINED by the Town Council of the Town of Apex as follows:

Section 1. **Section 2.3.4.F of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

2.3.4.F *Planned Development Districts, Standards*

1) Planned Unit Development (PUD-CZ) District
In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:
…
c) *RCA.* The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 *Resource Conservation Area*, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than ~~two percent (2%)~~ **10%** provided that **the PD Plan for PUD-CZ includes one or more of the following**:

i) ~~The PD Plan for PUD-CZ includes a~~**A** non-residential component; ~~or~~

ii) ~~The PD Plan for PUD-CZ has a~~**A**n overall density of ~~6~~ **7** residential units per acre or more~~.~~**; or**

iii) Environmental measures including but not limited to the following:

(a) The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;

(b) The installation of a geothermal system for a certain number or percentage of units within the development; or

(c) Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).

…

2) Traditional Neighborhood District (TND-CZ)

In approving a Planned Development (PD) Zoning District designation for a TND-CZ, the Town Council shall find the zoning district designation and PD Plan for TND-CZ complies with the following standards:

…

b) *Development parameters*

…

(viii) *RCA*. The PD Plan for TND-CZ shall demonstrate compliance with Sec. 8.1.2 Resource Conservation Area, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than ~~two percent (2%)~~ **10% provided that the PD Plan for TND-CZ includes one or more environmental measure including but not limited to the following**:

(a) The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;

(b) The installation of a geothermal system for a certain number or percentage of units within the development; or

(c) Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).

…

Section 2. **Section 8.1.2.A of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

8.1.2 Resource Conservation Area

…

A) Establishment of RCA

1) *Off-site RCA.* RCA may be established outside of the limits of the development site provided that ~~the Town Council finds through a quasi-judicial public hearing that~~ all of the following criteria are met by the off-site RCA:

…

Section 3. **Sections 8.1.2.C and 8.2.6 of the Unified Development Ordinance are amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

8.1.2 Resource Conservation Area

…

C) *Size of the RCA*

The size of the RCA for each development site shall be calculated by the applicant and staff based on the following:

1) *Planned Developments*

The RCA for all planned developments shall be determined by the Town Council per Sec. 2.3.4.F.1.c and per Sec. 8.1.2.C.4, 5, 6**, 7**, or ~~9~~**10** as applicable, based on the criteria set forth in subsection B. above.

2) *Small Town Character Overlay District*

All development meeting the criteria of Sec. 6.3 *Small Town Character Overlay District* shall be exempt from Sec. 8.1 *Resource Conservation.*

3) *Low Density Single-Family Residential Developments (maximum of two dwelling units per gross acre)*

Low density single-family residential developments with a maximum of two (2) dwelling units per gross acre shall be exempt from Sec. 8.1 *Resource Conservation*.

4) *Development located north and east of NC 540* ***and outside Apex Peakway***

All developments which do not meet the criteria of subsections 8.1.2.C.2, 3, or ~~9~~**10** and which are located north and east of NC 540 **and outside existing and future Apex Peakway** shall provide buffers and RCA equal to or greater than 20% of the gross site acreage.

5) *Development located south and west of NC 540*

All developments which do not meet the criteria of subsections 8.1.2.C.~~2,~~ 3~~,~~ ~~4,~~ or ~~9~~**10** and which are located south and west of NC 540 shall provide buffers and RCA equal to or greater than ~~25~~**30**% of the gross site acreage **for single-family and townhome uses and 25% of the gross site acreage for multi-family, mixed-use, and non-residential uses**.

6) ***Development located inside Apex Peakway***

All developments which do not meet the criteria of subsections 8.1.2.C.2, 3, or 10 and which are located inside existing and future Apex Peakway shall provide buffers and RCA equal to or greater than 10% of the gross site acreage.

~~6~~**7**) *Resource Conservation Area Exchanged for Reduced Width Buffers*

…

~~7~~**8**) *Maximum Built-Upon Area*

…

~~8~~**9**) Notwithstanding…

~~9~~**10**) *North Carolina Certified Sites*
…

8.2.6.B *Buffering*
…
3) Type and Width Buffer Required
…
b) *Reduced Width Buffers in Exchange for Resource Conservation Area*
Required buffers may be exchanged for Resource Conservation Area in accordance with Sec. 8.1.2.C.~~6~~**7**.
…

Section 4. **Section 4.2.1 of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

4.2.1 *Use Table, General*
…
I) ***Prohibited Uses in Residential Districts***
In addition to the uses listed in subsection H above, parking that is not accessory to the residential use is prohibited. This includes, but is not limited to, student parking, parking for a nearby special event, and off-site parking for another use. For the purpose of this Section, student parking is defined as parking at a residence or on a residential lot, for the purpose of coming and going from a vehicle to a school or from a school to a vehicle. This definition of student parking shall not apply to students who reside at the home.

Section 5. **Section 6.3.1.G.5 of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

6.3.1 Small Town Character Overlay District
…
G) *Residential Building Standards*
…
5) **Except for multi-family structures containing more than four (4) units,** ~~N~~**n**o slab-on-grade foundations are permitted. **Raised** ~~F~~**f**oundations around the principal structure shall be fully enclosed.

Section 6. **Section 9.1.2.B of the Unified Development Ordinance is amended to read as follows with additions shown as bold underlined text and deletions shown as struck-through text:**

9.1 Design Standards, General
…

9.1.2 Applicability

…

B) These design standards shall also be applicable to residential development, with the exception of one- and two-family dwellings, in ~~the PUD-CZ, SD-CZ, and TND-CZ planned development districts and the MORR district~~ **all zoning districts**.

Section 7. Amendments in Sections 1-3 shall not apply to projects for which an application for development approval has been submitted before the effective date of this ordinance.

Section 8. The Planning Director and/or Town Manager are hereby authorized to renumber, revise formatting, correct typographic errors, to verify and correct cross references, indexes and diagrams as necessary to codify, publish, and/or accomplish the provisions of this ordinance or future amendments as long as doing so does not alter the terms of this ordinance.

Section 9. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed. If any section, paragraph, subdivision, clause or provision of this ordinance shall be adjudged invalid, such adjudication shall apply only to such section, paragraph, subdivision, clause or provision so adjudged and the remainder of the ordinance shall be deemed valid and effective.

Section 9. The ordinance shall be effective upon enactment on the _____ day of July 2020.

Introduced by Council Member _____

Seconded by Council Member _____

Attest: TOWN OF APEX

_____ _____

Donna Hosch, MMC, NCCMC
Town Clerk

Jacques K. Gilbert
Mayor

Approved As To Form:

_____

Laurie L. Hohe
Town Attorney

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: NEW BUSINESS

Meeting Date: July 21, 2020

Item Details

Presenter(s): Nicole Dozier, Mayor Pro-Tem

Department(s): Governing Body

Requested Motion

Possible Motion to amend the Town's Personnel Policies to include June 19, Juneteenth, as a paid Town Holiday for employees.

Approval Recommended?

Yes

Item Details

Juneteenth is the oldest nationally celebrated commemoration of the ending of slavery in the United States. Dating back to 1865, it was on June 19th that Union soldiers, led by Major General Gordon Granger, arrived at Galveston, Texas with news that the war had ended, to take command of the more than 2,000 federal troops there to enforce the freedom of the estimated 250,000 Africans who were still enslaved. This was over two and a half years after President Lincoln's preliminary Emancipation Proclamation. In light of the significance of this day in American history, and in an effort to continue improving our policies and practices to enhance a culture of belonging for all members of Town staff, it is the Personnel Committee's recommendation to amend the Town's Personnel Policies to include June 19, Juneteenth, as a paid Town holiday for employees.

Article VII. Section 2 of the Town's Personnel Policies will be amended as follows:

Section 2. Holidays

The policy of the Town is to recognize the following Holidays as paid holidays for Town employees:

- New Year's Day
- Martin Luther King Jr. Day
- Good Friday
- Memorial Day
- Juneteenth
- Independence Day
- Labor Day
- Veteran's Day
- Thanksgiving (2 days)
- Christmas (3 days)

The Human Resources Director shall prepare a schedule of holidays at the beginning of December for the following calendar year. Departments providing 24-hour operation may adopt a varying holiday schedule that designates the legal holiday as the designated holiday when a legal holiday observance falls on a Saturday or Sunday. Any special holiday schedule shall be approved in advance by the Town Manager.

Upon approval, the Town's personnel policies would be updated to reflect the new holiday and the first Juneteenth holiday would be observed on Friday, June 18, 2021.

Attachments

- N/A