



Planning Board Meeting

October 27, 2025

7:00 p.m.

AGENDA

A. Call to Order

1. Pledge of Allegiance
2. Invocation
3. Approval of September 22, 2025 Meeting Minutes

B. Regular Agenda

1. TA-25-08 – Text Amendment to LDO Section 5.1. Hospital Use (Applicant-initiated)
2. REZ-25-03 – Rezoning Map Amendment for 625 Averette Road
3. REZ-24-05 – Rezoning Map Amendment for Atticus Woods - Wait Avenue
4. TA-25-12 – Text Amendment to LDO Section 3.4.1./Table 3.4.1. - Town Center District, Use of Development Agreement (Town-initiated)

C. Communications

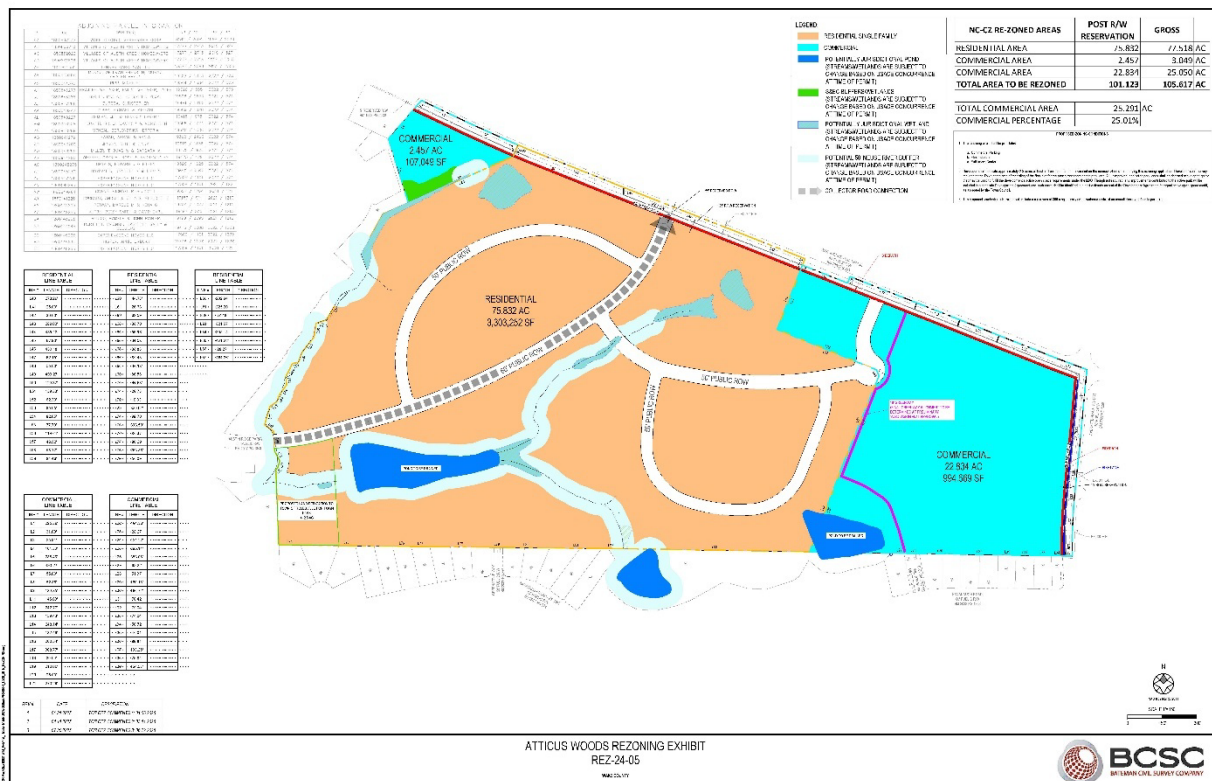
1. Planning Director's Report
 - a. December Meeting Date
 - b. GovWell Online Platform Update
 - c. Update – Comprehensive Plan/Housing Plan
2. Town Attorney's Report
3. Other Business
4. Adjournment



To: Town of Rolesville Planning Board
From: Michael Elabarger, Interim Planning Director & Meredith Gruber, Senior Planner
Date: Meeting Held October 27, 2025
Re: REZ-24-05 Atticus Woods – Wait Avenue

Rezoning Application & Site Data

The Town of Rolesville Planning Department received a Rezoning application in December 2024 for property located at 2028, 2200, 2206, 2216, and 2232 Wait Avenue to change the zoning from Residential & Planned Unit Development (R&PUD) and Residential Low (RL) to Neighborhood Center Conditional Zoning District (NC-CZ). The applicant has included a Concept Site Plan as required by the Land Development Ordinance (LDO) for the Neighborhood Center (NC) zoning district.



Atticus Woods Concept Site Plan

Key information from the rezoning application is in the Site Data Table below:

Site Data Table	
Case Number and Name	REZ-24-05 Atticus Woods – Wait Avenue
Address(es)	2028, 2200, 2206, 2216, and 2232 Wait Avenue
Owner	Thales Academy and WFINV, LLC
Applicant	Paul C. Schmidt, Ardent Building, LLC
Area	105.619 Acres
PIN(s)	1850950449, 1860056400, 1860045778, 1860151206, 1860143789
Current Zoning	Residential & Planned Unit Development (R&PUD) and Residential Low (RL)
Proposed Zoning	Neighborhood Center Conditional Zoning District (NC-CZ)
Associated Previous Case Number(s)	MA-18-02, SUP-18-01, SUP-21-01
Current Use	Vacant
Proposed Use	Single Family Housing and Commercial Uses

Proposed Conditions of Approval

The applicant's proposed Conditions of Approval include:

- Prohibiting Commercial Parking, Flex Industrial, and Fulfillment Center uses;
- Parkland dedication of approximately 2.5 acres;
- Maximum of 300 single family detached and attached housing, at a density of four (4) units per acre.

Development Agreement

The applicant is proposing a Development Agreement to modify the following standards:

- The NC District Development Standards in Table 3.4.3. of the LDO are modified as follows:
 - The minimum side setback for detached, single-family homes shall be reduced to five feet (5').
 - The maximum single-use/building size (excluding residential only structures) shall be 110,000 square feet.
- The NC District standards regarding timing of development in Section 3.4.3.D. of the LDO are modified as follows: A maximum of seventy-five (75) percent of the residential uses may be permitted until at least twenty-five (25) percent of the approved non-residential square footage is permitted (issue of a building permit).

Applicant Justification

The Applicant provided a Justification Statement for their rezoning request; it is included as Attachment 3. The Justification Statement notes the proposed rezoning would allow the property to be developed with a mix of uses including commercial and single family housing within walking distance of the commercial development.

Neighborhood Meeting

The applicant held a neighborhood meeting at the Rolesville Community Center on May 20, 2025. A neighborhood meeting report is included as Attachment 6.

Comprehensive Plan

Land Use

The Rolesville 2050 Comprehensive Plan's Future Land Use Map identifies the subject property as Mixed-Residential Community. These parcels are largely single family subdivisions with limited nonresidential development at key intersections, such as at Wait Avenue and Averette Road. The intent of this district is to provide unique and diverse residential opportunities and amenities through the Town while encouraging interconnectivity via multi-modal connections.

Community Transportation Plan

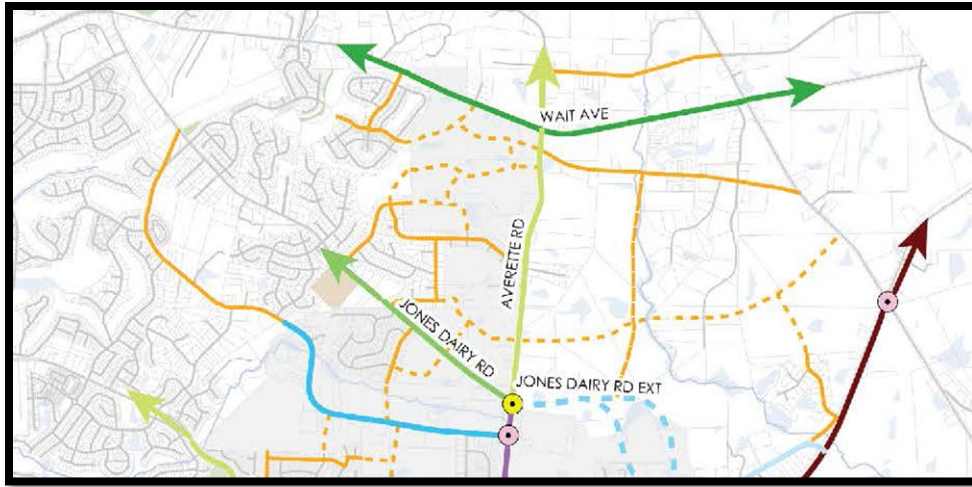
The Town of Rolesville's Community Transportation Plan (CTP, adopted 2021) includes recommendations for Thoroughfares, Collectors, and intersections. Thoroughfare and Collector recommendations apply to REZ-24-05, Atticus Woods – Wait Avenue.

Thoroughfare Recommendations

- Wait Avenue: 4-lane divided (raised median) with curb & gutter and sidepath; such cross-section entails an ultimate right-of-way width of 110 feet – existing Right-of-way width is 60 Feet, hence $\frac{1}{2}$ of the missing amount – 25' of 50' - would be required at the time of Preliminary Subdivision Plat. Due to the short length in Rolesville's planning area, Wait Avenue will include sidepath along both sides for consistency.
- Averette Road: 4-lane divided (narrow raised median) with curb & gutter, bike lanes, and sidewalks. Such cross-section entails an ultimate right-of-way width of 110 feet; existing Right-of-way width is 60 Feet, hence $\frac{1}{2}$ of the missing amount – 25' of 50' - would be required at the time of Preliminary Subdivision Plat.

Collector Recommendations

- The CTP Proposed Network Map shows a Collector connection from Austin Ridge Parkway through the subject property connecting to Carrie May Lane.
- A Collector connection from the proposed Collector noted above to Old Pearce Road is also shown on the CTP Proposed Network Map.
- Finally, the CTP Proposed Network Map shows a Collector connection from Classical Way in Elizabeth Springs to the Collector connection to Old Pearce Road.



*Proposed Network Map, Northern Rolesville
(Thoroughfares Shown in Green and Collectors shown in Mango Yellow)*

Greenway and Bike Plans

As per the 2022 Greenway and Bike Plans, proposed pedestrian routes are shown in the following locations:

- A sidepath is required on Wait Avenue.
- Bike lanes and sidepaths are required along Averette Road.
- A developer-built greenway is required running south to north through the subject property.

Consistency

The Applicant's rezoning request is **consistent** with the Town of Rolesville's Comprehensive Plan for the following reasons:

- The proposed residential and commercial uses are consistent with the Mixed-Residential Community District.
- The vehicular circulation network includes the Collector connection from Austin Ridge Parkway through the subject property connecting to Wait Avenue opposite Carrie May Lane as recommended by Rolesville's Community Transportation Plan.
- The Concept Site Plan includes sidepaths, bike lanes, and the developer-built greenway as recommended by Rolesville's Greenway and Bike Plans.

The Applicant's rezoning request is **inconsistent** with the Town of Rolesville's Comprehensive Plan for the following reasons:

- The vehicular circulation network illustrated on the Concept Site Plan does not include the Collector connection from the proposed Collector connection (from Austin Ridge Parkway to Carrie May Lane) to Old Pearce Road as recommended by Rolesville's Community Transportation Plan.
- The Collector connection from Classical Way in Elizabeth Springs to the Collector connection to Old Pearce Road is also not shown on the Concept Site Plan.

Traffic

Traffic Impact Analysis

The consulting firm, DRMP, performed the Traffic Impact Analysis (TIA) for this project on behalf of the Town; the study analyzed a development of:

- 300 Single-Family Detached Housing Dwelling Units
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF each
- 5,000 SF Convenience Store/Gas Station with 12 fueling positions

The Draft Final Report dated August 2025 is included as Attachment 7 to this memo, and a final letter from NCDOT is included as Attachment 8.

TIA Summary - Trip Generation	Entering	Exiting	Total
<i>AM Peak (7-9 am)</i>	383	411	794
<i>PM Peak (4-6 pm)</i>	689	647	1,336
<i>Weekday Daily Trips</i>	14,353		

Five intersections were studied for capacity analysis and Level of Service (LOS) impact of this development. Recommendations for improvements are listed in the table below.

<i>TIA Summary – Recommendations</i>	
<i>Wait Avenue and Averette Road</i>	• Construct a westbound right-turn lane on Wait Avenue with 100 feet of storage and appropriate taper. • Construct a northbound left-turn Lane on Averette Road with 300 feet of storage and appropriate taper
<i>Wait Avenue and Carrie May Lane/Access B</i>	• Construct Site Access B (northbound approach) with one ingress and one egress lane. • Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length. • Construct a westbound Wait Avenue left turn lane with 125 feet of storage and appropriate taper length. (Under Scenario-1). • Construct a westbound Wait Avenue left turn lane with 350 feet of storage and appropriate taper length. (Under Scenario-2). • Install a traffic signal.
<i>Averette Road and Old Pearce Road/Access E</i>	• Construct Site Access E (westbound approach) as a with one ingress and one egress lane.

	- Construct a northbound Averette Road left turn lane with 100 feet of storage and appropriate taper length. - Construct a southbound Averette Road right turn lane with 75 feet of storage and appropriate taper length. - Provide stop control for the westbound approach.
<i>Wait Avenue and Access C</i>	- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length. - Construct a westbound Wait Avenue left turn lane with 175 feet of storage and appropriate taper length (Under Scenario-1).
<i>Wait Avenue and Access D</i>	Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.

Development Review

The Technical Review Committee (TRC) reviewed six (6) submittals of the Rezoning application and attachments, with most comments being resolved. Outstanding comments/issues include the following:

- 3. FYI – General Statutes 160D-605(a) Plan Consistency – “If a zoning map amendment is adopted and the action was deemed inconsistent with the adopted plan, the zoning amendment has the effect of also amending any future land-use map in the approved plan, and no additional request or application for a plan amendment is required. A plan amendment and a zoning amendment may be considered concurrently. “ An extension of Classical Way is identified on the Community Transportation Plan (CTP) as a Collector road on this property. Staff can create a Statement of Plan Inconsistency for the Board of Commissioners to adopt should they approve the Rezoning request including the lack of compliance with the CTP.
 - Noted by applicant.*
- 5. REPEAT – LDO Section 9.2.5.B. (per TA-22-01) - Existing street stubs are required to be connected to and continued; the Board of Commissioners cannot approve a deviation from the LDO through the Conditional Rezoning process. This will be identified as an outstanding topic. Note – amending the CTP may delete the extension of Classical Way ON the subject property but does not address the lack of connecting a stubbed street (as Classical Way exists within Elizabeth Springs). Note – if the existing Classical Way was abandoned (via petition, by the Board of Commissioners) as a public right-of-way, there would not be a ‘stub’ requiring connection/extension.
 - Noted by applicant.*

Staff Recommendation

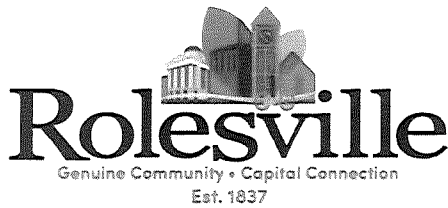
Staff recommends denial of REZ-24-05, Atticus Woods – Wait Avenue, based on inconsistencies with the Comprehensive Plan and outstanding TRC review comments, both about the lack of including two Collector roadways, as noted in the Comprehensive Plan and Development Review Sections of this report. The applicant may be able to address the issues leading to the staff recommendation of denial if the Town Board of Commissioners approves a Community Transportation Plan (CTP) amendment along with an approval of the rezoning request.

Proposed Motion

Motion to recommend to the Town Board of Commissioners (*approval or denial*) of rezoning request REZ-24-05 Atticus Woods – Wait Avenue based on (*consistency or inconsistency*) with Rolesville's Comprehensive Plan. (*Please include examples of consistency or inconsistency.*)

Attachments

1	Application
2	Conditions of Approval - September 27, 2025
3	Applicant Justification Statement - September 27, 2025
4	Development Agreement - September 2, 2025
5	Concept Site Plan - September 2, 2025
6	Neighborhood Meeting Minutes - May 20, 2025
7	Traffic Impact Analysis (TIA) Report - August 7, 2025
8	NCDOT Final Letter - October 1, 2025



Case No. REZ-24-05

Date _____

Map Amendment Application

Contact Information

Property Owner WFNV, LLC

Address 4641 PARAGON PARK RD STE 104 City/State/Zip RALEIGH NC 27616-3407

Phone _____ Email _____

Developer ARDENT BUILDING, LLC

Contact Name PAUL C SCHMIDT

Address P.O. BOX 5509 City/State/Zip CARY, NC 27512

Phone 919-991-1428 Email cschmidt@e1homes.com

Property Information

Address 2028 WAIT AVE

Wake County PIN(s) 1850950449

Current Zoning District R&PUD Requested Zoning District NC-CZ

Total Acreage 51.758 AC

Owner Signature

I hereby certify that the information contained herein is true and completed. I understand that if any item is found to be otherwise after evidentiary hearing before the Town Board of Commissioners, that the action of the Board may be invalidated.

Signature Robert L Luddy Date APRIL 11, 2025

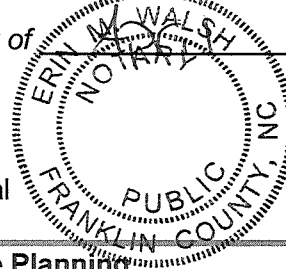
STATE OF NORTH CAROLINA

COUNTY OF Wake

I, a Notary Public, do hereby certify that Robert L Luddy
personally appeared before me this day and acknowledged the due execution of the foregoing instrument. This
the 11th day of APRIL 2025.

My commission expires 1-20-2030.

Signature Erin M Walsh Seal



Town of Rolesville Planning

PO Box 250 / Rolesville, North Carolina 27571 / RolesvilleNC.gov / 919.554.6517

Metes and Bounds Description of Property

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Rezoning Justification

[illegible]

Property Owner Information

[illegible]

Case No. REZ-24-05

Date _____

Map Amendment Application

Contact Information

Property Owner THALES ACADEMYAddress 4641 PARAGON PARK RD City/State/Zip RALEIGH NC 27616-3407

Phone _____ Email _____

Developer ARDENT BUILDING, LLCContact Name PAUL C SCHMIDTAddress P.O. BOX 5509 City/State/Zip CARY, NC 27512Phone 919-991-1428 Email cschmidt@e1homes.com

Property Information

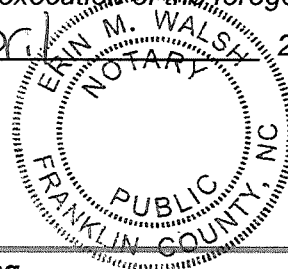
Address 2206 WAIT AVE / 2200 WAIT AVE / 2216 WAIT AVE / 2232 WAIT AVEWake County PIN(s) 1860045778 / 1860056400 / 1860151206 / 1860143789Current Zoning District R&PUD AND RL Requested Zoning District NC-CZTotal Acreage 53.861 AC

Owner Signature

I hereby certify that the information contained herein is true and completed. I understand that if any item is found to be otherwise after evidentiary hearing before the Town Board of Commissioners, that the action of the Board may be invalidated.

Signature Robert L Luddy Date APRIL 11, 2025

STATE OF NORTH CAROLINA

COUNTY OF WakeI, a Notary Public, do hereby certify that Robert L Luddypersonally appeared before me this day and acknowledged the due execution of the foregoing instrument. This the 11th day of April, 2025.My commission expires 1-20-2030.Signature Erin M. Walsh Seal

Town of Rolesville Planning

PO Box 250 / Rolesville, North Carolina 27571 / RolesvilleNC.gov / 919.554.6517

Metes and Bounds Description of Property

[illegible]

Metes and Bounds Description of Property

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Metes and Bounds Description of Property

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Rezoning Justification

[illegible]

Property Owner Information

[illegible]

PROPOSED CONDITIONS OF APPROVAL

REZ-24-05

ATTICUS WOODS (2028, 2200, 2206, 2216, 2232 WAIT AVE)

09-27-2025

1. The following uses shall be prohibited:
 - a. Commercial Parking
 - b. Flex Industrial
 - c. Fulfillment Center
2. Developer shall dedicate approximately 2.5 acres of land as Town park land as indicated on the concept plan accompanying this rezoning application. Developer shall convey the land to the Town at the time of recording of the final plat for the phase that contains the park land. All unimproved, dedicated park lands shall be deemed active open space that may be used to fulfill the development's active open space requirements under the LDO. Though not required, any improvements contributed to the active park will be included in a separate Development Agreement and such costs shall be identified in a cost estimate as part of the Development Agreement for equal active open space credit, as accepted by the Town Council.
3. The proposed residential subdivision will include a maximum of 300 single-family and townhome units, at an overall density of 4 units per acre.

Property Owner: Thales Academy, NC Non-Profit Corporation
2006, 2200, 2216, and 2232 Wait Ave
(PINs : 1860045778, 1860056400, 1860151206, and 1860143789)

Registered Agent: _____.
(Robert L. Luddy)

Property Owner: WFINV, LLC
2028 Wait Ave
(PIN : 1850950449)

Registered Agent: _____.
(Robert L. Luddy)

REZONING JUSTIFICATION

The proposed rezoning of the Property to Neighborhood Center- Conditional Zoning (NC-CZ) will permit the property to be developed for a mix of uses, including up to 125,000 sf of commercial for grocery stores, restaurants and other retail uses and up to 300 residences within walking distance of this new retail center.

The development team seeking this rezoning considers the proposed commercial portions of the development as crucial to the overall success of the development and plans on commencing construction of commercial areas in the initial phases of development. The proposed NC-CZ zoning will further ensure that the commercial areas actually develop during build out of residential areas and do not become another set of undeveloped lots set aside by a residential developer for commercial uses that may never come.

The proposed development is consistent with the Property's Medium Density Residential designation on the Future Land Use Map. The residential portions of the development will include a mix of high-quality single-family homes and townhomes at an overall density of up to 4 units per acre, which is consistent with Comprehensive Plan guidance. The commercial portions of the development will be consistent with Comprehensive Plan guidance.

The proposed residential uses are consistent with surrounding residential developments and will benefit residents of northern Rolesville and surrounding areas by providing needed retail uses not currently available in this part of town, including grocery and restaurants.

The proposed development is also consistent with the intent of the existing zoning of the Property. All of the Property outside of the watershed is zoned Residential and Planned Unit Development (R&PUD). The legacy PUD zoning district subjects the Property to a master plan that permits a school on the eastern portion of the site and up to 143 single-family homes on the western portion of the site. The legacy master plan is now infeasible because Thales Academy no longer intends to build a school on the eastern portion of the Property. Under the Town's Land Development Ordinance, the only way to update the legacy master plan is to rezone the property into a mixed-use district such as the NC district.

In addition to the proposed rezoning, the applicants are seeking a development agreement and text amendments with the Town. The applicant expects that the specific modifications needed as part of text amendments and development agreement will be determined in cooperation with Town staff.

Instrument prepared by:

Mail after recording: Town Clerk, Town of Rolesville, PO Box 250, Rolesville, NC 27571

NORTH CAROLINA

WAKE COUNTY

**DEVELOPMENT AGREEMENT
ATTICUS WOODS**

THIS DEVELOPMENT AGREEMENT (the “**Agreement**”) is made to be effective as of the ____ day of _____, 2025, by and between the **TOWN OF ROLESVILLE**, a North Carolina municipal corporation (the “**Town**”) and **ARDENT BUILDING, LLC**, a North Carolina limited liability company (the “**Developer**”).

WITNESSETH:

WHEREAS, Developer desires to develop the real property comprised of approximately 101.123 acres and which is more particularly described on Exhibit A, attached hereto and incorporated herein (the “**Property**”); and

WHEREAS, the Property is an assemblage of parcels currently owned by Thales Academy and WFINV, LLC; and

WHEREAS, Developer has the right to purchase the Property under a purchase agreement(s) with Thales Academy and WFINV, LLC; and

WHEREAS, Developer desires to develop the Property as a mixed use development with a retail center and a neighborhood of single-family homes and townhomes, the concept plan for which is attached hereto and incorporated herein as Exhibit B;

WHEREAS, on _____, Developer filed a rezoning application (REZ-24-05) proposing to rezone the Property to Neighborhood Center (“NC”) (the “**Rezoning Application**”); and

WHEREAS, between _____ and _____, Developer supplemented the Rezoning Application by amending its concept plan to more closely align its

plan for development of the Property to the Town's Land Development Ordinance ("LDO") and Comprehensive Land Use Plan (collectively, the "Amended Rezoning Application"); and

WHEREAS, pursuant to Section 3.4.3.D and Table 3.4.3 of Rolesville's Land Development Ordinance ("LDO"), the timing of development standards and development standards for the development may be modified as part of this Development Agreement; and

WHEREAS, on _____, following a public hearing before the Town Board of Commissioners, the Town approved the Amended Rezoning Application; and

WHEREAS, the approved rezoning of the Property permits up to 300 single-family home and townhome residential lots, up to 200,000 square feet of retail and office uses, along with ancillary public and private facilities, including streets, sidewalks, water and sewer lines, storm drainage improvements, open space, and passive and/or active recreation facilities that will be developed in multiple phases, requiring a long-term commitment of private and public resources; and

WHEREAS, pursuant to Article 10, Chapter 160D of the General Statutes, the Town possesses broad authority to form development agreements in instances when it determines that the location, nature, or size of a particular proposed development causes the necessity for Town to formulate specific conditions, terms, restrictions or other requirements for the public health, safety, or welfare of its citizens; and

WHEREAS, the Development will provide new retail and office space in an area of Rolesville where such uses are needed and currently lacking; and

WHEREAS, the residential areas of the Development will be developed to conserve significant open space and stream buffers in a manner that will benefit residents of the Town but is difficult to accommodate without modification to the residential lot standards; and

WHEREAS, pursuant to G.S. § 160D-1005, the Town Board of Commissioners conducted a public hearing on _____ concerning forming the Agreement. The notice of public hearing specified, among other things, the location of the Property subject to the Agreement, the development uses proposed on the Property, and a place where a copy of the proposed Agreement could be obtained; and

WHEREAS, the Town finds the following: (1) development projects often occur in multiple phases over several years, requiring a long-term commitment of both public and private resources; (2) such developments create community impacts and opportunities that are difficult to accommodate within traditional zoning processes; (3) because of the scale and duration, such projects often require careful coordination of public capital facilities planning, financing, and construction schedules and phasing of the private development; (4) such projects involve substantial commitments of private capital, which developers are usually unwilling to risk without sufficient assurances that development standards will remain stable through the extended period of the development; (5) such developments often permit communities and developers to experiment with different or nontraditional types of development concepts and standards, while still managing impacts on the surrounding areas; (6) to better structure and manage development approvals for such developments and ensure their proper integration into local capital facilities

programs, local governments need flexibility to negotiate such developments; and (7) modification of the LDO development standards described herein will facilitate the development of commercial uses in an area of Town that currently lacks such uses and will permit the Town to experiment with nontraditional standards for residential development while still preserving significant open space; and thereby promotes the public health, safety, and welfare; and

WHEREAS, after careful review and deliberation, including without limitation the General Assembly's findings set out in G.S. § 160D-1001, the Town Board of Commissioners finds forming a development agreement as permitted by Article 10 of Chapter 160D of the General Statutes is appropriate and is in the best interests of Rolesville and its citizens.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein and other good and valuable consideration, the parties hereto agree as follows:

1. Modification of Development Standards.

- a. The NC District Development Standards in Table 3.4.3 of the LDO are modified as follows:
 - i. The minimum side setback for detached, single-family homes shall be reduced to 5'.
 - ii. The maximum single-use/building size (excluding residential only structures) shall be 110,000 square feet.
- b. The NC District standards regarding timing of development in Section 3.4.3.D of the LDO are modified as follows: A maximum of seventy-five (75) percent of the residential uses may be permitted until at least twenty-five (25) percent of the approved non-residential square footage is permitted (issue of a building permit).

2. Force Majeure. The parties hereto shall not be liable for any failure to perform hereunder as a result of an external event or events beyond their respective control, including, without limitation, acts of the United States of America, acts of the State of North Carolina (including the denial of permits which have been pursued in good faith), embargos, fire, flood, drought, hurricanes, tornadoes, explosions, acts of God or a public enemy, strikes, labor disputes, vandalism, civil riots, or pandemic. However, if any such event interferes with the performance by a party hereunder, such party shall diligently and in good faith act to the extent within its power to remedy the circumstances affecting its performance or to complete performance in as timely a manner as is reasonably possible.

3. Indemnification of Town.

- a. To the maximum extent allowed by law, Developer shall defend, indemnify, and hold harmless the Town from and against all Charges (as defined below) that arise in any manner from, in connection with, or out of this Agreement as a result of acts or omissions of the Developer or contractors or subcontractors or anyone directly or indirectly employed by or contracting with any of them or anyone for

whose acts any of them may be liable. In performing its duties under this section, Developer shall, at its sole expense, defend all Charges with legal counsel reasonably acceptable to the Town. Notwithstanding the foregoing, this Subsection shall not require Developer to indemnify or hold harmless the Town and indemnitees against liability for damages arising out of bodily injury to persons or damage to property proximately caused by or resulting from the gross negligence, in whole or in part, of the Town.

- b. **“Charges”** shall mean claims, suits, judgments, costs, damages, losses, demands, liabilities, duties, obligations, fines, penalties, royalties, settlements, interest, reasonable attorney’s fees, expenses, and amounts for alleged violations of sedimentation pollution, erosion control, pollution, or other environmental laws, regulations, ordinances, rules, or orders, including but not limited to any such alleged violation that arises out of the handling, transportation, deposit, or delivery of the items that are the subject of this Agreement. In this Indemnification, “the Town” includes the Town and its officers, officials, employees, independent contractors, and agents, which shall not be constructed to include the Developer.
 - c. Nothing in this Section shall affect any warranties in favor of the Town that are otherwise provided in or arise out of this Agreement. This section is in addition to and shall be construed separately from any other indemnification provisions that may be in this Agreement.
 - d. This Section shall remain in force despite termination of this Agreement (whether by expiration of the term or otherwise) and is not limited by any Warranty Period appearing elsewhere in the Agreement.
- 4. Written Consents from the Town. Where this Agreement refers to written approvals or consents to be given by the Town and the person or position that may give consent is not identified, the authority to give such approvals shall be delegated to the Town Manager or his designee. An approval required by this Agreement shall not be effective unless given in writing.
 - 5. No Waiver of Governmental Authority or Discretion. Nothing in this Agreement shall be construed to bind, estop, direct, limit, or impair the future regulatory, legislative, or governmental discretion of the Town of Rolesville Board of Commissioners in a manner not permitted by law. The Town shall incur no liability to the Developer for any losses or damages it may incur as a result of or in connection with the Town’s exercise or performance of its regulatory, legislative, or governmental powers or functions or any judicial determination regarding the same.
 - 6. Miscellaneous.
 - a. Choice of Law and Forum. This Agreement shall be deemed made in Wake County, North Carolina. This Agreement shall be governed by and construed in accordance with the laws of North Carolina. The exclusive forum and venue for

all actions arising out of this Agreement shall be the North Carolina General Court of Justice in Wake County, North Carolina. Such actions shall neither be commenced in nor removed to federal court. This section shall not apply to subsequent actions to enforce a judgment entered in actions heard pursuant to this section.

- b. Waiver. No action or failure to act by the Town shall constitute a waiver of any of its rights or remedies that arise out of this Agreement, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.
- c. Severability. If any provision of this Agreement shall be unenforceable, the remainder of this Agreement shall be enforceable to the extent permitted by law.
- d. No Third-Party Rights Created. This Agreement is intended for the benefit of the Town and Developer and not for any other person, and no such persons shall enjoy any right, benefit, or entitlement under this Agreement.
- e. Principles of Interpretation and Definitions. In this Agreement, unless the context requires otherwise: (1) the singular includes the plural and the plural, the singular. The pronouns “it” and “its” include the masculine and feminine. References to statutes or regulations include all statutory and regulatory provisions consolidating, amending, or replacing the statute or regulation. References to contracts and agreements shall be deemed to include all amendments to them. The words “include,” “including,” etc. mean include, including, etc., without limitation. (2) References to a “Section” or “section” shall mean a section of this Agreement. (3) “Contract and “Agreement,” whether or not capitalized, refer to this instrument. (4) Titles of sections, paragraphs, and articles are for convenience only and shall not be construed to affect the meaning of this Agreement. (5) “Duties” includes obligations. (6) The word “person” includes natural persons, firms, companies, associations, partnerships, trusts, corporations, governmental agencies and units, and other legal entities. (7) The word “shall” means the action is mandatory. (8) The word “day” means calendar day. (9) Attorneys for all parties have participated in the drafting of this document, and no future interpretation shall favor or disfavor one party over another on account of authorship.
- f. Construction of Agreement. In the event of a conflict or inconsistency between this Agreement and any currently existing agreement between the Town and Developer, the provisions of this Agreement shall control. In the event of a conflict or inconsistency between this Agreement and the approved Standard Specifications, the approved Standard Specifications shall control.
- g. Amendment. This Agreement shall not be modified in any manner except in writing, signed by each of the parties.

- h. Applicability of Agreement. This Agreement shall be applicable to the Property and Construction Documents as approved at the time of this Agreement, and as the same shall thereafter be amended or modified and approved by the Town.
 - i. Preambles. The preambles to this Agreement are a part of the agreement of the parties set forth in this Agreement and shall be binding upon the parties in accordance with their terms.
- 7. Term. The term of this Agreement shall be a period of twelve (12) years following execution by both parties.
- 8. Real Covenant. This Agreement shall be a real covenant running with the Property, and any portion thereof, as it may be subdivided or recombined from time to time and shall apply to the development of all or any portion of the Property, and this Agreement shall be binding upon and shall insure to the benefit of any successor in title to the Property or any portion thereof.
- 9. Assignment. Developer shall be released from its obligations under this Agreement only upon the assignment and assumption of Developer's obligations hereunder by a successor in title to the Property and only with the prior written consent of the Town. The Town's consent shall not be unreasonably withheld, conditioned, or delayed if, as reasonably determined by the Town, the proposed assignee assuming Developer's obligations possesses adequate financial resources, ownership interests and development expertise needed to complete the requirements of this Agreement. An assignee's assumption of the obligations of this Agreement shall be memorialized by an assignment and assumption agreement executed by Developer and the assignee, and joined by the Town for the sole purpose of evidencing Town's consent, in a form reasonably approved by the Town Attorney and recorded in the Wake County Registry. Without otherwise modifying the foregoing, the Town consents to [REDACTED], as a permitted assignee upon execution and recordation of the aforementioned agreement.
- 10. Consideration. The parties hereto agree that this Agreement is mutually beneficial in that it provides for orderly urban growth and systematic extension of municipal improvements while at the same time saving a substantial amount of money for Developer by relieving Developer of certain infrastructure expenses for which it would otherwise have been obligated.
- 11. Default by Developer. The Town's Planning Director or his designee shall conduct an annual investigation on each anniversary date of recording this Agreement to determine if Developer is in compliance with the schedules and construction obligations attached hereto. In addition to other remedies provided for in this Agreement or by law or equity, any material breach which remains uncured for a period of thirty (30) days after receipt of written notice from the Town of non-compliance with the Phasing Schedule shall entitle the Town to require specific performance of Developer's obligations hereunder and recover such damages as to which the Town may be entitled, plus reasonable attorneys' fees and costs of any such litigation.

12. Lender Subordination. Any existing deeds of trust, mortgages, or liens encumbering the Property, other than property tax liens for the current tax year or governmental improvement assessment liens, must be subordinated to this Agreement. Such encumbrances must be listed, and this Agreement must be executed by the beneficiary and trustee (if trustee execution is necessary per the terms of the security instrument), mortgagee, or lien holder to evidence such subordination. Grantor represents that no superior deeds of trust, mortgages, or liens (other than property tax liens for the current tax year or governmental improvement assessment liens) encumber or affect the property at the time of the execution and recording of this Agreement, or that if any of the foregoing exist, they shall be subordinate to this Agreement through the subordination language herein.
13. Effectiveness of Agreement. This Agreement shall be effective upon its recording in the offices of the Wake Register of Deeds.
14. Legal Obligations. The failure of this Agreement to describe any permit, condition, or term of restriction applicable to the Property by law does not relieve Developer of the necessity of complying with such laws governing permitting requirements, conditions, terms or restrictions.

[Signature, Acknowledgment, & Exhibit Pages Follow]

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed under seal on the day and year first written above:

“Town”

TOWN OF ROLESVILLE

By: _____
Ronnie Currin, Mayor

[municipal seal above]

Attest:

Chritina Ynclan, Town Clerk

Approved as to Form:

David J. Neill, Town Attorney

**NORTH CAROLINA
WAKE COUNTY**

I certify that Christina Ynclan, Town Clerk of Rolesville, personally appeared before me this day and certified to me under oath or by affirmation that she is not a named party to the foregoing document, has no interest in the transaction, signed the foregoing document as a subscribing witness, and either (i) witnessed Ronnie Currin, as Mayor of Rolesville, sign the foregoing document, or (ii) witnessed the principal acknowledge the principal's signature on the already-signed document.

Today's Date: _____, _____. _____
[Notary's signature as name appears on seal]

[Notary's printed name as name appears on seal]

My commission expires: _____, 20__

[Affix Notary Seal in Space Above]

This instrument has been pre-audited to the extent and in the manner required by the "Local Government Budget and Fiscal Control Act."

By: _____
Amy Stevens, Town Finance Director

“Developer”

ARDENT BUILDING, LLC

(SEAL)

By: _____
Name: _____
Manager

**NORTH CAROLINA
WAKE COUNTY**

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she signed the foregoing document:

_____.

Today's Date: _____, _____. _____
[Notary's signature as name appears on seal]

[Notary's printed name as name appears on seal]

My commission expires: _____, 20__

EXHIBIT A
The “Property”

[legal description to be attached]

EXHIBIT B
The “Development”

[final concept plan to be attached]



2524 Reliance Avenue
Apex, North Carolina 27539

Phone: 919.577.1080
info@batemancivilsurvey.com

DATE: May 21, 2025

RE: *Wait Ave Rezoning Neighborhood Meeting 05/20/25– Meeting Minutes*

Notes:

Ardent Building, LLC formally held a meeting with neighbors adjacent to the property of the proposed rezoning, REZ-24-05. Meeting Notes are below:

- The Meeting was held at the Rolesville Community Center (514 Southtown Circle) and virtually via Microsoft Teams on May 20, 2025 at 6pm.
 - Each Member on behalf of Ardent Building were introduced, which included: Paul (Corey) Schmidt, (Ardent Building/ExperienceOne Homes), David Schmidt (Ardent Building/ExperienceOne Homes), Timothy Grissinger (Bateman Civil Survey Company), Shelby Daniel (Bateman Civil Survey Company).
 - There were 5 in person attendees and 5 virtual attendees.
 - The development team discussed that the requested rezoning was to revise the zoning district to NC-CZ and referenced the submitted site plan for the project that was on display to show areas of residential and commercial. It was noted that the rezoning case was in review with the Town of Rolesville, and that the project aligns with the current land use plan.
 - Neighbors from Carrie May Lane proposed questions about why the project was being rezoned and referenced previously approved PUD. The development team explained that a different entity did that plan to include a school, but that the school has chosen another location within the area. Neighbors included many questions into where the school was going and how traffic will be handled with the school.
 - Neighbors from Carrie May Lane expressed concerns about traffic on Wait Avenue/98. The development team discussed that a traffic impact analysis is underway to help determine what improvements will be necessary for Wait/98. Neighbors from Carrie May Lane expressed interest in the addition of a traffic light at their intersection to help enter and exit their neighborhood, and that they currently wait quite a while to leave their neighborhood. The development team discussed the required improvements to the Averette/Wait that is required with the Elizabeth Springs subdivision and that the TIA will provide more info to what improvements will be needed for the subject property.
 - Neighbors from Carrie May Lane requested clarity on how many entrances/exits the property would have and expressed concerns about whether the entrance across from Carrie May would be the only ones in and out. The development team explained that the ones on the map would be the main egress points but that there would likely be smaller private entrances and exits within the commercial development areas.
 - Neighbors from Carrie May proposed questions about the amount of single-family homes and type of commercial properties. The development team discussed that the site plan will be finalized later, and at this time it would likely be up to 300 homes with a mix of single-family homes and townhomes and that the exact locations of the homes will be determined by the site plan following more design work and environmental analysis. The development team also mentions the desire to bring in a grocer as a part of the commercial area, but that a grocery store might be hard to acquire given the quantity of homes in the area.
-

- Neighbors from Carrie May expressed concern over whether multi-family homes would be included in the residential areas. The development team explained that the plan is only for single-family homes and townhomes. The neighbors expressed concern over the architectural design for the homes. The development team mentioned that there could potentially be architectural restrictions on what could be built here, but that they intended to provide homes with architectural interest, similar to other projects the team has developed.
 - Neighbors from Winter Springs Dr proposed questions on when the development team would be required to start building commercial properties. The development team mentions that it is currently 50% of the building permits before 50% of the commercial SF must be permitted, but that they are attempting to revise this to 75% of homes permitted prior to having to start commercial development. Neighbors from Winter Springs express concerns about the type of commercial and bring up the self-storage center on the project. The development team mentions that nothing is locked in at the time, but the desire is to do indoor self-storage.
 - Neighbors from Winter Springs question the timeline of the project. The development team mention that the ideal timeline would be to begin construction in Spring 2026.
 - Neighbors from Kavanaugh Road propose questions about whether there will be a privacy wall along the back of the properties on Kavanaugh that would have commercial behind their property line. The development team explains that a wall likely wouldn't be required, but there will be a landscaping buffer requirement for this area. The neighbors question when this landscape buffer would be required to be constructed. The development team mentions that there isn't a timeline as far as they are aware, but that they intend to build it early in the process of commercial construction.
 - The Kavanaugh neighbors express concerns about the commercial going behind their homes, and that they would prefer it to remain residential, and question what can be done to stop the rezoning. The development team provides information for them to reach out to the Town Staff and Boards with their concerns.
 - Neighbors from Winter Springs ask about connectivity to Elizabeth Springs, and if the residents of the proposed development would be able to use Elizabeth Springs Amenities. The development team explains that the proposed development would have its own Amenity, and would not have access to the Elizabeth Springs Amenities. The team also mentioned that as of right now the intention for connectivity would be no access on Classical Way, but to provide access into the proposed development on Gemstone Way. The development team also mentions the intention to dedicate town park land within the development.
 - A neighbor from Kavanaugh propose questions about the price points of the proposed homes. The development team explains that the prices have not been finalized but they're assuming \$350k+ for townhomes and \$450+ for single-family homes.
 - A neighbor from Carrie May Lane proposes questions on the size of the single family and townhome projects. The development team explains that the sizes are not set in stone but they're assuming 1400-1500 SF for townhomes and 1600+ SF for single-family homes. The neighbors question lot sizes and setbacks. The development team explains that the proposed lot sizes and setback will be determined at plan design following a rezoning approval, but mention the minimum standards for the NC district.
 - Neighbors from Kavanaugh question whether another meeting will be held as the project develops. The development team mentions that another meeting will not be required, but that the project info will be available on Rolesville's website following rezoning approval and plan submission.
 - Neighbors from Carrie May question how many sidewalks will be provided in the community. The development team explains that the sidewalks will be designed and permitted with site plans, but that they typically provide sidewalks on both sides of the street in their other developments.
-

- Neighbors from Kavanaugh bring up traffic regarding the Thales Academy project. The development team explains that they will likely be required to provide traffic improvements precautions for carpool but that it is a separate project. The team mentions that they plan to coordinate with the Thales Academy project on traffic improvements.
- The sign-in sheet for the meeting has been attached as an exhibit to this document.



2524 Reliance Avenue
Apex, North Carolina 27539

Phone: 919.577.1080
info@batemancivilsurvey.com

DATE: May 20, 2025

RE: Wait Ave Rezoning – Meeting Sign-In
Project Address

Meeting Purpose: Neighborhood Meeting

Name	Address	Email or Phone
Elizabeth Henley	1400 Carrie May Lane WF	ehenley@nc.rr.com
George Wrenn	1408 Carrie May Lane ^{WF}	
MAN LEETE	109 KAVANAUGH RD	SOLD@MANLEETE.COM
Christian Onderka	6561 Winter Spring Dr	chrond001@gmail.com
	Virtual Attendees	
Will Apps	108 Kavanaugh Rd	
Carla & Chuck Dequaine	1300 Rose Finch Circle	
Ortals	128 Kavanaugh	
Hi	no info provided	
Kim	no info provided	



TRAFFIC IMPACT ANALYSIS

FOR

WAIT AVENUE MIXED-USE

LOCATED

IN

ROLESVILLE, NC

Prepared For:

TOWN OF ROLESVILLE
P.O. BOX 250
502 SOUTHTOWN CIRCLE
ROLESVILLE, NC 27571



August 2025

DRMP Project No. 2500158

Prepared By: LK

Reviewed By: CC



**TRAFFIC IMPACT
ANALYSIS
FOR
WAIT AVENUE MIXED-USE
LOCATED IN
ROLESVILLE, NC**



Caroline Cheeves

Prepared For:

TOWN OF ROLESVILLE
P.O. BOX 250
502 SOUTHTOWN CIRCLE
ROLESVILLE, NC 27571

Prepared By:

DRMP, Inc.
License #F-1524

TRAFFIC IMPACT ANALYSIS

WAIT AVENUE MIXED-USE

Rolesville, North Carolina

EXECUTIVE SUMMARY

1. Development Overview

A Traffic Impact Analysis (TIA) was conducted for the proposed Wait Avenue Mixed-Use development in accordance with the Rolesville (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. The proposed Wait Avenue Mixed-Use development to be located Rolesville, North Carolina. The proposed development, anticipated to be completed in 2031, is assumed to consist of the following land uses:

- 300 DU Single-Family Detached Housing
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF each
- 5,000 SF Convenience Store/Gas Station w/12 fueling positions

Site access is proposed via four driveways along Wait Avenue (NC 98), one full movement driveway along Averette Road, and one site access is proposed via the existing Austin Ridge Parkway.

2. Existing Traffic Conditions

The study area for the TIA was determined through coordination with the NCDOT and the Town and consists of the following existing intersections:

- Wait Avenue and Averette Road (Signalized)
- Wait Avenue and Austin View Road (Unsignalized)
- Wait Avenue and Carrie May Lane (Unsignalized)
- Averette Road and Old Pearce Road (Unsignalized)
- Averette Road and Kavanaugh Road (Unsignalized)

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersection listed above, in May of 2025 by DRMP during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods. Traffic volumes were balanced between study intersections, where appropriate.

3. Future Traffic Conditions

Through coordination with the NCDOT and the Town, it was determined that an annual growth rate of 2.5% would be used to generate 2031 projected weekday AM and PM peak hour traffic volumes. Based on coordination with NCDOT and the Town, it was determined there were no adjacent developments to consider with this study.

4. Site 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, 11.1th Edition. Table E-1 provides a summary of the trip generation potential for the site.

Table E-1: Site Trip Generation

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)			Weekday PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Mini-Warehouse (151)	107,049 SF	155	6	4	10	8	8	16
Single-Family Detached Housing (210)	300 DU	2,772	51	151	202	176	103	279
Shopping Plaza with Supermarket (821)	84,600 SF	7,924	185	114	299	369	399	768
Convenience Store/Gas Station	12 Fueling Positions (5,000 sq. ft.)	3,502	141	142	283	136	137	273
Total Trips		14,353	383	411	794	689	647	1,336
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
Total External Trips			355	383	738	620	582	1,202
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
Primary Trips			212	240	452	400	362	762

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2031 no-build traffic volumes to determine the 2031 build traffic volumes. The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2031 No-Build Traffic Conditions
- 2031 Build Traffic Conditions Scenario 1 (without Median)
- 2031 Build Traffic Conditions Scenario 2 (with Median)

5. Capacity Analysis Summary

The analysis considered weekday AM and PM peak hour traffic for 2025 existing, 2032 no-build, and 2032 build conditions. Refer to Section 7 of the TIA for the capacity analysis summary performed at each study intersection.

6. Recommendations

Based on the findings of this study, specific geometric and traffic control improvements have been identified at study intersections. The improvements are summarized below and are illustrated in Figure E-1.

Wait Avenue and Averette Road

- Construct a westbound right-turn lane on Wait Avenue with 100 feet of storage and appropriate taper.
- Construct a northbound left-turn Lane on Averette Road with 300 feet of storage and appropriate taper.

Wait Avenue and Carrie May Lane/Access B

- Construct Site Access B (northbound approach) with one ingress and one egress lane.
- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 125 feet of storage and appropriate taper length. (Under Scenario-1).
- Construct a westbound Wait Avenue left turn lane with 350 feet of storage and appropriate taper length. (Under Scenario-2)

- Install a traffic Signal.

Averette Road and Old Pearce Road/Access E

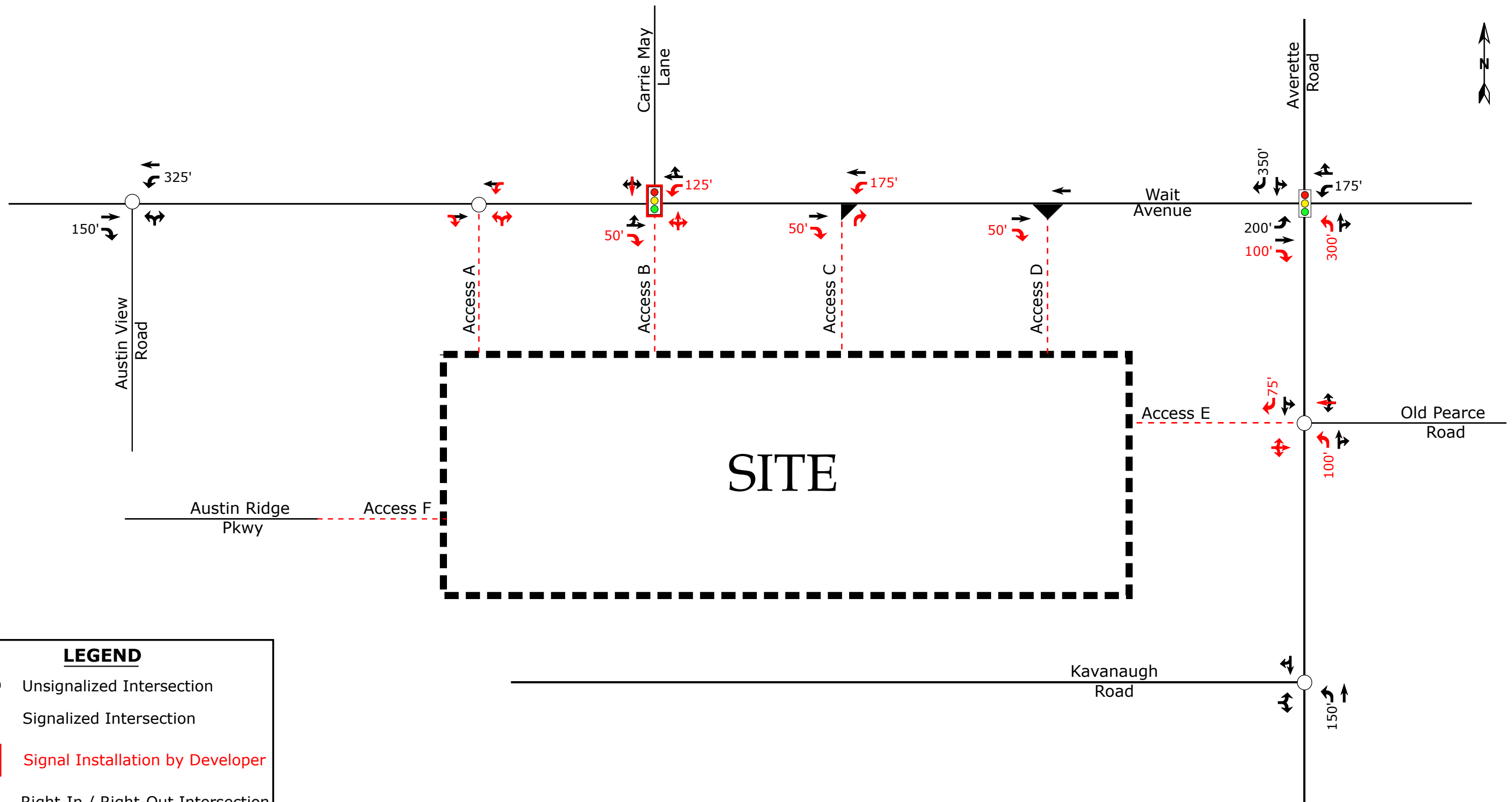
- Construct Site Access E (westbound approach) as a with one ingress and one egress lane.
- Construct a northbound Averette Road left turn lane with 100 feet of storage and appropriate taper length.
- Construct a southbound Averette Road right turn lane with 75 feet of storage and appropriate taper length.
- Provide stop control for the westbound approach.

Wait Avenue and Access C

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 175 feet of storage and appropriate taper length (Under Scenario-1).

Wait Avenue and Access D

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.



LEGEND

-  Unsignalized Intersection
-  Signalized Intersection
-  Signal Installation by Developer
-  Right-In / Right-Out Intersection
-  Left-Over Intersection
-  Existing Lane
-  Improvement by Developer
- x' Storage (In Feet)

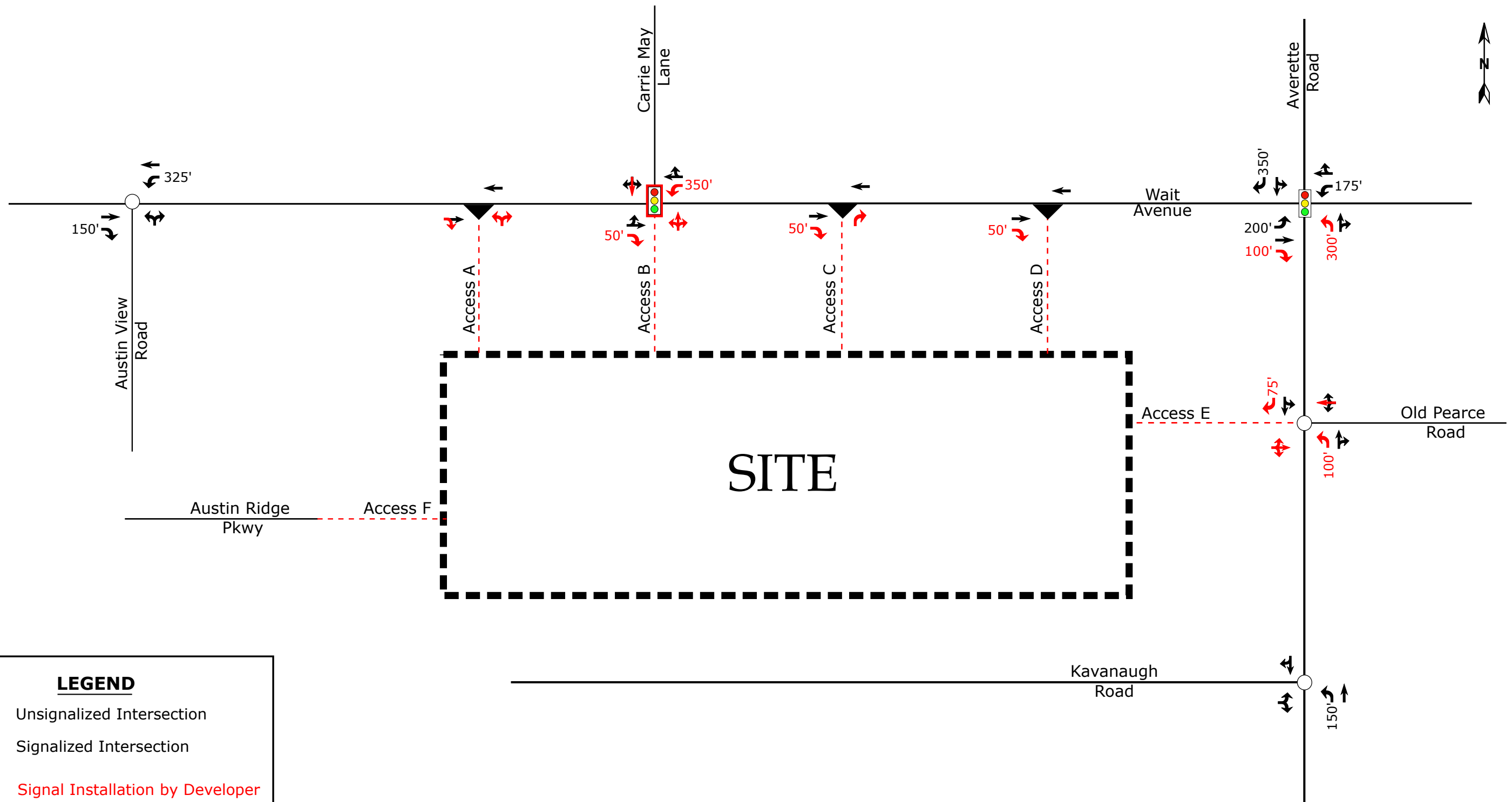
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Recommended Lane
Configurations
Scenario-1

Scale: Not to Scale Figure E-1



Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point



Wait Avenue Mixed-Use
Rolesville, NC

Recommended Lane
Configurations
Scenario-2

Scale: Not to Scale Figure E-2

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TECHNICAL APPENDIX

Appendix A:	Scoping Documentation
Appendix B:	Traffic Counts
Appendix C:	Signal Plans
Appendix D:	Capacity Calculations – Wait Avenue and Averette Road
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Appendix L:	SimTraffic Queueing Analysis

TRAFFIC IMPACT ANALYSIS

WAIT AVENUE MIXED-USE Rolesville, North Carolina

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Wait Avenue Mixed-Use development to be located Rolesville, 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, anticipated to be completed in 2031, is assumed to consist of the following uses:

- 300 DU Single-Family Detached Housing
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF each
- 5,000 SF Convenience Store/Gas Station w/12 fueling positions

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2031 No-Build Traffic Conditions
- 2031 Build Traffic Conditions Scenario 1 (without Median)
- 2031 Build Traffic Conditions Scenario 2 (with Median)

1.1. Site Location and Study Area

The development is proposed to be located Rolesville, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Rolesville (Town) and consists of the following existing intersections:

- Wait Avenue and Averette Road (Signalized)
- Wait Avenue and Austin View Road (Unsignalized)
- Wait Avenue and Carrie May Lane (Unsignalized)
- Averette Road and Old Pearce Road (Unsignalized)
- Averette Road and Kavanaugh Road (Unsignalized)

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2031, is assumed to consist of the following uses:

- 300 Single-Family Detached Housing
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF
- 5,000 SF Convenience Store/Gas Station

Site access is proposed via four driveways along Wait Avenue (NC 98), one full movement driveway along Averette Road, and one site access is proposed via the existing Austin Ridge Parkway. 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.

1.4. Existing Roadways

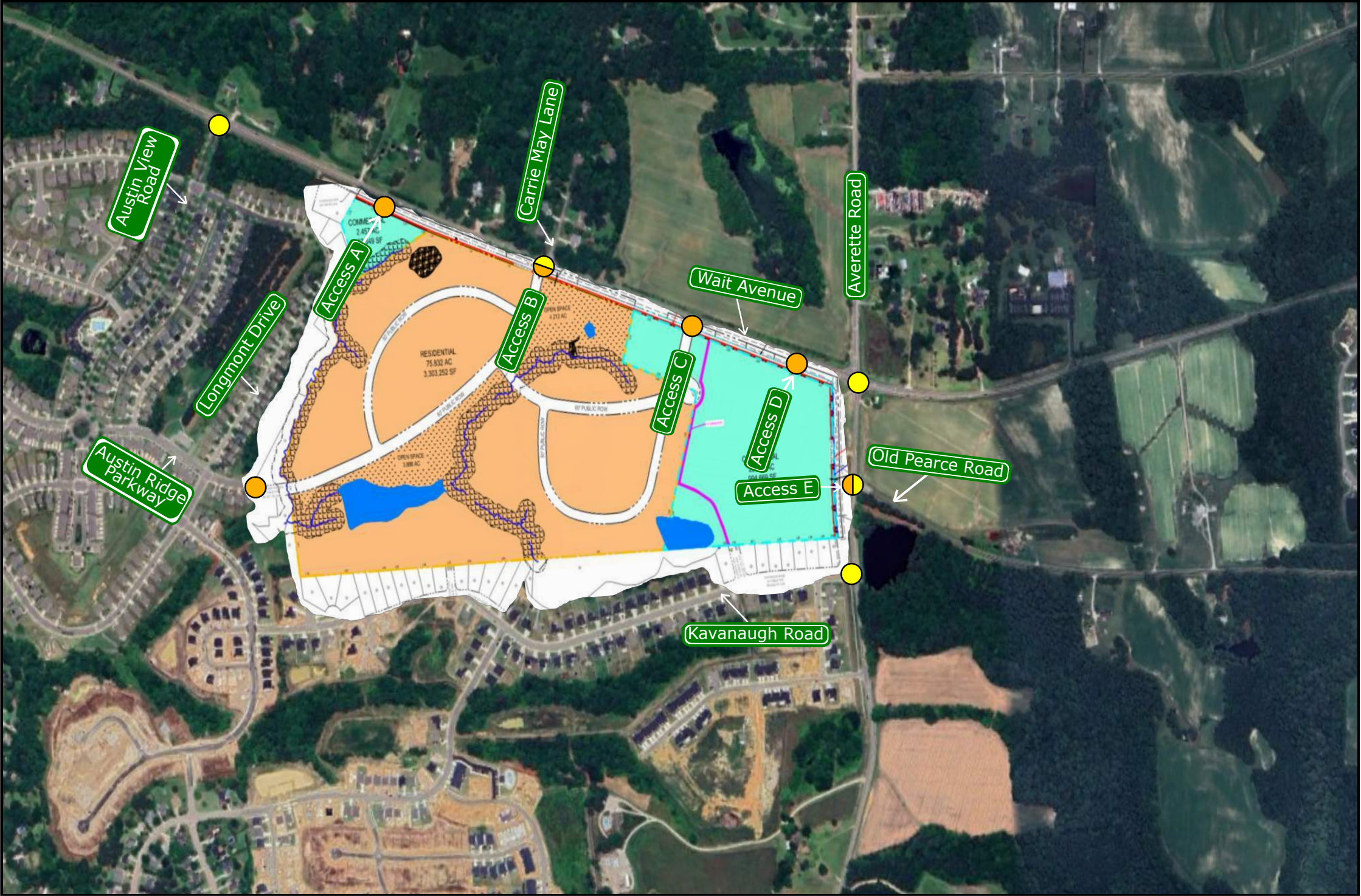
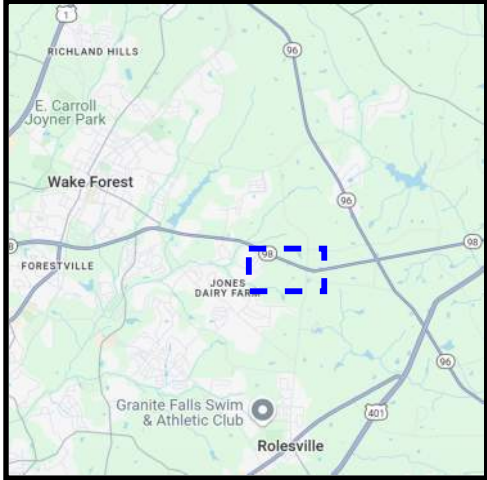
Existing lane configurations (number of traffic lanes on each intersection approach), speed limits, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	AADT (vpd)
Averette Road	SR 1945	2-lane undivided	45 mph	3,600*
Wait Avenue	NC 98	2-lane undivided	45 mph	19,500**

* ADT based on the traffic counts from 2021

**ADT based on the traffic counts from 2023 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.



LEGEND

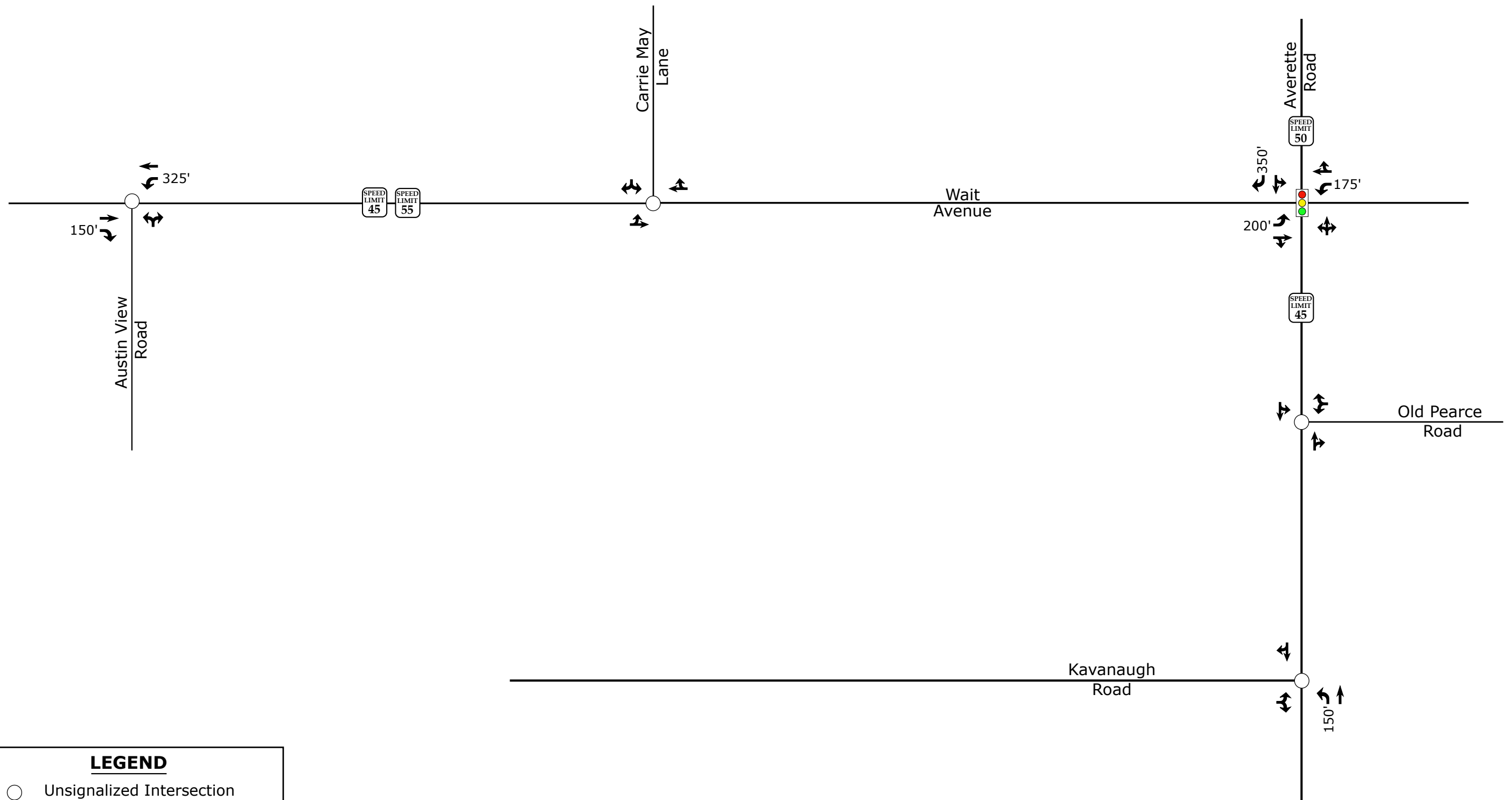
- Yellow dot: Study Intersection
- Orange dot: Proposed Site Access
- Blue dashed box: Study Area



Wait Avenue Mixed-Use
Rolesville, NC

Site Location Map

Scale: Not to Scale Figure 1



LEGEND

-  Unsignalized Intersection
-  Signalized Intersection
-  Existing Lane
-  Storage (In Feet)
-  Posted Speed Limit



Wait Avenue Mixed-Use
Rolesville, NC

2025 Existing
Lane Configurations

Scale: Not to Scale Figure 3

2. 2025 EXISTING PEAK HOUR CONDITIONS

2.1. 2025 Existing Peak Hour Traffic Volumes

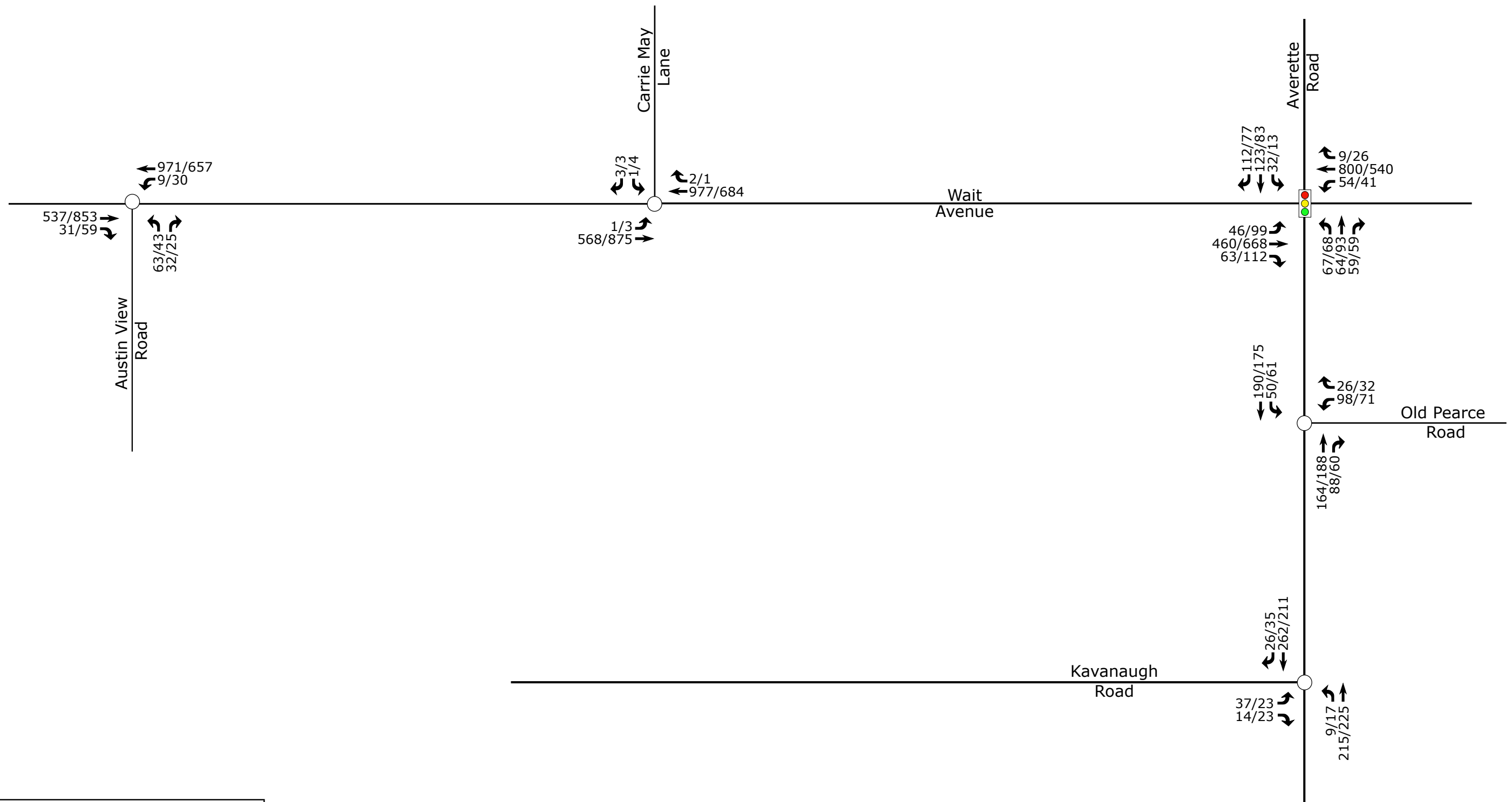
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in May of 2025 by DRMP during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods while schools were in session:

- Wait Avenue and Austin View Road (Signalized)
- Wait Avenue and Averette Road (Unsignalized)
- Averette Road and Old Pearce Road (Unsignalized)
- Averette Road and Kavanaugh Road (Unsignalized)
- Wait Avenue and Carrie May Lane (Unsignalized)

Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for 2025 existing 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 2025 Existing Peak Hour Traffic Conditions

The 2025 existing 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

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

	Wait Avenue Mixed-Use Rolesville, NC	2025 Existing Peak Hour Traffic	
		Scale: Not to Scale	Figure 4

3. 2031 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, no-build traffic projections are needed. No-build 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. No-build 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 NCDOT and the Town, it was determined that an annual growth rate of 2.5% would be used to generate 2031 No-Build weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for 2031 No-Build peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the NCDOT and the Town, it was determined there were no adjacent developments to consider with this study.

3.3. Future Roadway Improvements

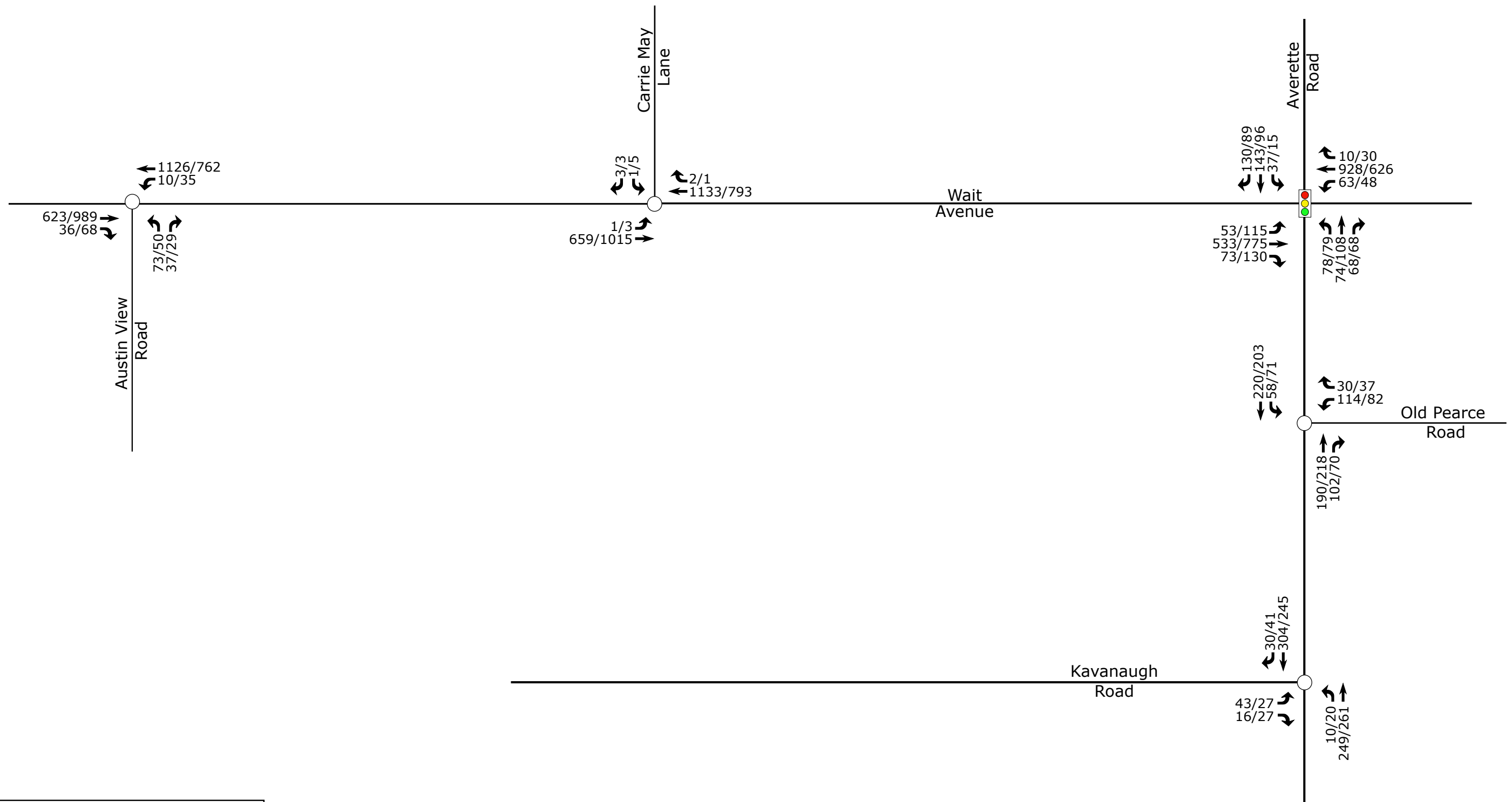
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

3.4. 2031 No-Build Peak Hour Traffic Volumes

The 2031 no-build traffic volumes were determined by projecting the 2025 existing peak hour traffic to the year 2031. Refer to Figure 5 for an illustration of the 2031 no-build peak hour traffic volumes at the study intersections.

3.5. Analysis of 2031 No-Build Peak Hour Traffic Conditions

The 2031 no-build 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.



LEGEND

○

Unsignalized Intersection

🚦

Signalized Intersection

X / Y →

Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.

Wait Avenue Mixed-Use

Rolesville, NC

2031 No-Build

Peak Hour Traffic

Scale: Not to Scale

Figure 5

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of 300 DU Single-family detached housing, a 107,049 s.f. mini-warehouse, a 51,000 s.f. supermarket, a 23,700 s.f. strip retail plaza, a 2,500 s.f. of coffee/donut shop with drive-through window, a 2,400 s.f. drive-in Bank, a 2 fast casual restaurants at 2,500 s.f. each and 5,000 s.f. convenience store/gas Station w/12 fueling positions. 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*, 11.1 Edition. Table 3 provides a summary of the trip generation potential for the site.

Table 3: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)			Weekday PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Mini-Warehouse (151)	107,049 SF	155	6	4	10	8	8	16
Single-Family Detached Housing (210)	300 DU	2,772	51	151	202	176	103	279
Shopping Plaza with Supermarket (821)	84,600 SF	7,924	185	114	299	369	399	768
Convenience Store/Gas Station	12 Fueling Positions (5,000 sq. ft.)	3,502	141	142	283	136	137	273
Total Trips		14,353	383	411	794	689	647	1,336
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
Total External Trips			355	383	738	620	582	1,202
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
Primary Trips			212	240	452	400	362	762

It is estimated that the proposed development will generate approximately 14,353 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 794 trips (383 entering and 411 exiting) will occur during the weekday AM peak hour and 1,336 trips (689 entering and 647 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, and retail/restaurant land uses. Based on NCHRP Report 684 methodology, a weekday AM peak hour internal capture rate of 7% and a weekday PM peak hour internal capture rate of 10% was applied to the total trips. The internal capture reductions are expected to account for approximately 56 trips (28 entering and 28 exiting) during the weekday AM peak hour and 134 trips (69 entering and 65 exiting) during the weekday 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 percentages are applied to site trips after adjustments for internal capture. Pass-by trips are expected to account for approximately 286 trips (143 entering and 143 exiting) during the weekday AM peak hour and approximately 440 trips (220 entering and 220 exiting) during the weekday PM peak hour. It should be noted that the pass-by trips were balanced, as it is likely that these trips would enter and exit at the same 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 452 trips (212 entering and 240 exiting) during the weekday AM peak hour and 762 trips (400 entering and 362 exiting) during the weekday PM peak hour.

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 the residential site trips will be regionally distributed as follows:

- 35% to/from the north via Averette Road
- 35% to/from the east via Wait Avenue
- 30% to/from the west via Wait Avenue

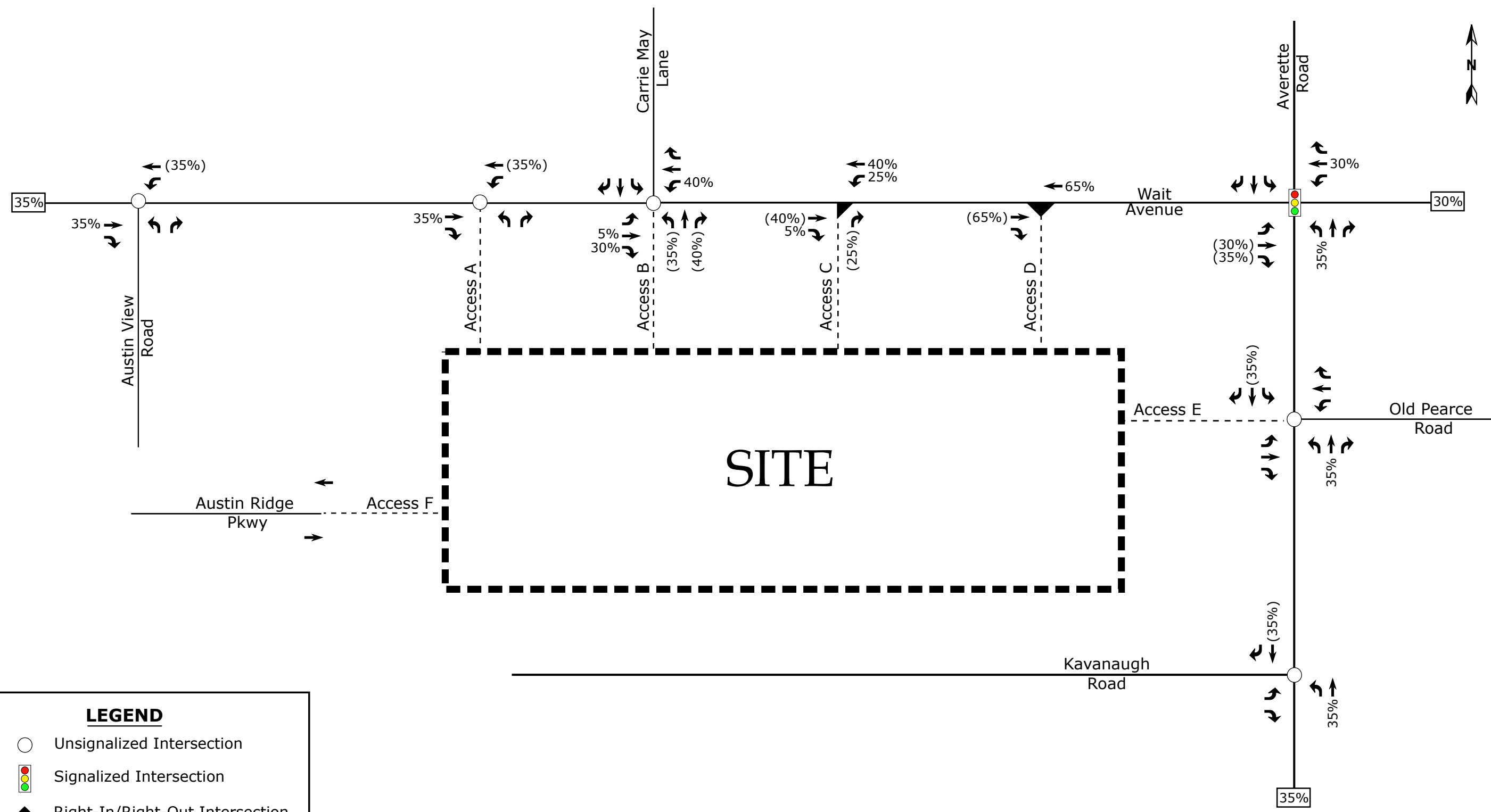
It is estimated that the primary commercial site trips will be regionally distributed as follows:

- 40% to/from the north via Averette Road
- 10% to/from the south via Averette Road
- 5% to/from the west via Old Pearce Road
- 35% to/from the east via Wait Avenue
- 5% to/from the west via Wait Avenue

The residential site trip distribution is shown in Figures 6a and 7a for Scenarios 1 and 2, and the primary commercial site trip distribution is shown in Figures 8a and 9a for Scenarios 1 and 2. Refer to Figures 6b and 7b for the residential site trip assignment, and Figures 8b and 9b for the primary commercial site trip assignment for Scenarios 1 and 2.

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 10a and 10b for the pass-by site trip distribution. Pass-by site trips are shown in Figure 11a and 11b.

The total site trips were determined by adding the primary site trips and the pass-by site trips. Refer to Figure 12a and 12b for the total peak hour site trips for Scenario 1 and Scenario 2 at the study intersections.



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

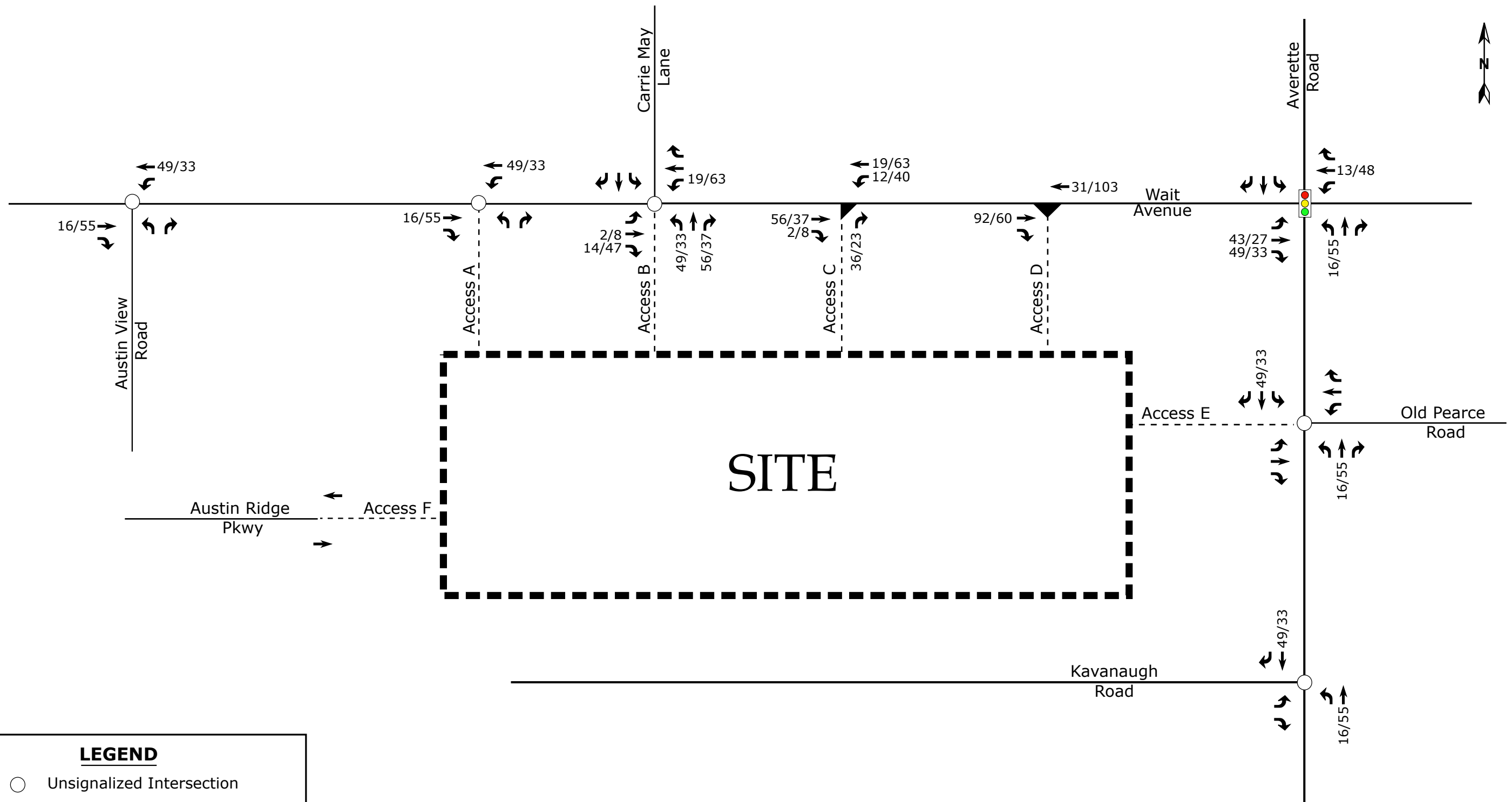
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Residential Site
Trip Distribution
Scenario-1

Scale: Not to Scale Figure 6a



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- ◼ Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

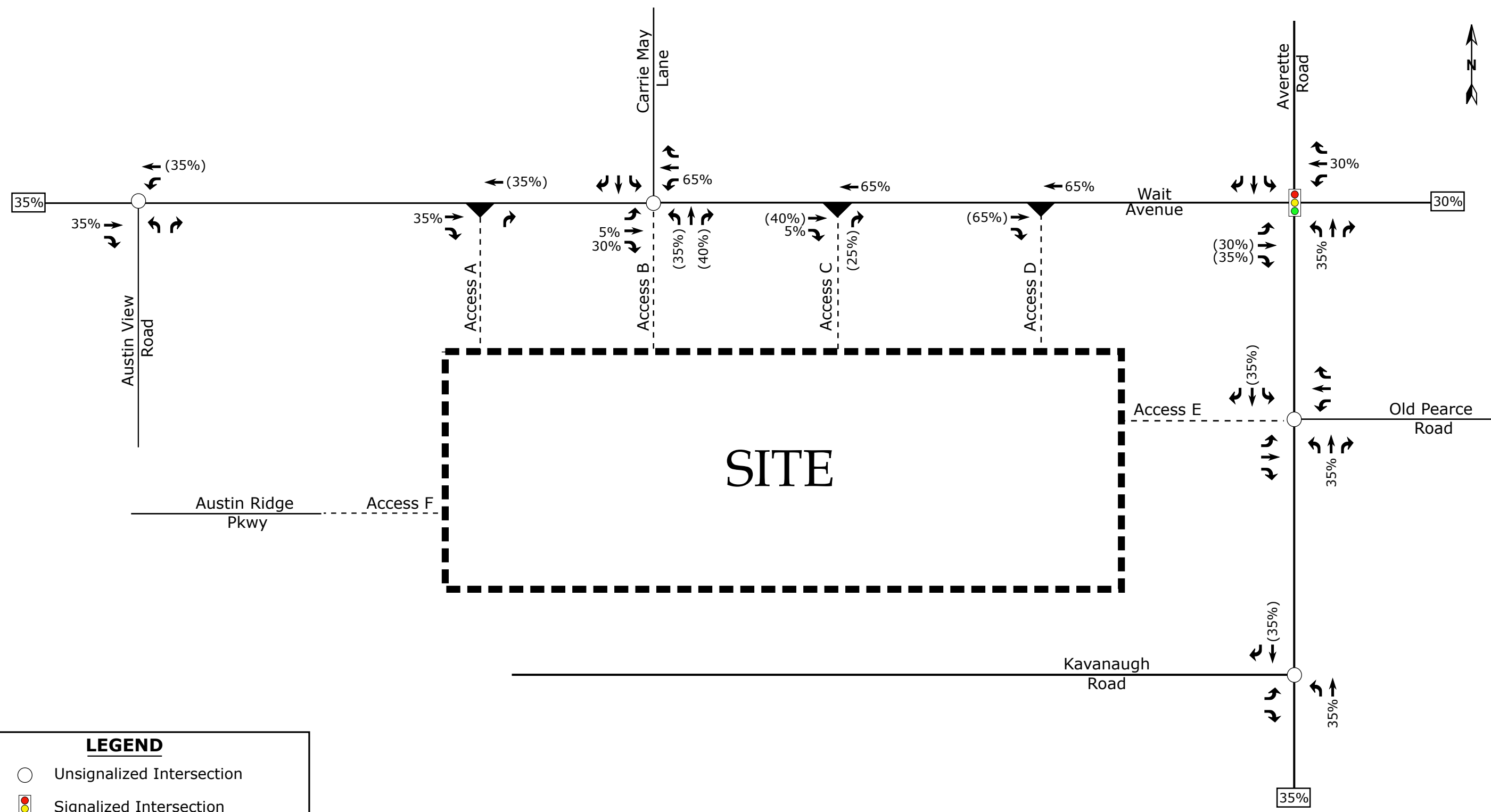
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Residential Site
Trip Assignment
Scenario-1

Scale: Not to Scale Figure 6b



LEGEND

Unsignalized Intersection

Signalized Intersection

Right-In/Right-Out Intersection

x% →

Entering Trip Distribution

(Y%) →

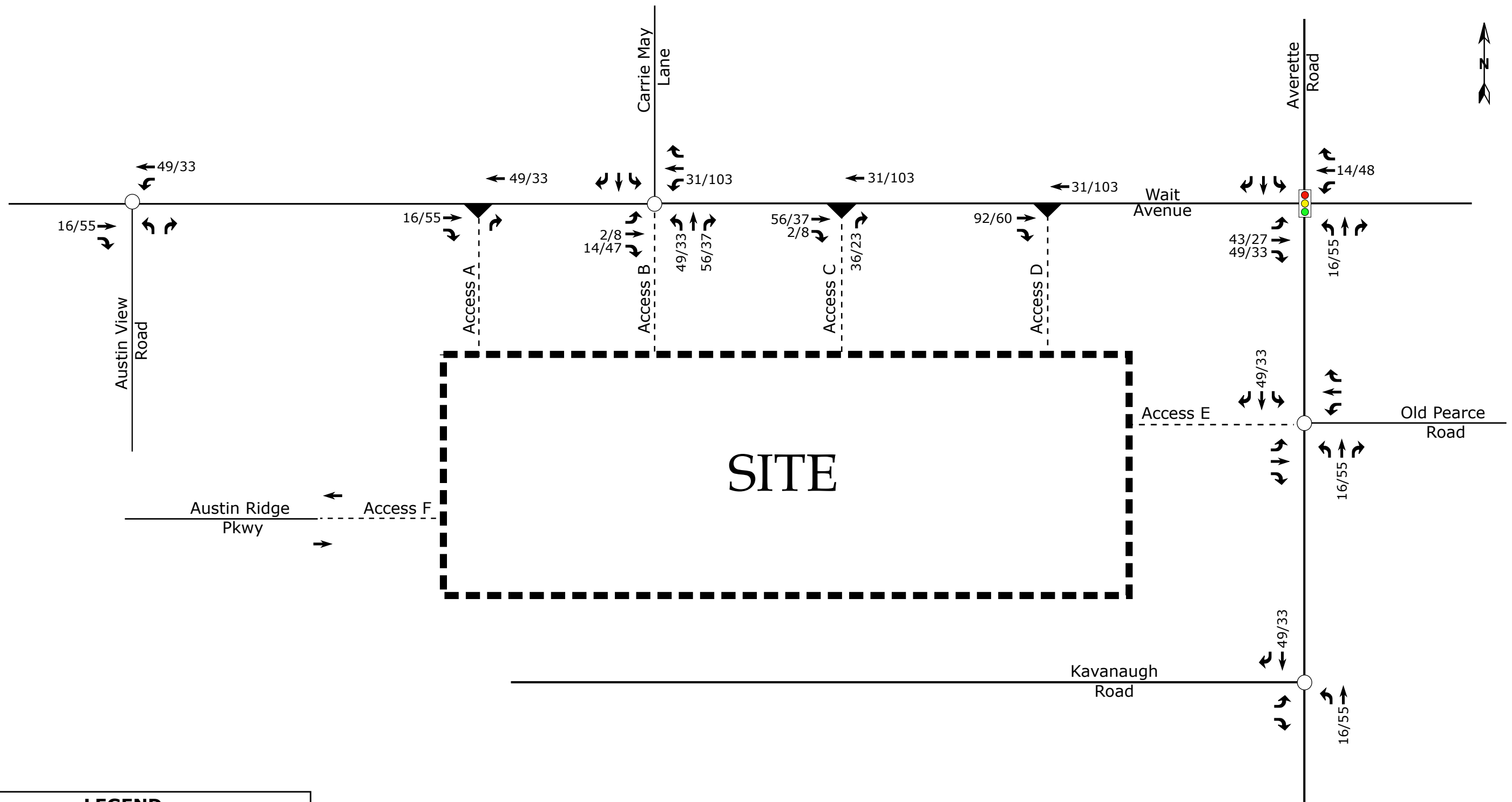
Exiting Trip Distribution

XX%

Regional Trip Distribution

Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point

	Wait Avenue Mixed-Use Rolesville, NC	Residential Site Trip Distribution Scenario-2	
		Scale: Not to Scale	Figure 7a



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

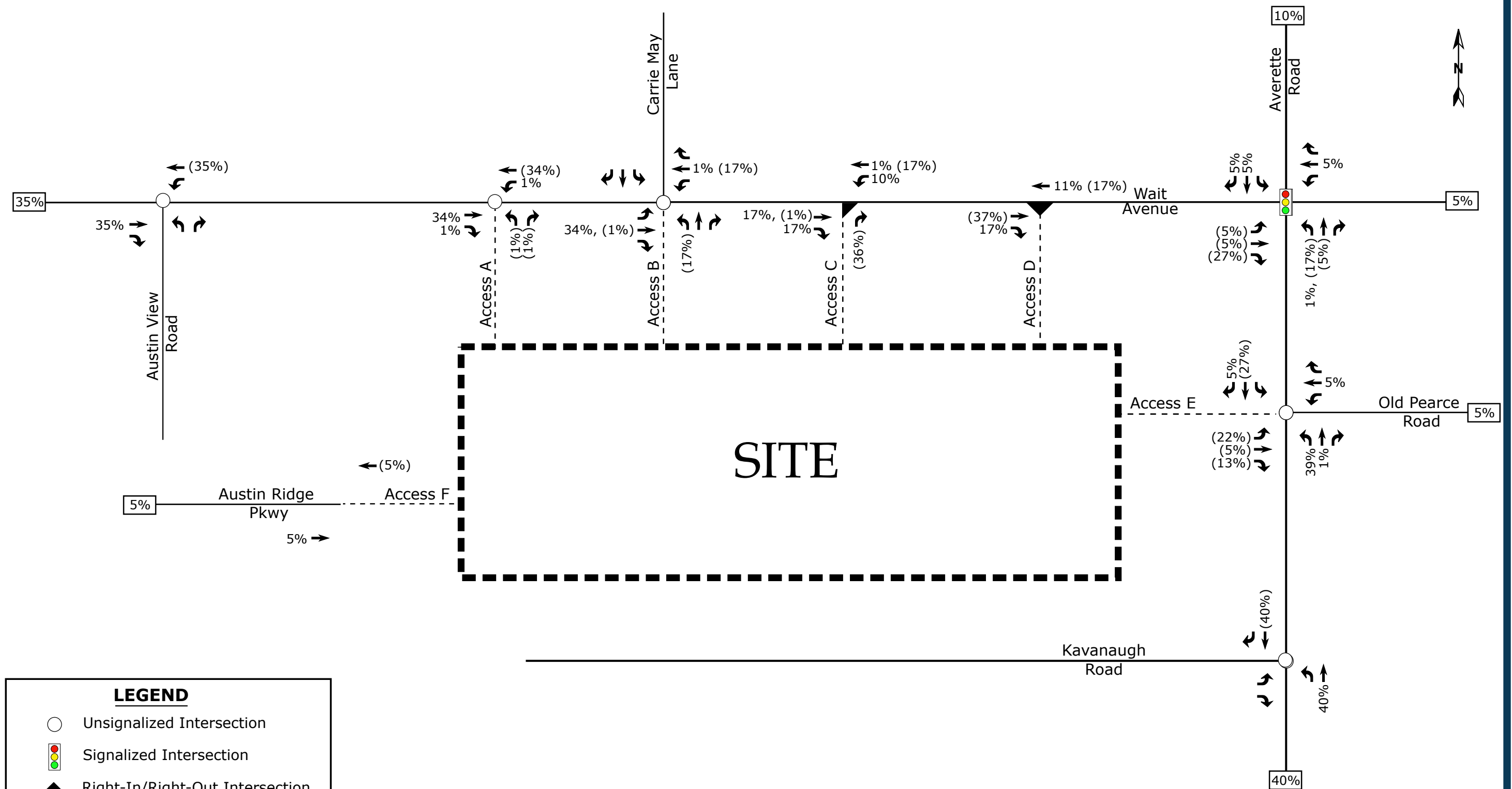
Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point



Wait Avenue Mixed-Use
Rolesville, NC

Residential Site
Trip Assignment
Scenario-2

Scale: Not to Scale Figure 7b



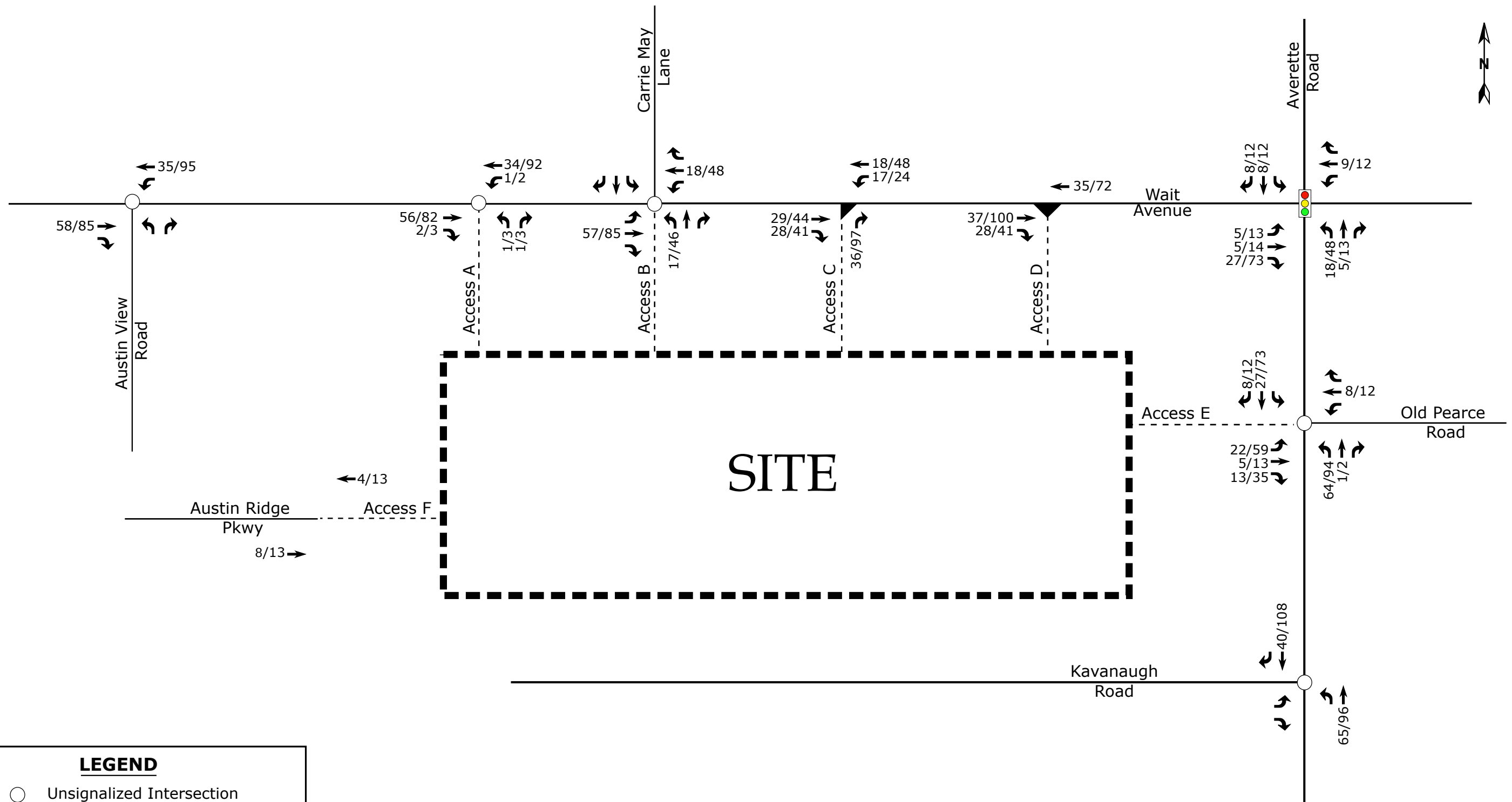
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Commercial Site
Trip Distribution
Scenario-1

Scale: Not to Scale Figure 8a



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- ▲ Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

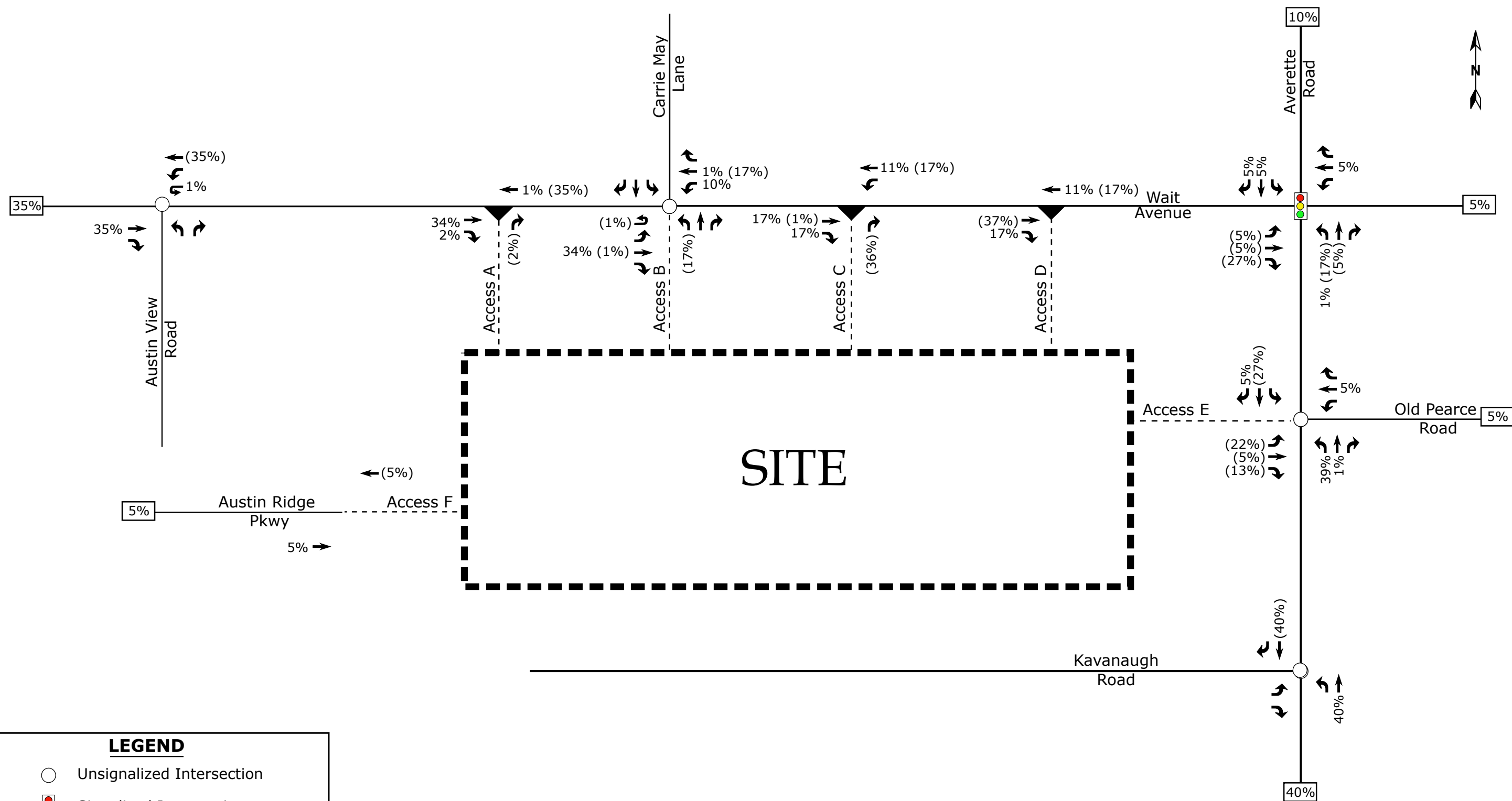
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Commercial Site
Trip Assignment
Scenario-1

Scale: Not to Scale Figure 8b

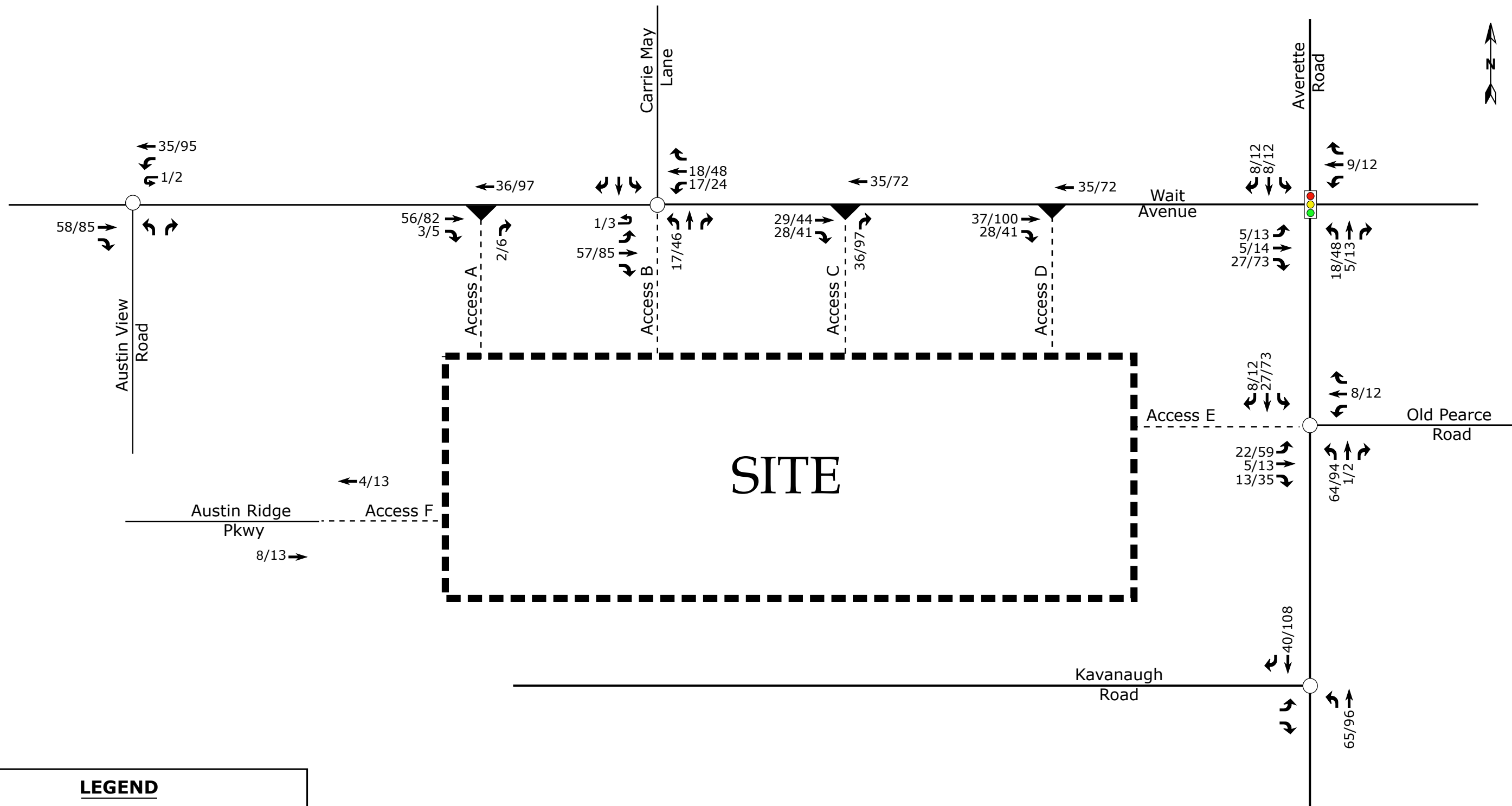


LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% → Entering Trip Distribution
- (y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point

	Wait Avenue Mixed-Use Rolesville, NC	Commercial Site Trip Distribution Scenario-2	
		Scale: Not to Scale	Figure 9a



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

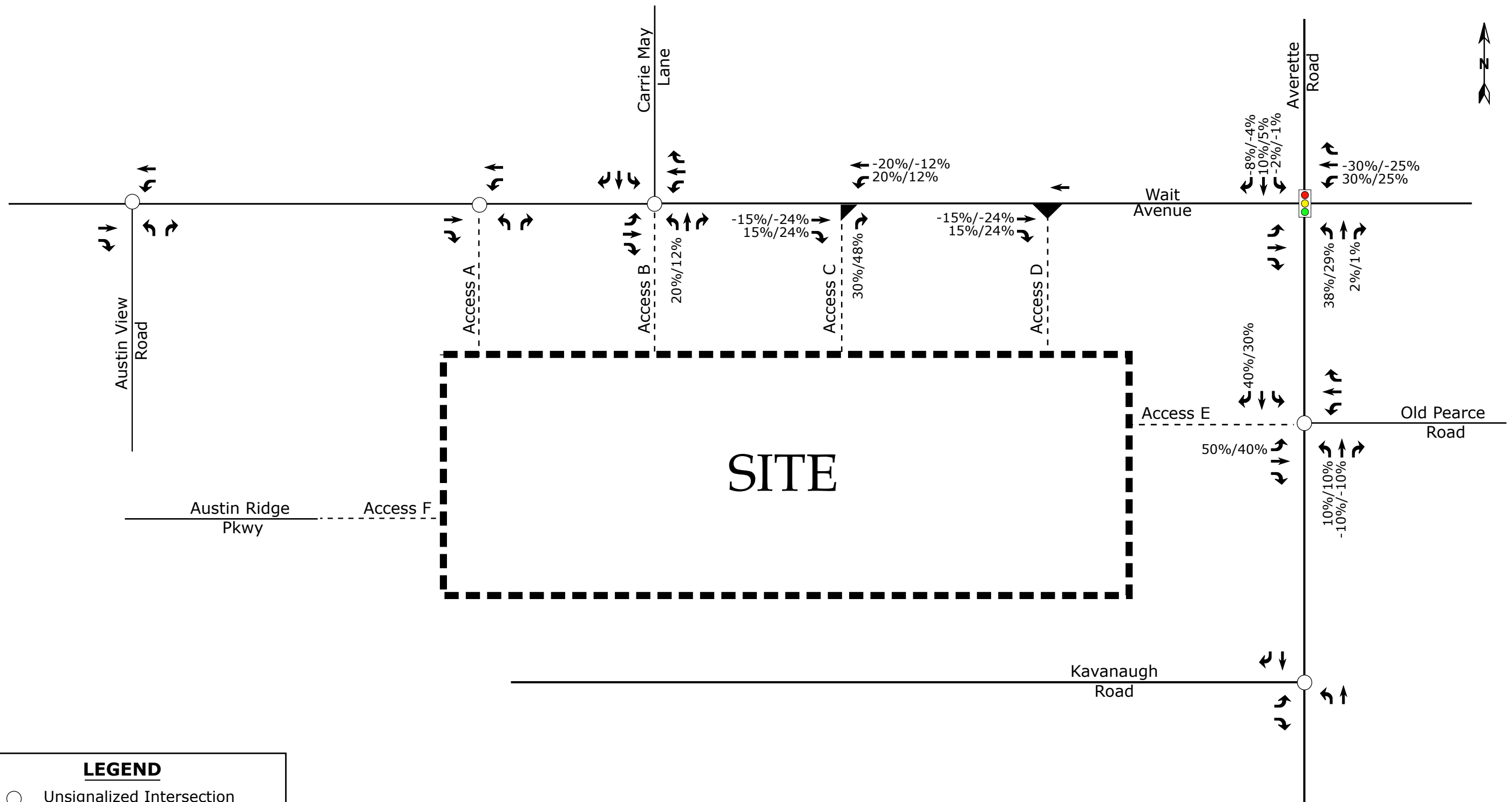
Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point



Wait Avenue Mixed-Use
Rolesville, NC

Commercial Site
Trip Assignment
Scenario-2

Scale: Not to Scale Figure 9b



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- ▲ Left-Over Intersection
- X% / Y% → Weekday AM / PM Pass-By Trip Distribution

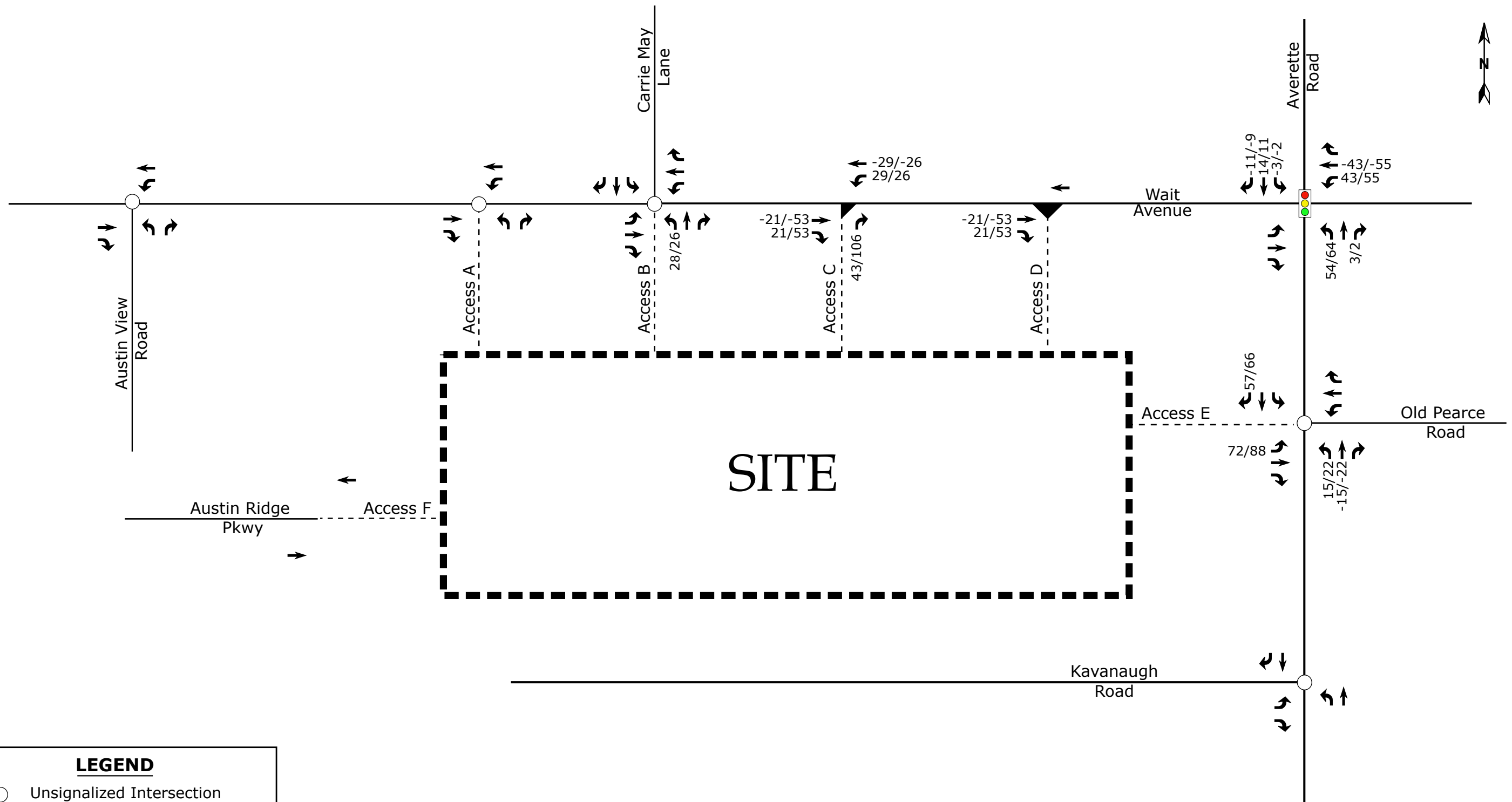
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Pass-By Site
Trip Distribution
Scenario-1

Scale: Not to Scale Figure 10a



LEGEND

-  Unsignalized Intersection
-  Signalized Intersection
-  Left-Over Intersection
-  Right-In/Right-Out Intersection
-  X / Y → Weekday AM / PM Peak Hour Site Pass-by Trips

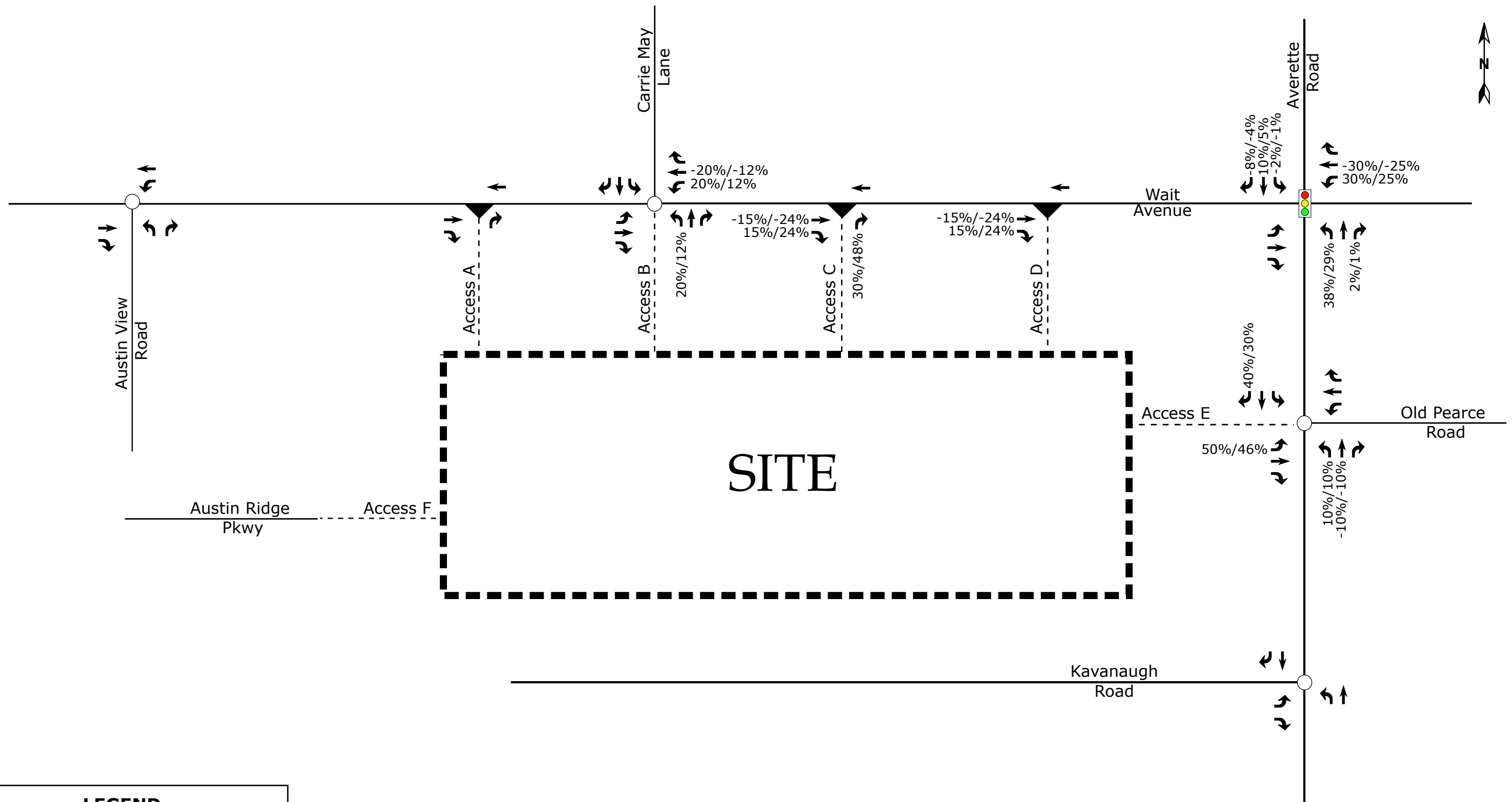
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Pass-By Site
Trip Assignment
Scenario-1

Scale: Not to Scale Figure 10b



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- X% / Y% → Weekday AM / PM Pass-By Trip Distribution

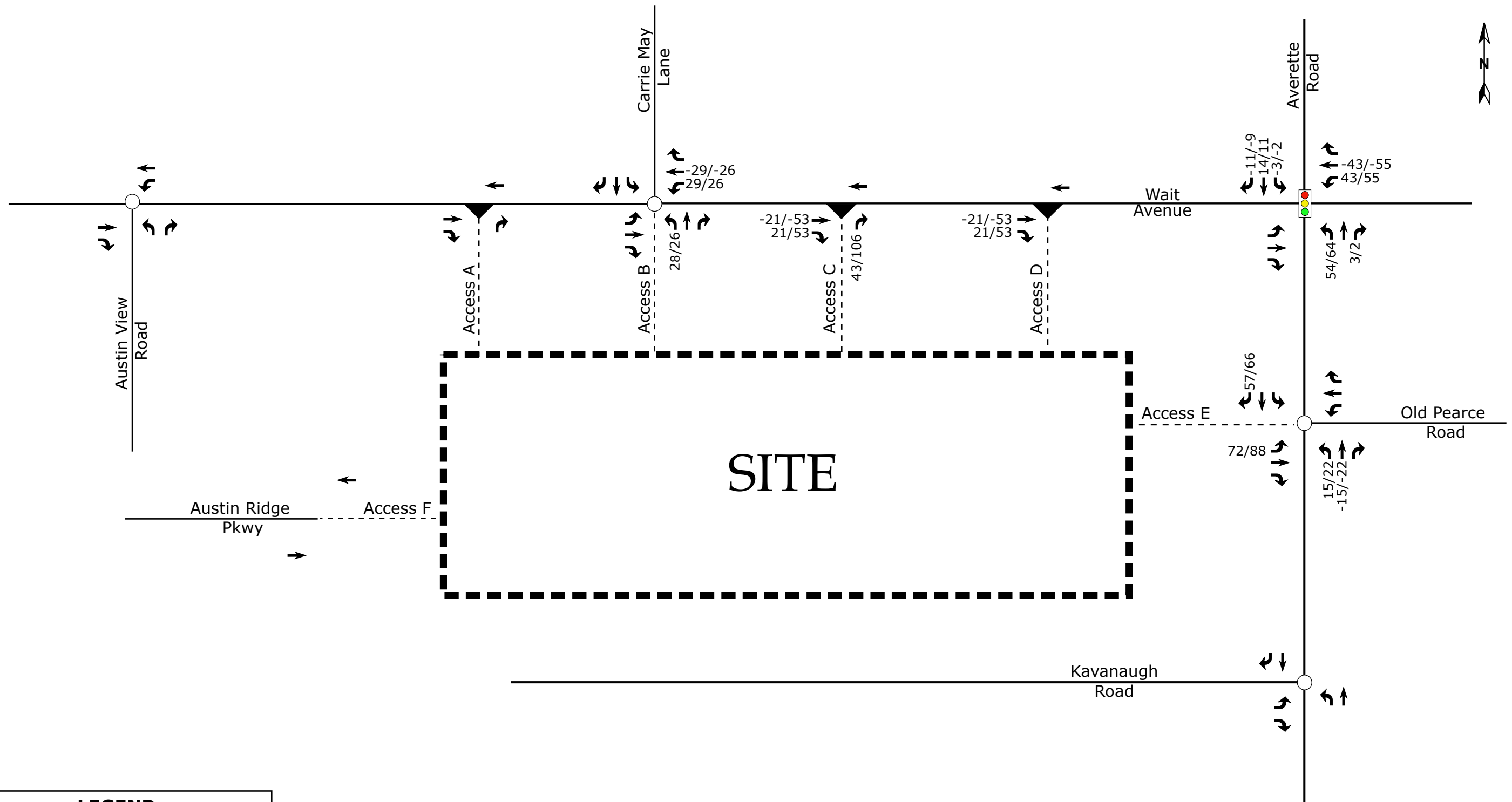
Note: Under Scenario 2, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Pass-By Site
Trip Distribution
Scenario-2

Scale: Not to Scale Figure 11a



LEGEND

-  Unsignalized Intersection
-  Signalized Intersection
-  Right-In/Right-Out Intersection
-  X / Y → Weekday AM / PM Peak Hour Site Pass-by Trips

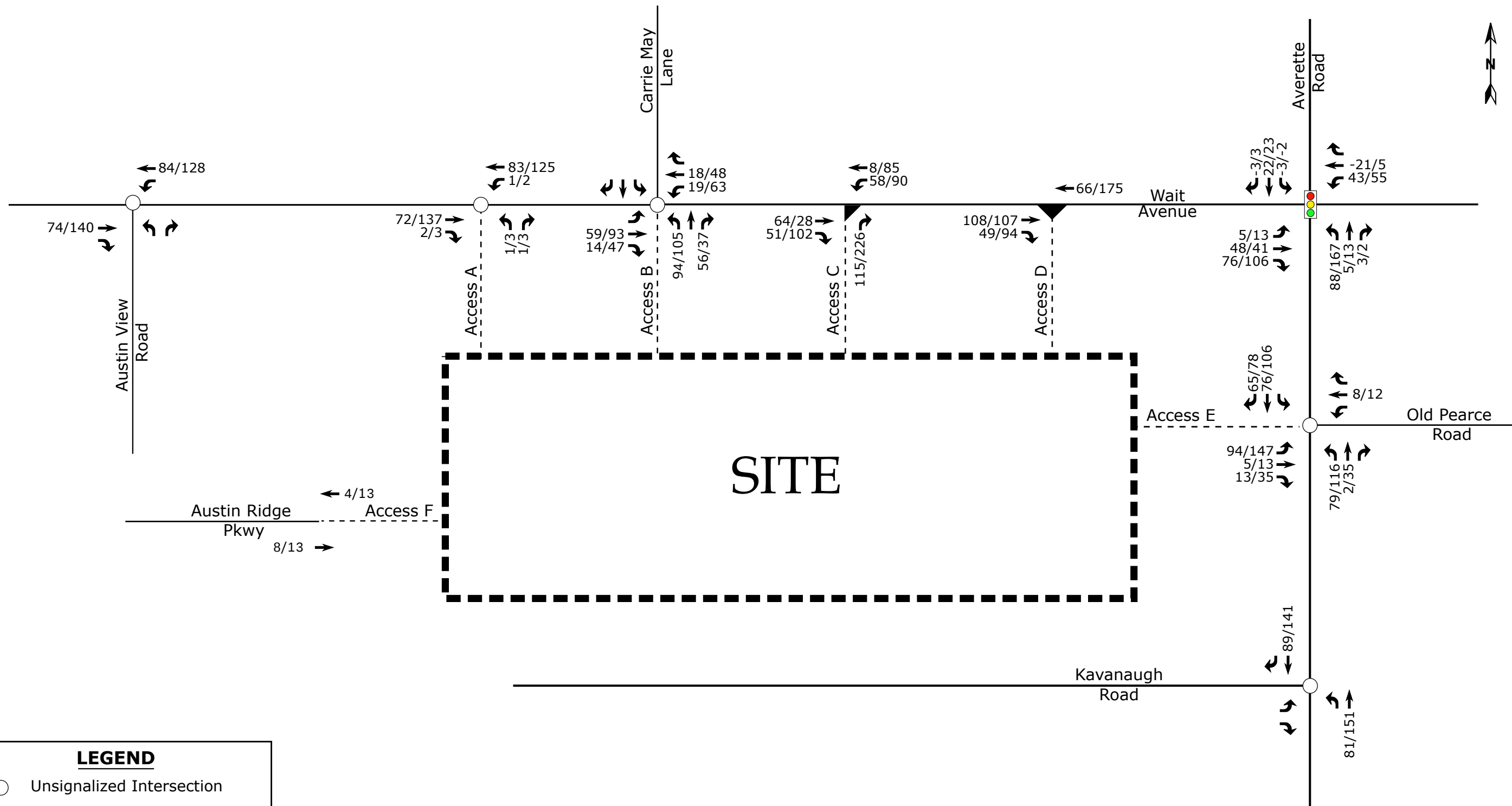
Note: Under Scenario 2, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Pass-By Site
Trip Assignment
Scenario-2

Scale: Not to Scale Figure 11b



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- ◼ Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips

Note: Under Scenario 1, Access A will be considered a full-movement driveway.

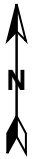
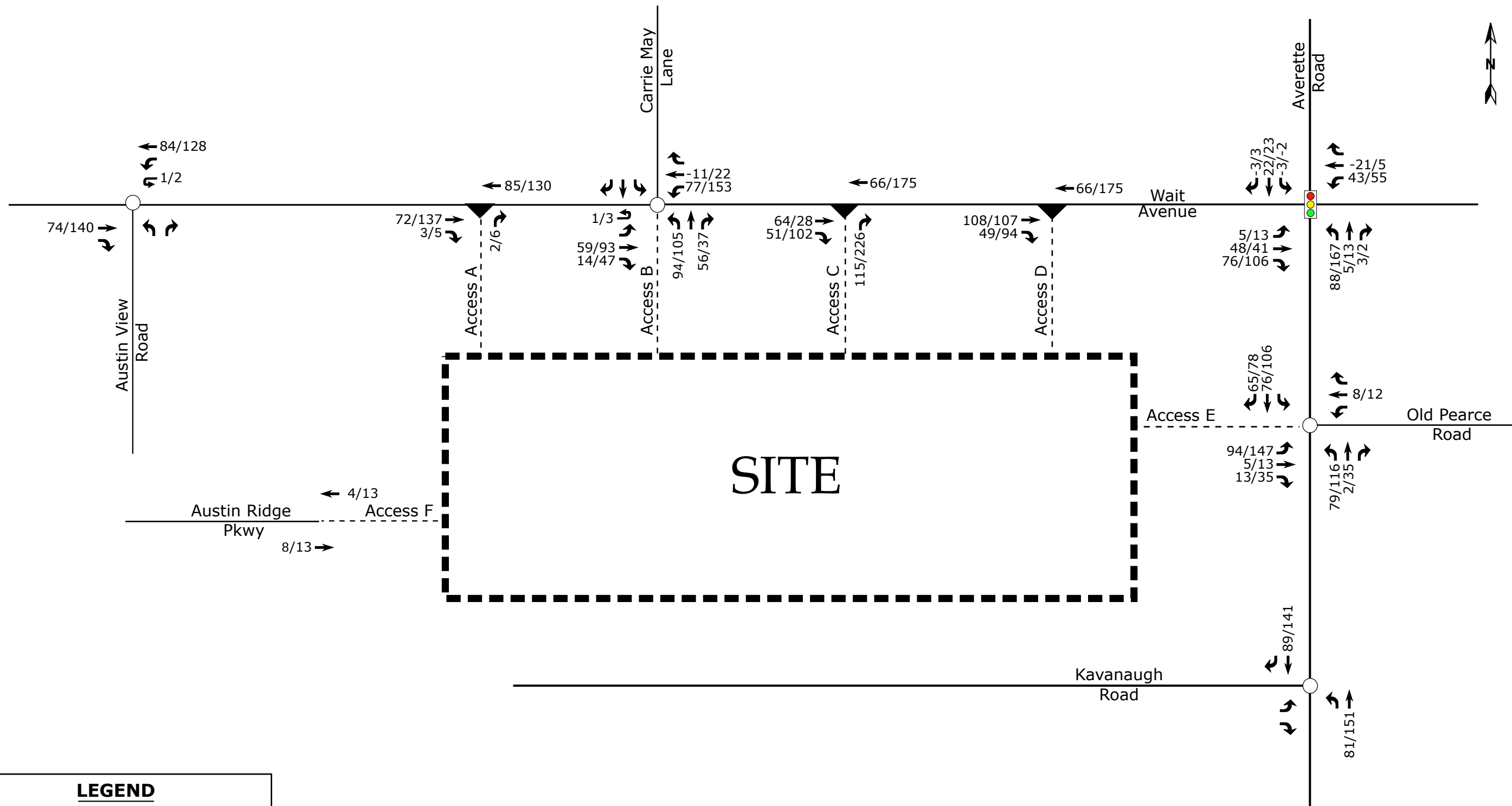


Wait Avenue Mixed-Use
Rolesville, NC

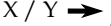
Total Site Trip
Assignment
Scenario-1

Scale: Not to Scale

Figure 12a



LEGEND

-  Unsignalized Intersection
-  Signalized Intersection
-  Right-In/Right-Out Intersection
-  Weekday AM / PM Peak Hour Site Trips

Note: Under Scenario 2, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Total Site Trip
Assignment
Scenario-2

Scale: Not to Scale

Figure 12b

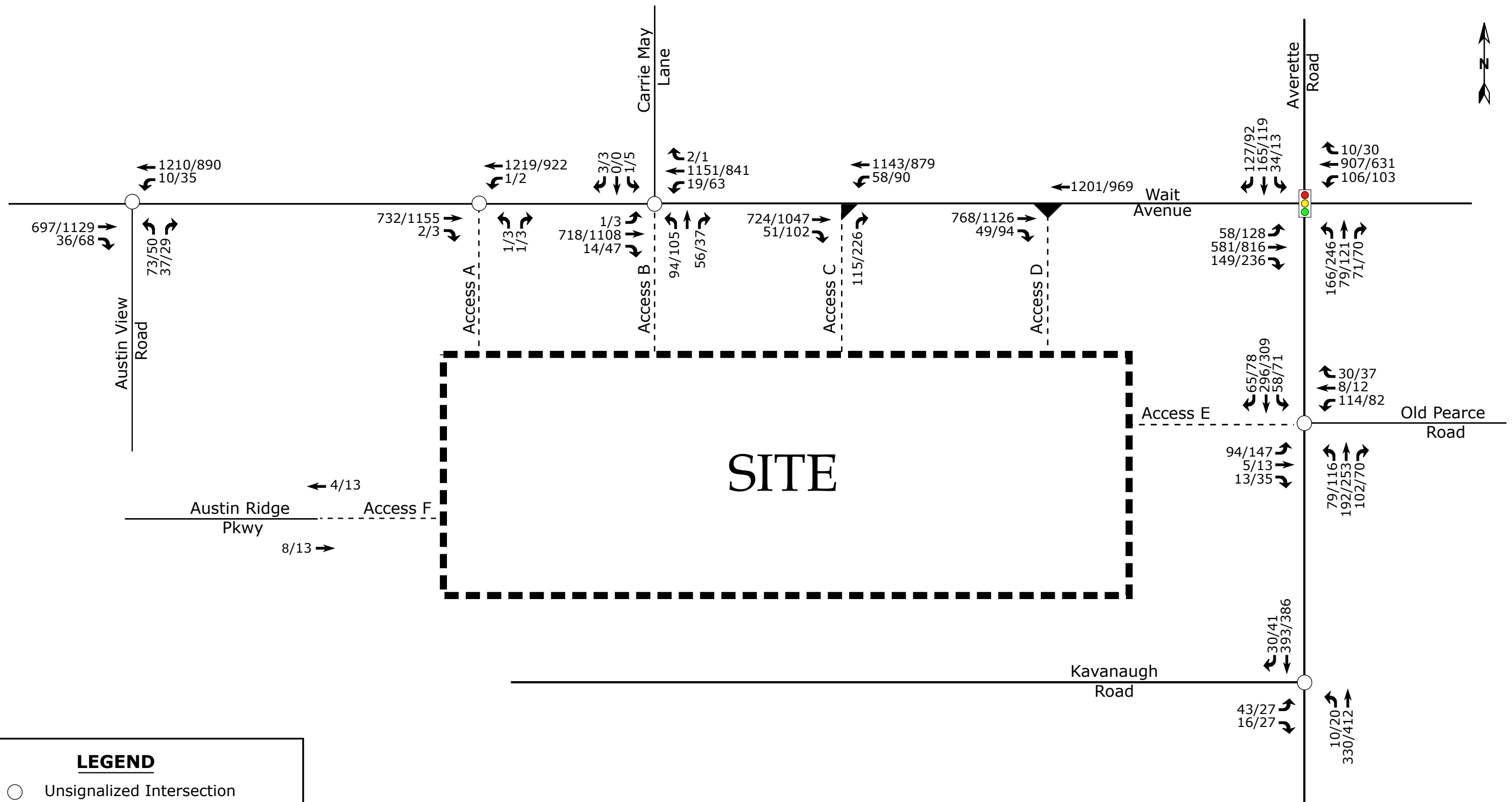
5. 2031 BUILD TRAFFIC CONDITIONS

5.1. 2031 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2031 no-build traffic volumes to determine the 2031 build traffic volumes. Refer to Figure 13a and 13b for an illustration of the 2031 build peak hour traffic volumes with the proposed site fully developed for Scenarios 1 and 2.

5.2. Analysis of 2031 Build Peak Hour Traffic Conditions

Study intersections were analyzed with the 2031 build traffic volumes using the same methodology previously discussed for existing and no-build traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

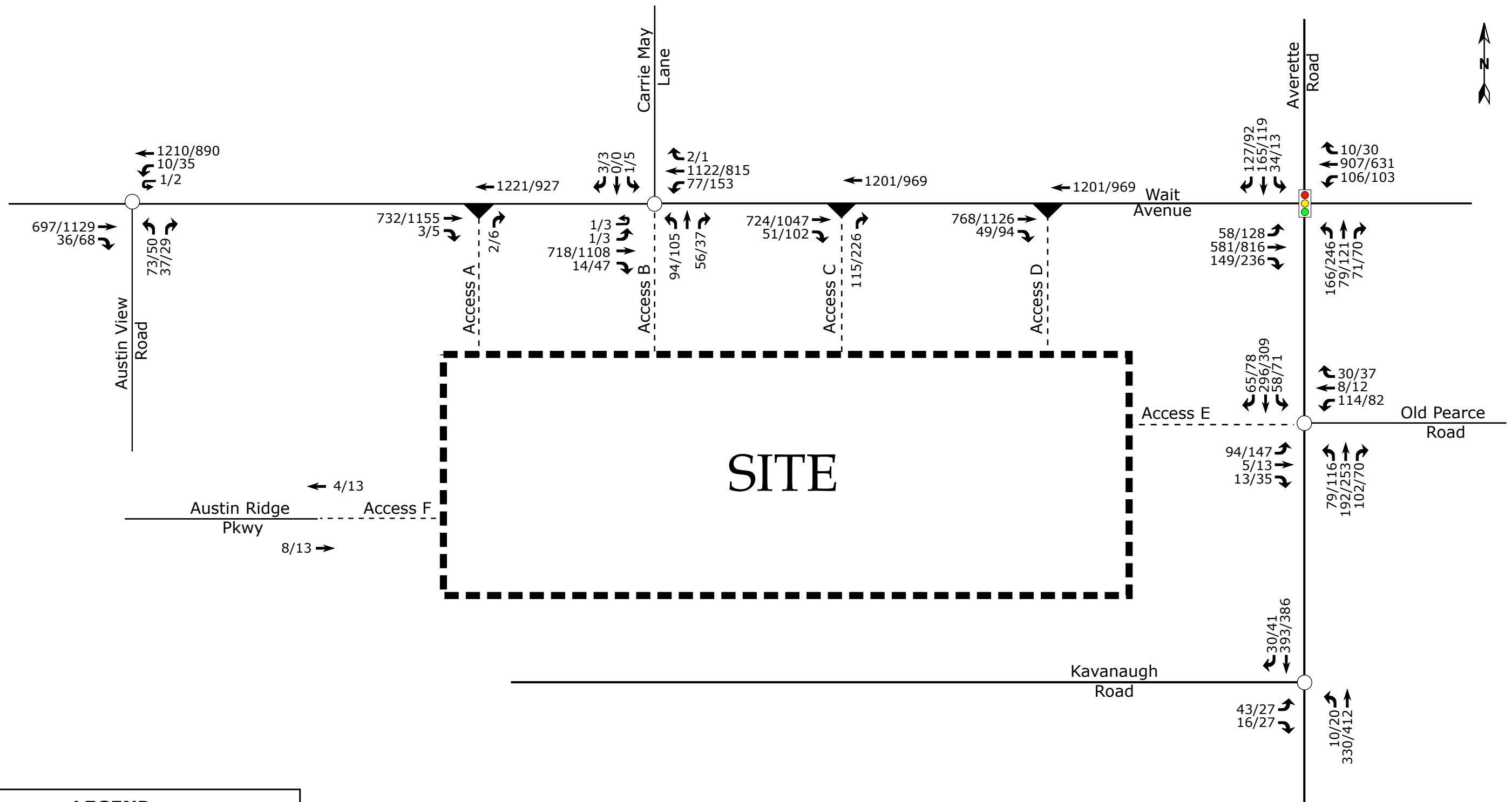
Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.



Wait Avenue Mixed-Use
Rolesville, NC

2031 Build
Peak Hour Traffic
Scenario-1

Scale: Not to Scale Figure 13a



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic

Note: Based on NCDOT Congestion Management guidelines, a volume of 4 vehicles per hour (vph) was analyzed for any movement with less than 4 vph.



Wait Avenue Mixed-Use
Rolesville, NC

2031 Build
Peak Hour Traffic
Scenario-2

Scale: Not to Scale Figure 13b

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 11.1), was used to complete the analyses for the study area intersections. Please note that 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 4 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 4: 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 all study intersections was completed according to the NCDOT Congestion Management Guidelines.

7. CAPACITY ANALYSIS

The following study intersections were analyzed under 2025 existing, 2031 no-build, and 2031 build traffic conditions:

- Wait Avenue and Averette Road
- Wait Avenue and Carrie May Lane / Site Access B
- Wait Avenue and Austin View Road
- Averette Road and Old Pearce Road / Site Access E
- Averette Road and Kavanaugh Road
- Wait Avenue and Site Access A
- Wait Avenue and Site Access C
- Wait Avenue and Site Access D

All proposed site driveways were analyzed under 2031 build traffic conditions. Refer to Tables 5-12 for a summary of capacity analysis results. Refer to Appendices F-J for the Synchro capacity analysis reports and SimTraffic queueing reports.

7.1. Wait Avenue and Averette Road

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 5: Analysis Summary of Wait Avenue and Averette 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)
2025 Existing	EB WB NB SB	LT, TH-RT 1 LT, TH-RT 1 LT-TH-RT 1 LT-TH, 1 RT	A (10) B (17) C (31) C (25)	B (17)	B (16) B (10) C (33) C (23)	B (17)
2031 No-Build	EB WB NB SB	LT, TH-RT 1 LT, TH-RT 1 LT-TH-RT 1 LT-TH, 1 RT	C (22) D (45) F (94) D (43)	D (43)	D (39) C (24) F (82) C (34)	D (39)
2031 Build	EB WB NB SB	LT, TH-RT 1 LT, TH-RT 1 LT-TH-RT 1 LT-TH, 1 RT	D (46) D (71) F (109) C (28)	E (62)	F (138) E (59) F (175) C (27)	F (111)
2031 Build Improved	EB WB NB SB	LT, TH-RT 1 LT, 1 TH, 1 RT 1 LT , 1 TH-RT 1 LT-TH, 1 RT	C (31) E (56) E (77) E (79)	D (54)	D (48) D (47) E (79) E (64)	D (54)

Improvements by developer shown in bold.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the intersection is expected to operate at an overall Level of Service LOS D or better during the weekday AM and PM peak under existing and 2031-no-build conditions, at 2031 build condition the intersection is expected to operate at E during AM peak hour and LOS F during PM peak hour, showing a degradation from LOS D under no-build conditions. This decline in LOS during both the AM and PM peak hours, along with observed queuing on multiple approaches, warrants mitigation.

To address the increased delay and restore operations to no-build conditions, the following improvement is recommended under 2031 full build conditions:

- Construct a westbound right-turn lane on Wait Avenue with 100 feet of storage and appropriate taper.

- Construct a northbound left-turn Lane on Averette Road with 300 feet of storage and appropriate taper.

7.2. Wait Avenue and Carrie May Lane/Access B

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 6: Analysis Summary of Wait Avenue and Carrie May Lane/Access B

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)
2025 Existing	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	B (11) ¹ -- D (32) ²	N/A	A (9) ¹ -- D (30) ²	N/A
2031 No-Build	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	B (12) ¹ -- E (45) ²	N/A	A (10) ¹ -- E (45) ²	N/A
2031 Build Scenario-1	EB WB NB SB	1 LT-TH, 1 RT 1 LT , 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	B (12) ¹ A (10) ¹ F (1341) ² F (113) ²	N/A	A (10) ¹ B (13) ¹ F (2656) ² F (241) ²	N/A
2031 Build Improved Scenario-1 (Signalized)	EB WB NB SB	1 LT-TH, 1 RT 1 LT , 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	B (17) C (30) E (55) C (32)	C (27)	D (38) B (12) F (86) D (47)	C (31)
2031 Build Scenario-2	EB WB NB SB	1 LT-TH, 1 RT 1 LT , 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	B (12) ¹ A (10) ¹ F (1863) ² F (149) ²	N/A	A (10) ¹ B (15) ¹ F (4579) ² F (511) ²	N/A
2031 Build Improved Scenario-2 (Signalized)	EB WB NB SB	1 LT-TH, 1 RT 1 LT , 1 TH-RT 1 LT-TH-RT 1 LT-TH-RT	C (21) C (27) D (44) C (27)	C (26)	D (48) C (28) F (88) D (39)	D (42)

Improvements by developer shown in bold.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left-turn movements are expected to operate at LOS D or better during the weekday AM and PM peak hours under all traffic conditions. The minor-street approach is expected to operate at LOS F or better during the weekday AM and PM peak hours. Due to poor operations on the minor-street approach during the weekday AM and PM peak hours, a traffic signal was considered. 2031 build volumes were analyzed utilizing the criteria contained in the *Manual on Uniform Traffic*

Control Devices (MUTCD). It should be noted that a traffic signal is expected to be warranted during both weekday peak hours under 2031 build traffic conditions. warrant analysis was conducted at this intersection. Based on the signal warrant analysis results, this intersection warrants signalization.

With signalization, the intersection is expected to operate at an overall LOS C during the weekday AM and LOS D during PM peak hours under 2030 build – improved traffic conditions. No queuing issues were identified under 2030 Build Improved traffic conditions.

Along with signalizing the intersection, left turn and right turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The following improvements are recommended to be constructed by the developer:

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 125 feet of storage and appropriate taper length. (Under Scenario-1).
- Construct a westbound Wait Avenue left turn lane with 350 feet of storage and appropriate taper length. (Under Scenario-2)
- Install a traffic Signal.

7.3. Wait Avenue and Austin View Blvd

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 7: Analysis Summary of Wait Avenue and Austin View Blvd

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)
2025 Existing	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 LT-RT	-- A (9) ¹ F (87) ²	N/A	-- A (9) ¹ F (87) ²	N/A
2031 No-Build	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 LT-RT	-- A (9) ¹ F (270) ²	N/A	-- B (12) ¹ F (200) ²	N/A
2031 Build	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 LT-RT	-- A (10) ¹ F (429) ²	N/A	-- B (13) ¹ F (474) ²	N/A

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis indicates that the major-street left-turn movements are expected to operate at LOS A during the weekday AM and PM peak hours under all traffic conditions. The minor-street approach is expected to operate at LOS F or better during the weekday AM and PM peak hours. Poor levels of service and higher delays are not uncommon for an unsignalized minor-street approach during the weekday peak hours when mainline volumes are heaviest. Due to the minimal impacts caused by the proposed development, no improvements are recommended by the developer. A signal warrant analysis was conducted based on Warrants 1, 2, and 3 in the Manual on Uniform Traffic Control Devices (MUTCD); however, none of the warrants were satisfied.

The Austin Creek development has several road connections and is expected to also connect to the proposed development. Should vehicles experience significant delay at this intersection, there are alternative routes available, including a new signal via the proposed development.

7.4. Averette Road and Old Pearce Road / Access E

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 8: Analysis Summary of Averette Road and Old Pearce Road / Access E

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)
2025 Existing	WB NB SB	1 LT-RT 1 TH-RT 1 LT-TH	B (15) ² -- A (8) ¹	N/A	B (14) ² -- A (8) ¹	N/A
2031 No-Build	WB NB SB	1 LT-RT 1 TH-RT 1 LT-TH	C (17) ² -- A (8) ¹	N/A	C (16) ² -- A (8) ¹	N/A
2031 Build	EB WB NB SB	1 LT-TH-RT 1 LT- TH -RT 1 LT , 1 TH-RT 1 LT-TH, 1 RT	E (39) ¹ E (49) ¹ A (8) ² A (8) ²	N/A	F (221) ¹ F (82) ¹ A (9) ² A (8) ²	N/A

Improvements by developer shown in bold.

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major-street left-turn movements are expected to operate at LOS A during the weekday AM and PM peak hours under all traffic conditions. The minor-street approach is expected to operate at LOS F or better during the weekday AM and PM peak hours. Poor levels of service and higher delays are not uncommon for an unsignalized minor-street approach during the weekday peak hours when mainline volumes are heaviest. Due to the minimal impacts caused by the proposed development, no improvements are recommended by the developer.

Although minor-street queues were observed to spill back due to heavy volumes on the major-street. The improvements recommended at Wait Avenue and Averette Road are expected mitigated this issue. As a result, no queuing issues were identified under the 2031 build – improved conditions

Left turn and right turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The following improvements are recommended to be constructed by the developer:

- Construct a northbound Averette Road left turn lane with 100 feet of storage and appropriate taper length.
- Construct a southbound Averette Road right turn lane with 75 feet of storage and appropriate taper length.

7.5. Averette Road and Kavanaugh Road

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 9: Analysis Summary of Averette Road and Kavanaugh 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)
2025 Existing	EB NB SB	1 LT-RT 1 LT, TH 1 TH-RT	B (13) ² A (8) ¹ --	N/A	B (12) ² A (8) ¹ --	N/A
2031 No-Build	EB NB SB	1 LT-RT 1 LT, TH 1 TH-RT	B (14) ² A (8) ¹ --	N/A	B (12) ² A (8) ¹ --	N/A
2031 Build	EB NB SB	1 LT-RT 1 LT, TH 1 TH-RT	C (17) ² A (8) ¹ --	N/A	C (16) ² A (8) ¹ --	N/A

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left turn movements and minor street approaches are expected to operate at LOS C or better during the weekday AM and PM peak hours under all traffic conditions. No queuing issues were identified. No improvements are recommended by the developer. No queuing issues were identified. No improvements are recommended by the developer.

7.6. Wait Avenue and Access A

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 10: Analysis Summary of Wait Avenue and Access A

ANALYSIS SCENARIO	A P P R O A C H	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2031 Build Scenario-1 (Full Movement)	EB WB NB	1 TH-RT 1 LT-TH 1 RT-LT	-- A (10) ¹ F (51) ²	N/A	-- B (12) ¹ F (66) ²	N/A
2031 Build Scenario-2 (RIRO)	EB WB NB	1 TH-RT 1 TH 1 RT	-- -- B (15) ²	N/A	-- -- C (24) ²	N/A

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis indicates that the major-street left-turn movements are expected to operate at LOS A during weekday AM and LOS B PM peak hour under 2031 build (Scenario-1). Poor levels of service and higher delays are not uncommon for an unsignalized minor-street approach during the weekday peak hours when mainline volumes are heaviest. Due to the minimal impacts caused by the proposed development, no improvements are recommended by the developer.

Under the 2031 build (Scenario-2) and minor street approach is expected to operate at LOS B during the weekday AM and LOS C PM peak hours under 2031 build (Scenario-2). No queuing issues were identified. No improvements are recommended by the developer.

Left turn and right turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. No turn lanes are warranted at Access A under full buildout of the development.

7.7. Wait Avenue and Access C

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 11: Analysis Summary of Wait Avenue and Access C

ANALYSIS SCENARIO	A P P R O A C H	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2031 Build Scenario-1 (left-over)	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 RT	-- B (10) ¹ C (19) ²	N/A	-- B (13) ¹ F (120) ²	N/A
2031 Build Scenario-2 (RIRO)	EB WB NB	1 TH, 1 RT 1 TH 1 RT	-- -- C (19) ²	N/A	-- -- F (120) ²	N/A

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Capacity analysis indicates that under Scenario-1 the major-street left-turn movements are expected to operate at LOS B during the weekday AM and PM peak hour. The minor-street approach is expected to operate at LOS F or better during the weekday AM and PM peak hours. Poor levels of service and higher delays are not uncommon for an unsignalized minor-street approach during the weekday peak hours when mainline volumes are heaviest.

Left turn and right turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The following improvements are recommended to be constructed by the developer:

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 175 feet of storage and appropriate taper length (Under Scenario-1).

Gaps in the roadway network along Wait Avenue are expected due to the proposed traffic signal. Should vehicles at this intersection experience significant delay exiting, there are several alternative routes via the connectivity provided by the site.

7.8. Wait Avenue and Access D

Refer to the table below for a summary of the capacity analysis of the subject intersection during the analysis scenarios.

Table 12: Analysis Summary of Wait Avenue and Access D

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)
2031 Build	EB WB	1 TH, 1 RT 1 TH	-- --	C	-- --	B

Capacity analysis indicates that Overall intersection is expected to operate at LOS C during the weekday AM and LOS B PM peak hours under all traffic conditions. No queuing issues were identified. Right turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways*. The following improvements are recommended to be constructed by the developer:

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the Wait Avenue Mixed-Use development to be located in Rolesville, North Carolina. The proposed development, anticipated to be completed in 2031, is assumed to consist of the following land uses:

- 300 DU Single-Family Detached Housing
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF each
- 5,000 SF Convenience Store/Gas Station w/12 fueling positions

Site access is proposed via four driveways along Wait Avenue (NC 98), one full-movement driveway along Averette Road, and one site access is proposed via the existing Austin Ridge Parkway.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2025 Existing Traffic Conditions
- 2031 No-Build Traffic Conditions
- 2031 Build Traffic Conditions Scenario 1 (without Median)
- 2031 Build Traffic Conditions Scenario 2 (with Median)

Trip Generation

Primary site trips are expected to generate approximately 452 trips (212 entering and 240 exiting) during the weekday AM peak hour and 762 trips (400 entering and 362 exiting) during the weekday PM peak hour.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to 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.

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 Figure 14a and 14b for an illustration of the recommended lane configuration for the proposed development.

Wait Avenue and Averette Road

- Construct a westbound right-turn lane on Wait Avenue with 100 feet of storage and appropriate taper.
- Construct a northbound left-turn Lane on Averette Road with 300 feet of storage and appropriate taper.

Wait Avenue and Carrie May Lane/Access B

- Construct Site Access B (northbound approach) with one ingress and one egress lane.
- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 125 feet of storage and appropriate taper length. (Under Scenario-1).
- Construct a westbound Wait Avenue left turn lane with 350 feet of storage and appropriate taper length. (Under Scenario-2)
- Install a traffic Signal.

Averette Road and Old Pearce Road/Access E

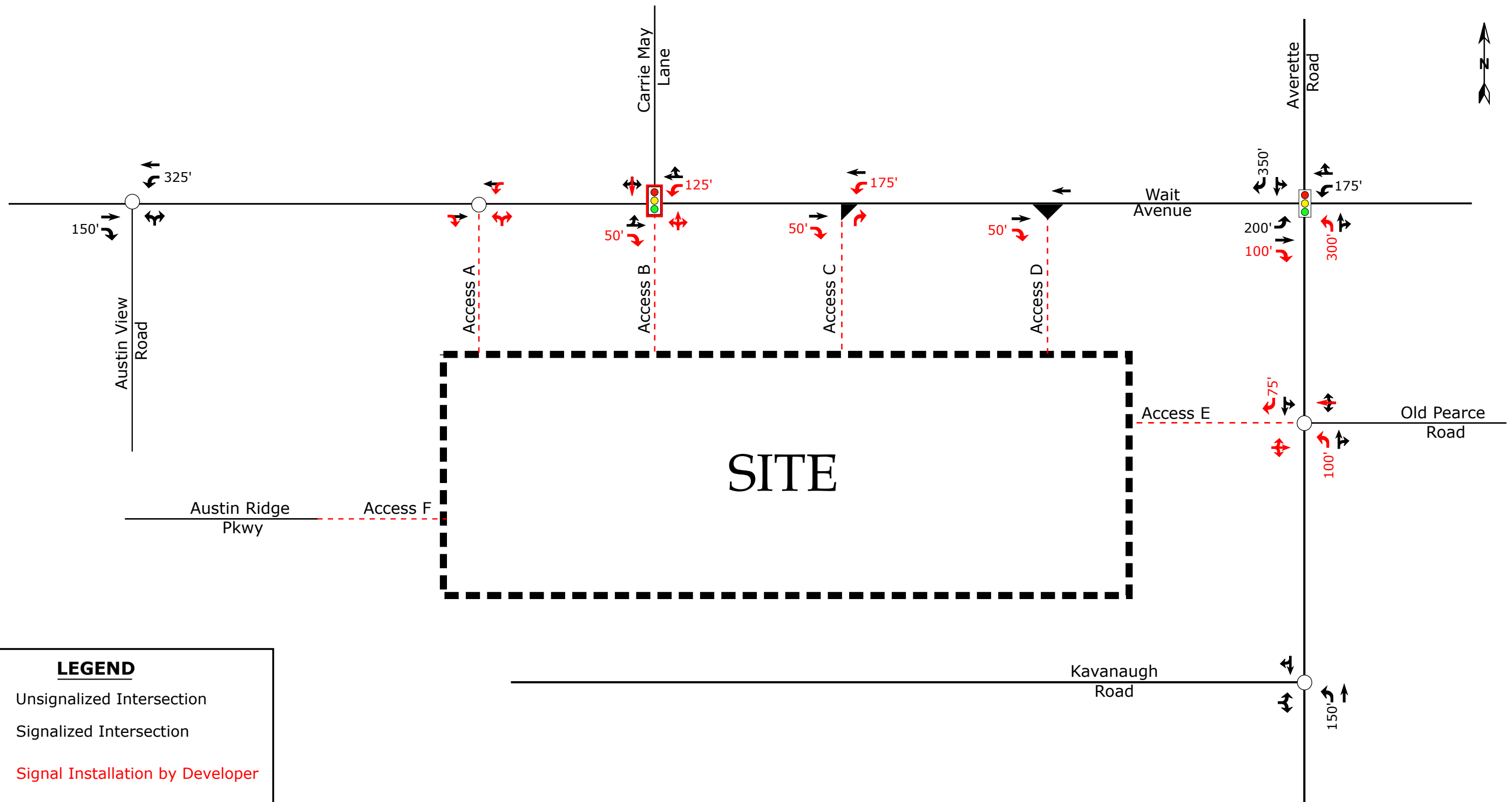
- Construct Site Access E (westbound approach) as a with one ingress and one egress lane.
- Construct a northbound Averette Road Left turn lane with 100 feet of storage and appropriate taper length.
- Construct a southbound Averette Road left turn lane with 125 feet of storage and appropriate taper length.
- Provide stop control for the westbound approach.

Wait Avenue and Access C

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.
- Construct a westbound Wait Avenue left turn lane with 175 feet of storage and appropriate taper length. (Under Scenario-1).

Wait Avenue and Access D

- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ◫ Signal Installation by Developer
- ▲ Right-In / Right-Out Intersection
- ▲ Left-Over Intersection
- Existing Lane
- Improvement by Developer
- x' Storage (In Feet)

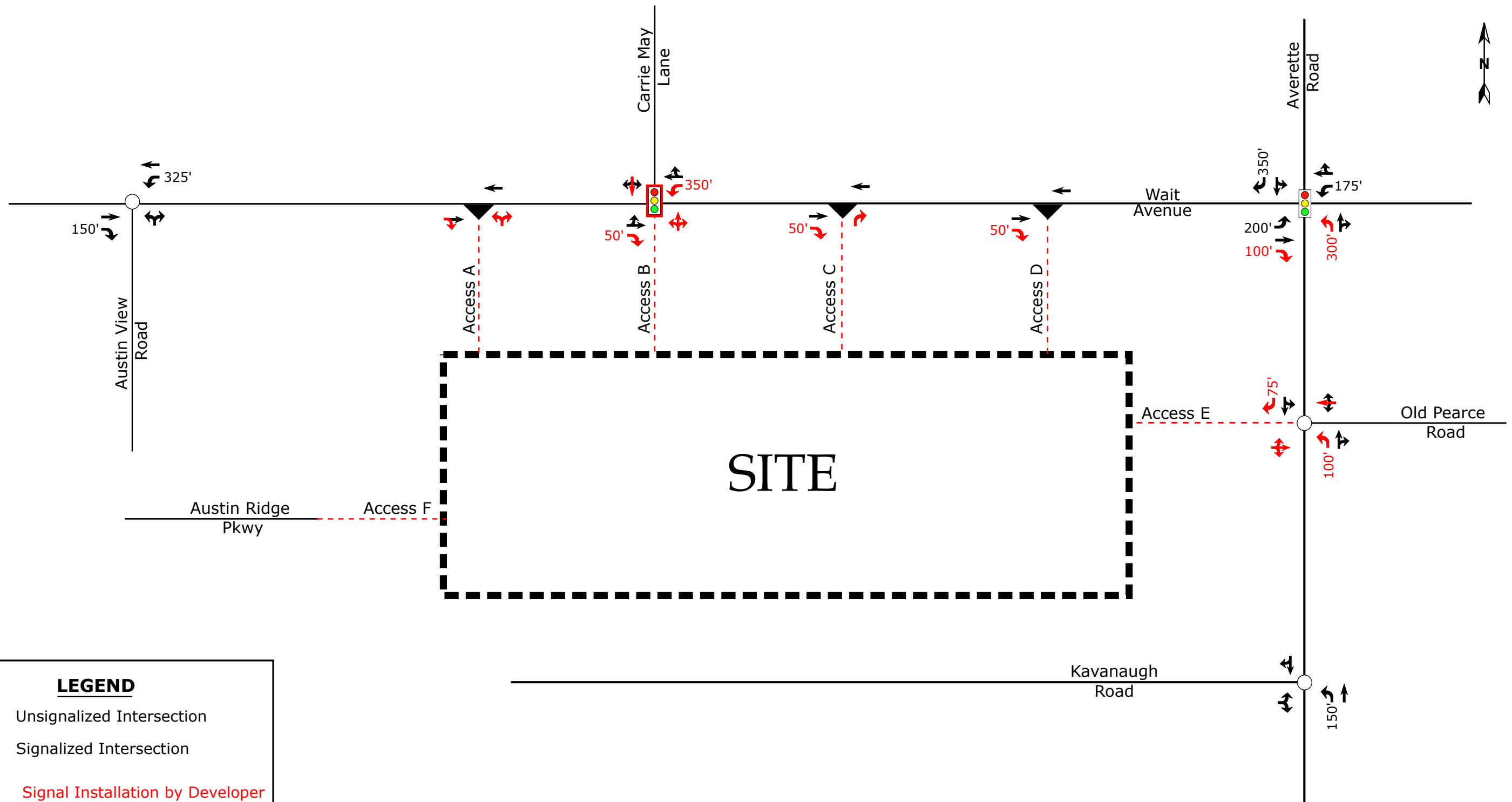
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Recommended Lane
Configurations
Scenario-1

Scale: Not to Scale Figure 14a



Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point



Wait Avenue Mixed-Use
Rolesville, NC

Recommended Lane
Configurations
Scenario-2

Scale: Not to Scale Figure 14b

TECHNICAL APPENDIX

APPENDIX A

SCOPING DOCUMENTATION



June 24, 2025

Daniel Boulware, PE
NCDOT Division 5 – District 1
4009 District Drive
Raleigh, NC 27607
P: 919-814-6115
dboulware@ncdot.gov

Reference: Wait Avenue Mixed-Use - Rolesville, NC
Subject: Memorandum of Understanding for TIA Report

Dear Daniel:

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 Wait Avenue Mixed-Use development, to be located south of Wait Avenue and west of Averette Road in Rolesville, North Carolina. This MOU reflects the assumptions outlined during initial coordination between DRMP, Inc., the Town of Rolesville (Town), and the development team. Refer to the attached site location map.

Access to the site is provided via four driveways along Wait Avenue (NC 98), one full-movement driveway along Averette Road, and one site access is proposed via the existing Austin Ridge Parkway. Refer to the attached site plan.

The proposed development, expected to be completed by the year 2031, is assumed to consist of the following land uses:

- 300 DU Single-Family Detached Housing
- 107,049 SF Mini-Warehouse
- 51,000 SF Supermarket
- 23,700 SF Strip Retail Plaza
- 2,500 SF Coffee/Donut Shop with Drive-Through Window
- 2,400 SF Drive-in Bank
- 2 Fast Casual Restaurants at 2,500 SF each
- 5,000 SF Convenience Store/Gas Station w/12 fueling positions

Study Area

The study area is proposed to consist of the following intersections:

- Wait Avenue and Austin View Road
- Wait Avenue and Averette Road
- Averette Road and Old Pearce Road / Site Access E
- Averette Road and Kavanaugh Road
- Wait Avenue and Carrie May Lane / Site Access B
- Wait Avenue and Site Access A
- Wait Avenue and Site Access C
- Wait Avenue and Site Access D

Background Traffic Volumes

Traffic volumes will be estimated by projecting 2025 existing traffic volumes to the year 2031 using an annual growth rate. The attached historical AADT data from NCDOT indicates a growth rate of 3.8% in the study area.

DRMP recommends using a background growth rate of 2.5% per year based on engineering judgement. Several factors were considered when making this judgment. The area has seen high growth in the last 8 to 12 years. (3.8% per year). There are several approved developments in the area that are nearly built out which likely accounts for much of the historical growth. The proposed development will contribute to future growth in the area. A 2% growth rate is common in most places. Using a growth rate of 2.5% should account for future growth without over estimating. No trips from unbuilt portions of approved developments are recommended to be added to the 2.5% background traffic growth.

Future Roadway Improvements

No future roadway improvements were identified within the study area to consider under future traffic conditions.

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*, 11th Edition. Several land uses were combined into the Shopping Plaza land use. Refer to Table 1 for a summary of the proposed site trip generation for full buildout of the proposed development. Internal Capture spreadsheets are attached. Pass-by Trips will be limited to 10% of the adjacent street traffic.

The internal capture calculations deviate from NCDOT Capacity Analysis Guidelines. The guidelines state that the walking distance should be the *maximum* distance between land uses. Internal capture for the PM peak hour was calculated based on the *average* walking distance; approximately 2,000 feet. NCHRP Report 684 states that the walking distance should be the average of the distances between land uses. Using the average distance resulted in an internal capture rate of 14% for the PM peak hour. The AM peak hour internal capture is typically less than the PM peak hour. An internal capture rate of 7% was chosen for the AM peak hour (half of the PM rate to remain).

Table 1: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)			Weekday PM Peak Hour Trips (vph)		
			Enter	Exit	Total	Enter	Exit	Total
Mini-Warehouse (151)	107,049 SF	155	6	4	10	8	8	16
Single-Family Detached Housing (210)	300 DU	2,772	51	151	202	176	103	279
Shopping Plaza with Supermarket (821)	84,600 SF	7,924	185	114	299	369	399	768
Convenience Store/Gas Station	12 Fueling Positions (5,000 sq. ft.)	3,502	141	142	283	136	137	273
Total Trips		14,353	383	411	794	689	647	1,336
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
Total External Trips			355	383	738	620	582	1,202
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
Primary Trips			212	240	452	400	362	762

Trip Distribution and Assignment

Site trips are distributed based on existing traffic patterns, population centers, and engineering judgment. Refer to the attached residential and commercial site trip distribution figures.



Analysis Scenarios

All capacity analyses will be performed utilizing Synchro (Version 11). All study intersections will be analyzed during the weekday AM and PM peak hours under the following traffic scenarios:

- 2025 Existing
- 2031 No-Build
- 2031 Build Scenario 1 (without Median)
- 2031 Build Scenario 2 (with Median)
- 2031 Build with Improvements

Report

The TIA report will be prepared based on Town and NCDOT requirements. The internal capture calculations deviate from NCDOT Capacity Analysis Guidelines, but are expected to provide more realistic results.

If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Andrew Eagle". The signature is fluid and cursive, with the first letter of "Andrew" being a large, stylized "A".

Andrew Eagle, PE, PTOE

Senior Traffic Analysis Project Manager

DRMP, Inc.

Attachments: Site Location Map

Site Plan

Growth Rate

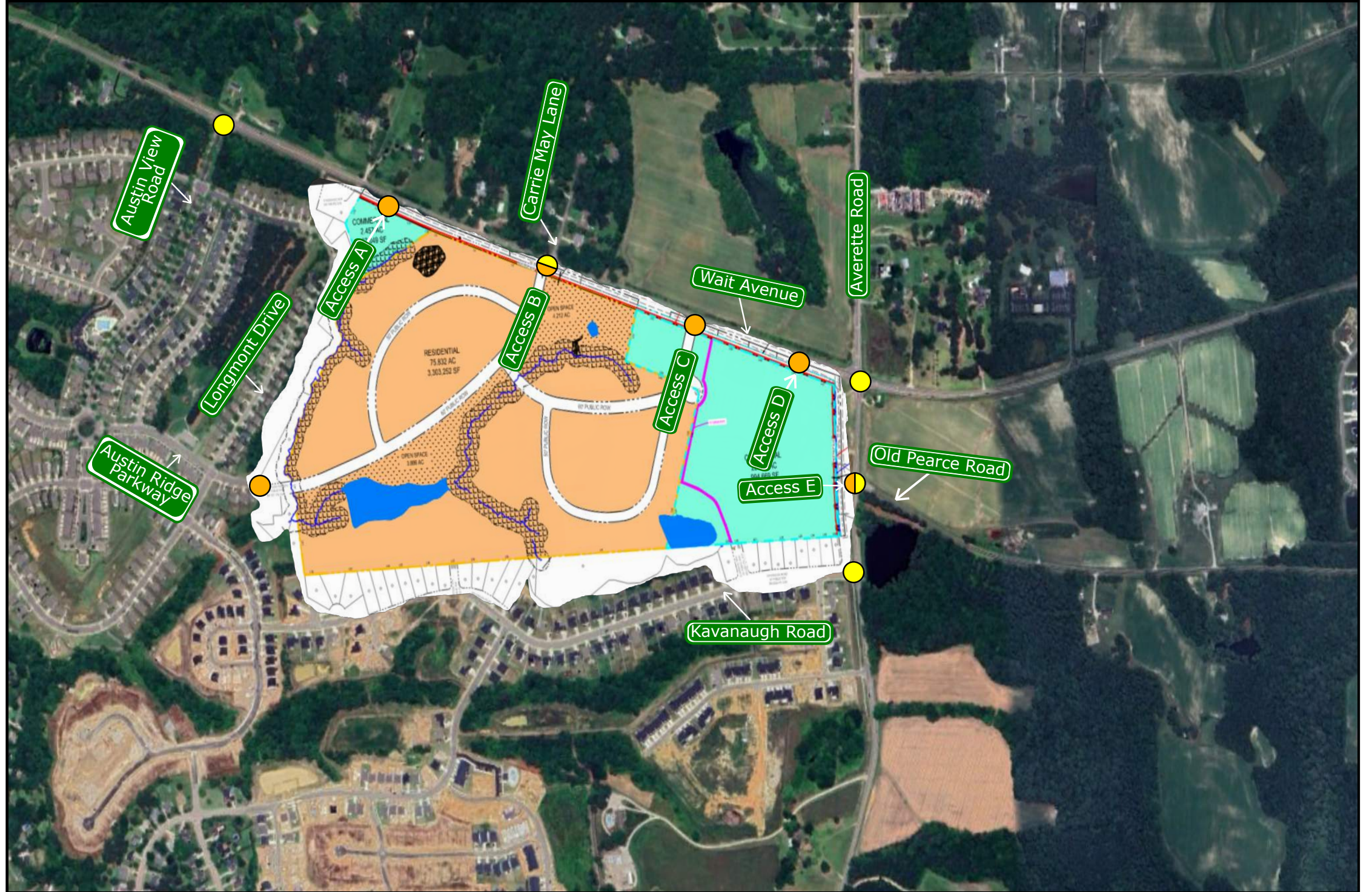
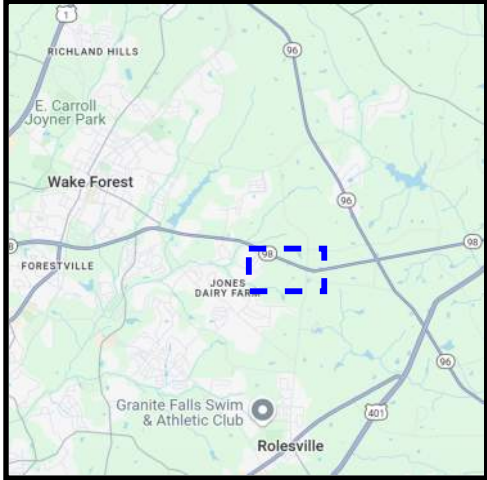
Internal Capture Spreadsheets

Residential Site Trip Distribution

Commercial Site Trip Distribution

Pass-By Site Trip Distribution

Cc: Meredith Gruber (Town of Rolesville)



LEGEND

- Yellow dot: Study Intersection
- Orange dot: Proposed Site Access
- Blue dashed box: Study Area



Wait Avenue Mixed-Use
Rolesville, NC

Site Location Map

Scale: Not to Scale Figure 1

ADJOINING PARCEL INFORMATION					
ID	PIN	OWNER(S)	DB / PG	BM / PG	
AA	1850867237	WAKE ELECTRIC MEMBERSHIP CORP.	8182 / 2604	1998 / 2036	
AB	1850856710	VILLAGES OF AUSTIN CREEK HOMEOWNERS	17277 / 2713	2010 / 527	
AC	1850852022	VILLAGES OF AUSTIN CREEK HOMEOWNERS	17277 / 2713	2010 / 527	
AD	1850841696	VILLAGES OF AUSTIN CREEK HOMEOWNERS	17277 / 2713	2017 / 1040	
AE	1850841551	LENNAR CAROLINAS LLC	15377 / 2089	2023 / 2306	
AF	1850843268	MUNOZ, WELLMAN FRANKLIN; MUNOZ, KRISTEN BRAUN	19407 / 1343	2022 / 575	
AG	1850844370	TRIPP, MICHELE L	19344 / 1384	2022 / 575	
AH	1850845277	BRATLEE-WHITAKER, EMILY; WHITAKER, TYLER	19328 / 555	2022 / 575	
AI	1850846285	BIZIEFF, MICHAEL P; BIZIEFF, VESAL	19508 / 2570	2022 / 574	
AJ	1850847266	BURGOA, CHRISTOPHER	19481 / 1310	2022 / 574	
AK	1850848247	GIBBS, MICHAEL & STEFANI	19509 / 1828	2022 / 574	
AL	1850849227	DEMIAN, JILL & BEVERLY LAVERY	19418 / 975	2022 / 574	
AM	1850940208	HOISETH, BRUCE CAVERLY & MARYELLEN	19366 / 1724	2022 / 574	
AN	1850940289	MONEAL, BERLONDIKA JERTORIA	19342 / 1506	2022 / 574	
AO	1850941279	FAYAD, AKRAM & RANIA	19368 / 2463	2022 / 574	
AP	1850943209	JENSEN, KENT & LINDA	19616 / 1836	2022 / 574	
AQ	1850943299	MILLER, THOMAS W & BARBARA M	19470 / 962	2022 / 574	
AR	1850944298	WINFREE, CRYSTAL ROSE & ANDREW CLAY	19425 / 429	2022 / 574	
AS	1850945275	ORTALS, EDWARD J & EILEEN	19328 / 1628	2022 / 574	
AT	1850946232	BAVISOITTO, DANIELLE M & ERIC N	19699 / 2162	2022 / 574	
AU	1850947236	EXPERIENCEONE HOMES LLC	17509 / 1101	2022 / 574	
AV	1860041295	EXPERIENCEONE HOMES LLC	17509 / 1101	2021 / 122	
AW	1860049264	GIVENS, MICHAEL R & JODY L	19557 / 1264	2021 / 121	
AX	1860141226	BOORADY, ANDRE J; ORTALS, MEREDITH B	19159 / 911	2021 / 1210	
AY	1860142205	PETWAY, MARCUS M & KENA G	19204 / 1027	2021 / 1210	
AZ	1860142285	AUTRY, BETSY SMITH & DAVID EARL	19197 / 530	2021 / 1210	
BA	1860143265	RODICO, PAMELA & JOHN RAINIER	19196 / 2595	2021 / 1210	
BB	1860144245	BARTLETT, BRIANNE; BARTLETT, SALLY & DOUGLAS	19413 / 2008	2022 / 1238	
BC	1860145225	EXPERIENCEONE HOMES LLC	17509 / 1101	2022 / 1238	
BD	1860145294	THOMPEN, APRIL LINDSAY	19736 / 2558	2022 / 1238	
BE	1860146265	EXPERIENCEONE HOMES LLC	17509 / 1101	2021 / 121	

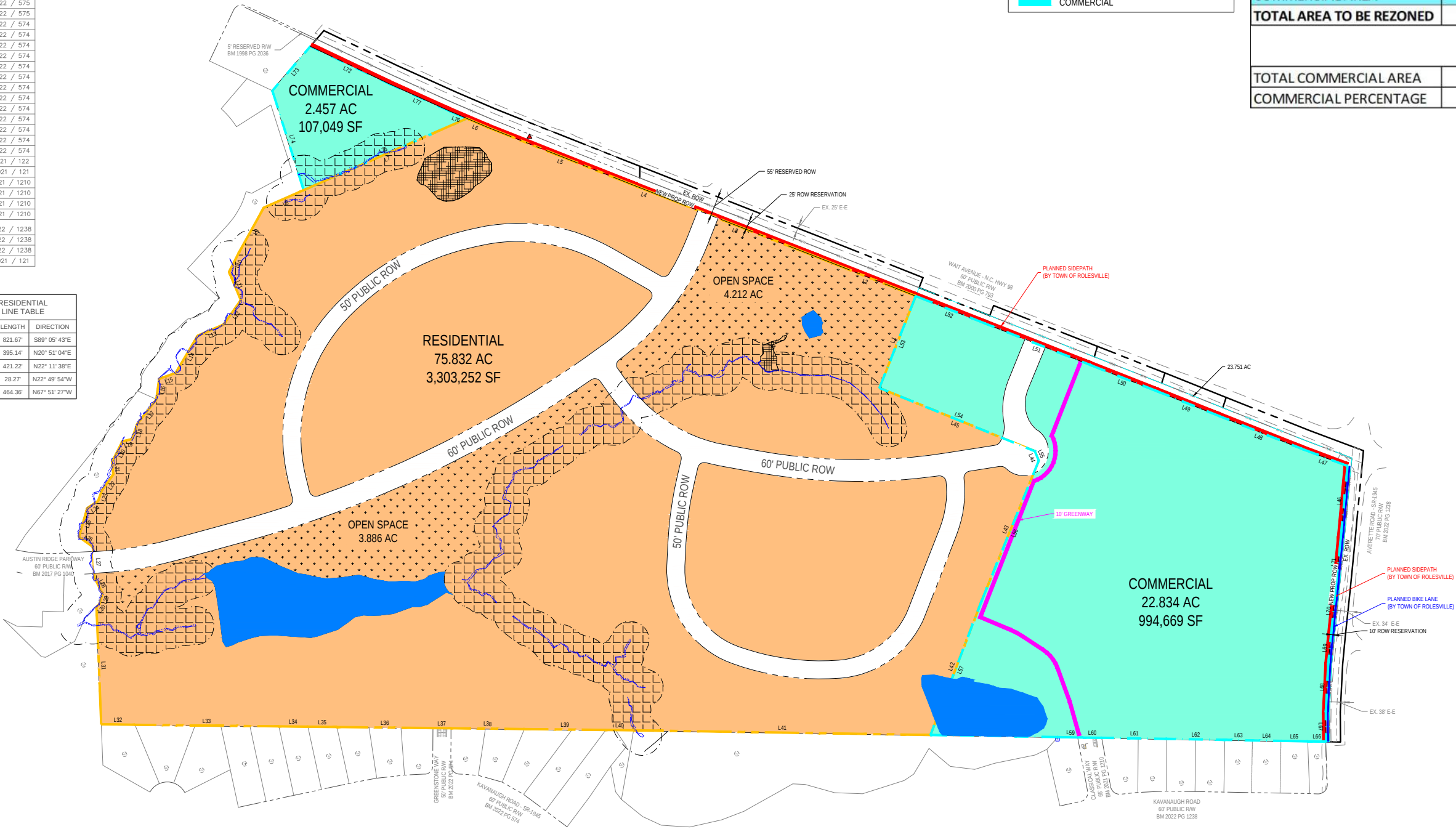
RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	273.29'	N21° 35' 45"E
L2	288.95'	N68° 25' 12"W
L3	485.06'	N68° 36' 29"W
L4	56.53'	N68° 30' 35"W
L5	442.49'	N68° 23' 19"W
L6	62.94'	N66° 45' 05"W
L7	493.27'	S66° 17' 31"W
L8	120.37'	S66° 17' 31"W
L9	139.83'	S29° 02' 26"W
L10	62.39'	S27° 04' 26"W
L11	85.05'	S22° 30' 36"E
L12	82.65'	S35° 17' 49"W
L13	77.79'	S66° 41' 13"W
L14	119.64'	S30° 41' 32"W
L15	48.52'	S70° 24' 48"W
L16	58.77'	S07° 59' 45"W
L17	84.46'	S38° 16' 44"W
L18	44.78'	S19° 10' 58"W
L19	26.68'	S76° 49' 28"W
L20	63.59'	S27° 16' 11"W

RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L21	35.70'	S05° 25' 37"E
L22	53.96'	S35° 40' 08"W
L23	31.53'	S20° 09' 38"W
L24	35.88'	S56° 19' 27"W
L25	82.48'	S15° 56' 39"W
L26	47.18'	S54° 15' 58"E
L27	86.56'	S03° 11' 49"E
L28	47.68'	S27° 21' 06"E
L29	29.73'	S15° 39' 43"W
L30	12.33'	S44° 18' 30"W
L31	325.02'	S02° 18' 54"E
L32	92.70'	S89° 08' 31"E
L33	398.59'	S89° 22' 03"E
L34	80.37'	S89° 22' 03"E
L35	80.29'	S89° 22' 03"E
L36	265.88'	S89° 22' 03"E
L37	50.09'	S89° 29' 05"E
L38	202.94'	S89° 21' 30"E
L39	225.20'	S89° 21' 30"E
L40	77.18'	S89° 21' 30"E

RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L41	821.67'	S89° 05' 43"E
L42	395.14'	N20° 51' 04"E
L43	421.22'	N22° 11' 38"E
L44	28.27'	N22° 49' 54"W
L45	464.36'	N67° 51' 27"W

COMMERCIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L46	196.54'	N05° 20' 11"E
L47	133.48'	N69° 23' 18"W
L48	248.70'	N68° 22' 23"W
L49	182.39'	N68° 12' 44"W
L50	200.40'	N68° 31' 07"W
L51	308.80'	N68° 30' 12"W
L52	210.04'	N68° 26' 44"W
L53	273.29'	S21° 35' 45"W
L54	464.36'	S67° 51' 27"E
L55	28.27'	S22° 49' 54"E
L56	421.22'	S22° 11' 38"W
L57	395.14'	S20° 51' 04"W
L58	353.08'	S89° 03' 29"E
L59	69.22'	S88° 46' 48"E
L60	51.37'	S89° 20' 02"E
L61	180.15'	S89° 03' 25"E
L62	160.72'	S89° 04' 00"E
L63	76.42'	S88° 46' 32"E
L64	79.04'	S89° 02' 22"E
L65	74.04'	S88° 59' 25"E

COMMERCIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L66	50.72'	S88° 59' 26"E
L67	82.97'	N00° 26' 49"W
L68	135.31'	N02° 54' 54"E
L69	80.91'	N05° 27' 34"E
L70	124.62'	N05° 58' 10"E
L71	145.41'	N05° 35' 13"E
L72	241.40'	N64° 34' 13"W
L73	161.80'	S40° 39' 22"W
L74	288.49'	S17° 27' 54"E
L75	493.27'	N66° 17' 31"E
L76	53.36'	N66° 45' 05"W
L77	181.90'	N65° 41' 26"W



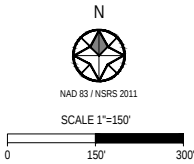
LEGEND:	
	RESIDENTIAL SINGLE FAMILY
	OPEN SPACE
	EXISTING WETLANDS UNDISTURBED
	EXISTING ENVIRONMENTAL UNDISTURBED
	COMMERCIAL

NC RE-ZONED AREAS POST R/W RESERVATION		
RESIDENTIAL AREA	75.832	AC
COMMERCIAL AREA	2.457	AC
COMMERCIAL AREA	22.834	AC
TOTAL AREA TO BE REZONED	101.123	AC
TOTAL COMMERCIAL AREA	25.291	AC
COMMERCIAL PERCENTAGE	25.01%	

REV #	DATE	DESCRIPTION
1	01.31.2025	TOR REZ COMMENTS 1: 01.06.2025

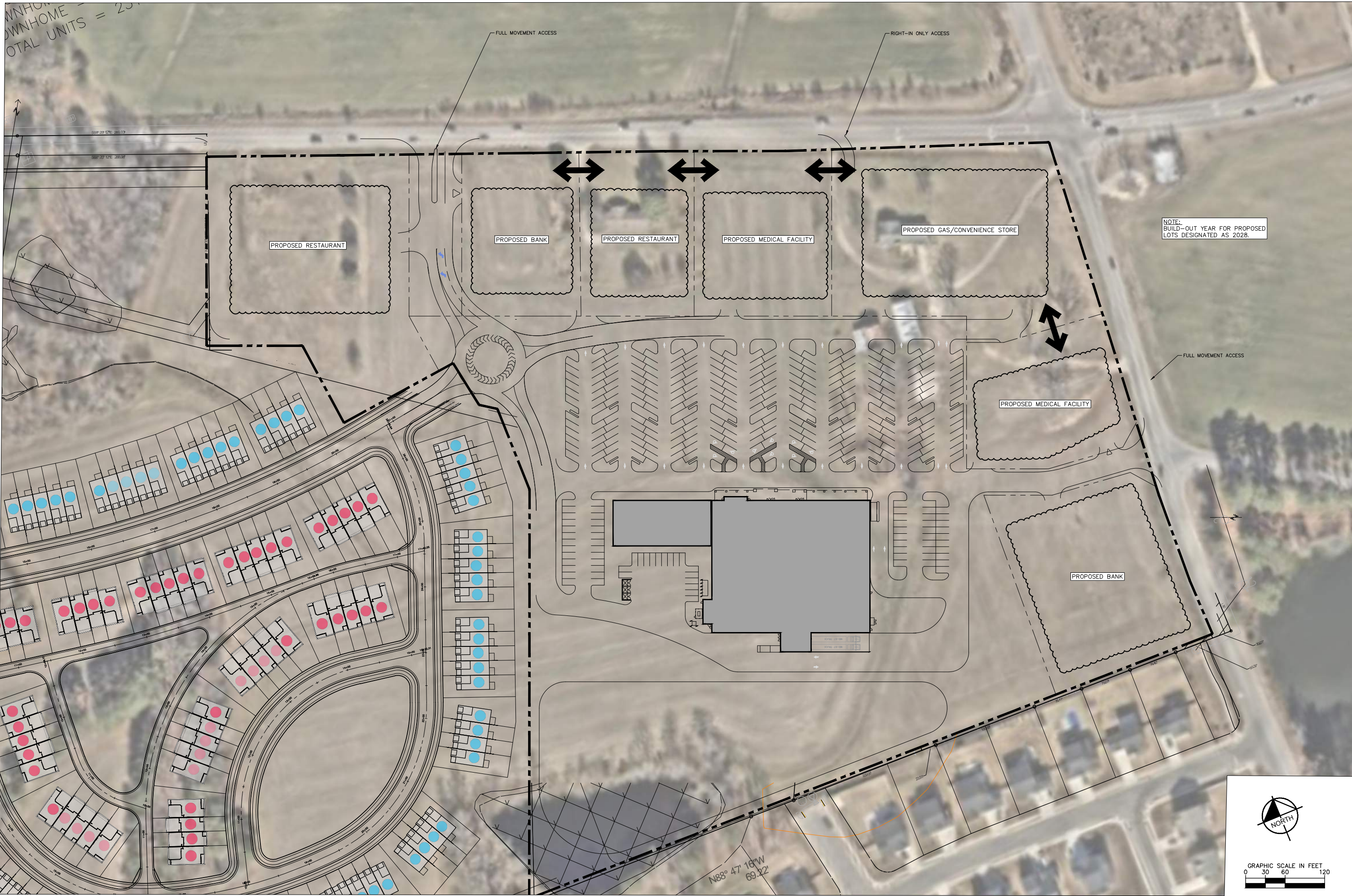
THALES/WAIT AVENUE REZONING EXHIBIT
REZ-24-05

WAKE COUNTY



P:\2024 Projects\240831 Wait_Avenue_Thales-ET\ENGINERING\240831_WAIT_AVE_1208_912E.dwg

OWNHOME
TOTAL UNITS = 25



NOTE:
BUILD-OUT YEAR FOR PROPOSED
LOTS DESIGNATED AS 2028.



GRAPHIC SCALE IN FEET
0 30 60 120

HISTORICAL TRAFFIC GROWTH RATE

Year	Averette Road SR 1945 Station #: 0920001280	Old Pearce Road SR 2055 Station #: 0920000142	Wait Avenue NC 98 Station #: 0920001875	Wait Avenue NC 98 Station #: 0920000521
2011	4600	670	9800	12000
2012				
2013	2700	710		13000
2014				
2015	3,000	900		17000
2016				
2017	3,300			15000
2018				
2019	3,600		12500	17500
2020				15000
2021	3600		6900	18000
2022				
2023		1200	13000	19500
2013-2021	3.66%			
2011-2023		4.98%	2.4%	4.1%

3.8%
Average Growth Rate
between Count Stations

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	REZ-24-05		Organization:	DRMP	
Project Location:	Rolesville, NC		Performed By:	LK	
Scenario Description:			Date:	2/11/2025	
Analysis Year:			Checked By:	AE	
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				0		
Retail	821/945	84.6k/5k	SF, SF	582	326	256
Restaurant				0		
Cinema/Entertainment				0		
Residential	210	300	DU	202	51	151
Hotel				0		
All Other Land Uses ²	151	107k	SF	10	6	4
				794	383	411

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		0	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	874	422	452
Internal Capture Percentage	1%	1%	1%
External Vehicle-Trips ⁵	789	381	408
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	N/A	N/A
Retail	1%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	1%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual* , published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter 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.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-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:	REZ-24-05
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.	Person-Trips*
Office	1.10	0	0		1.10	0
Retail	1.10	326	359		1.10	282
Restaurant	1.10	0	0		1.10	0
Cinema/Entertainment	1.10	0	0		1.10	0
Residential	1.10	51	56		1.10	166
Hotel	1.10	0	0		1.10	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		0	0	0	0	0
Retail	82		37	0	39	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	2	33	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		115	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	29		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	61	0	0		0
Hotel	0	14	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	Non-Motorized ²
Office	0	0	0		0	0
Retail	2	357	359		325	0
Restaurant	0	0	0		0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	55	56		50	0
Hotel	0	0	0		0	0
All Other Land Uses ³	0	7	7		6	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	Non-Motorized ²
Office	0	0	0		0	0
Retail	1	281	282		255	0
Restaurant	0	0	0		0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	164	166		149	0
Hotel	0	0	0		0	0
All Other Land Uses ³	0	4	4		4	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:	REZ-24-05		Organization:	DRMP	
Project Location:	Rolesville, NC		Performed By:	LK	
Scenario Description:			Date:	2/11/2025	
Analysis Year:			Checked By:	AE	
Analysis Period:	PM Street Peak Hour		Date:		

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (<i>For Information Only</i>)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	821/945	84.6k/5k	SF, SF	1,041	505	536
Restaurant				0		
Cinema/Entertainment				0		
Residential	210	300	DU	279	176	103
Hotel				0		
All Other Land Uses ²	151	107k	SF	16	8	8
				1,336	689	647

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		2000	2000		2000	
Retail					2000	
Restaurant					2000	
Cinema/Entertainment					2000	
Residential		2000	2000			
Hotel					2000	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	89	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	15	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,471	759	712
Internal Capture Percentage	14%	14%	15%
External Vehicle-Trips ⁵	1,147	595	552
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	N/A	N/A
Retail	3%	15%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	46%	13%
Hotel	N/A	N/A

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , 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 <i>Trip Generation Manual</i>).
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:	REZ-24-05
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.	Person-Trips*
Office	1.10	0	0		1.10	0
Retail	1.10	505	556		1.10	590
Restaurant	1.10	0	0		1.10	0
Cinema/Entertainment	1.10	0	0		1.10	0
Residential	1.10	176	194		1.10	113
Hotel	1.10	0	0		1.10	0

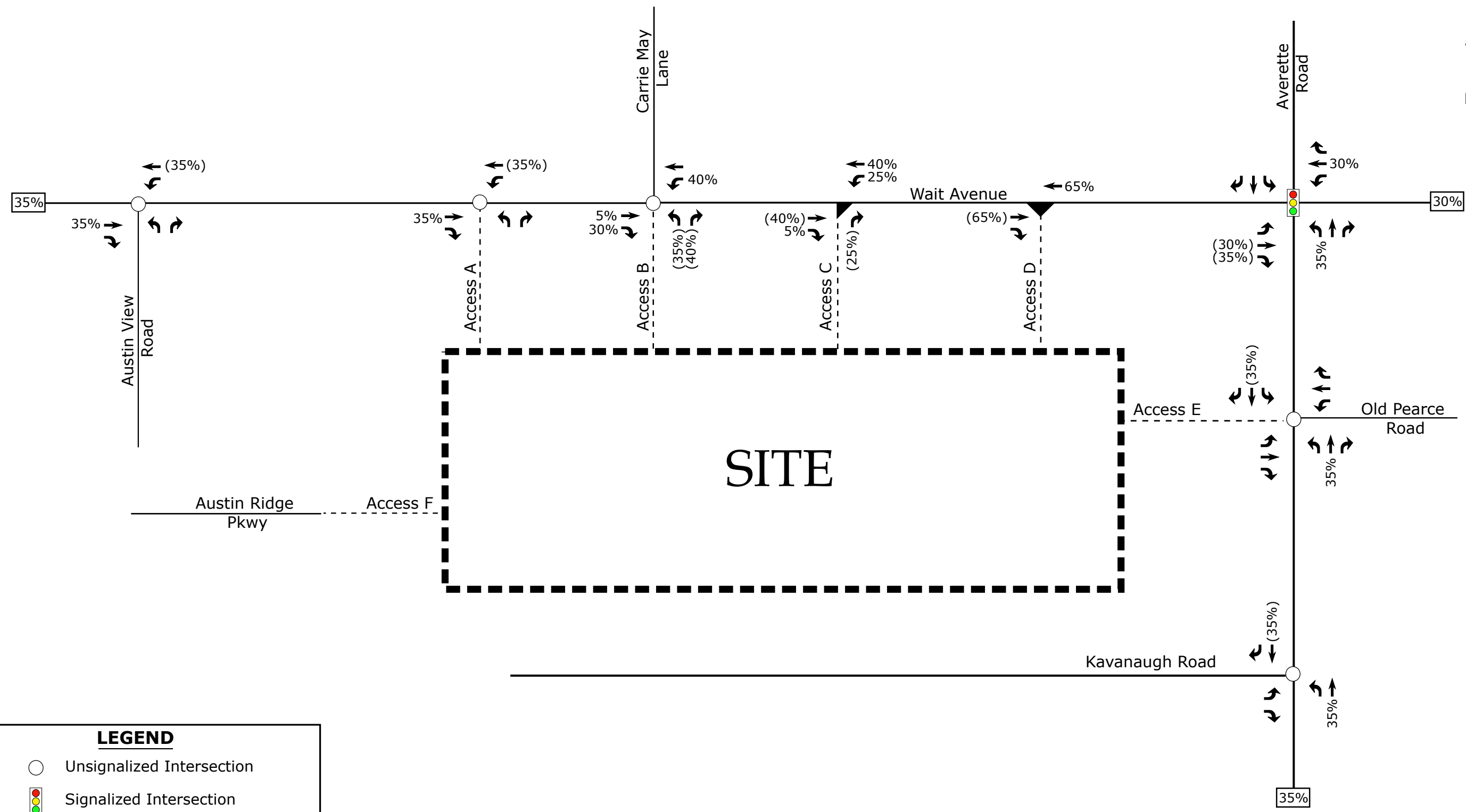
Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	12		171	24	97	30
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	15	8	0		3
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		14	0	0	8	0
Retail	0		0	0	89	0
Restaurant	0	278		0	31	0
Cinema/Entertainment	0	22	0		8	0
Residential	0	18	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	Non-Motorized ²
Office	0	0	0		0	0
Retail	15	541	556		492	0
Restaurant	0	0	0		0	0
Cinema/Entertainment	0	0	0		0	0
Residential	89	105	194		95	0
Hotel	0	0	0		0	0
All Other Land Uses ³	0	9	9		8	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	Non-Motorized ²
Office	0	0	0		0	0
Retail	89	501	590		455	0
Restaurant	0	0	0		0	0
Cinema/Entertainment	0	0	0		0	0
Residential	15	98	113		89	0
Hotel	0	0	0		0	0
All Other Land Uses ³	0	9	9		8	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.



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% ➡ Entering Trip Distribution
- (y%) ➡ Exiting Trip Distribution
- XX% Regional Trip Distribution

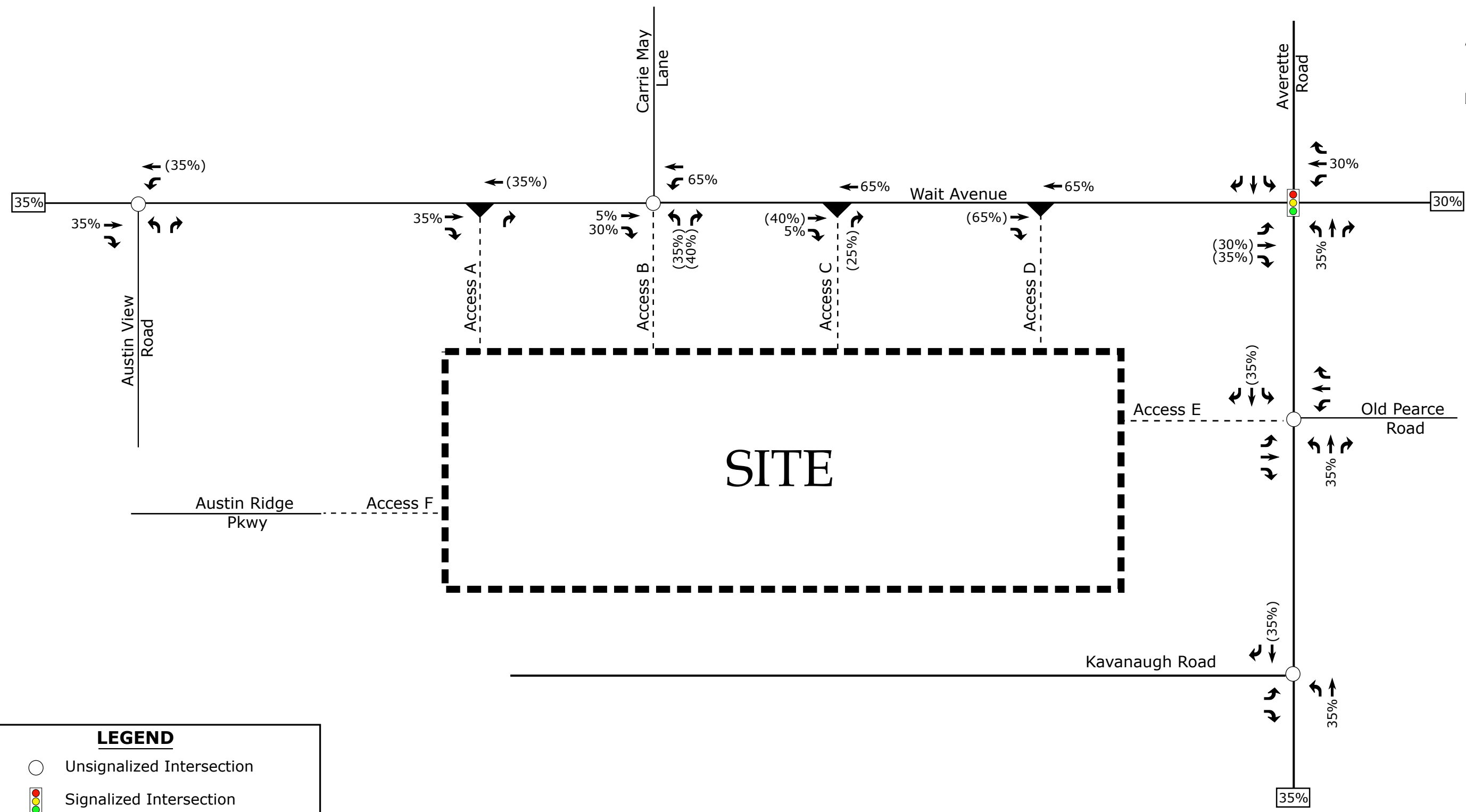
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Residential Site
Trip Distribution
Scenario-1

Scale: Not to Scale



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% ➡ Entering Trip Distribution
- (y%) ➡ Exiting Trip Distribution
- XX% Regional Trip Distribution

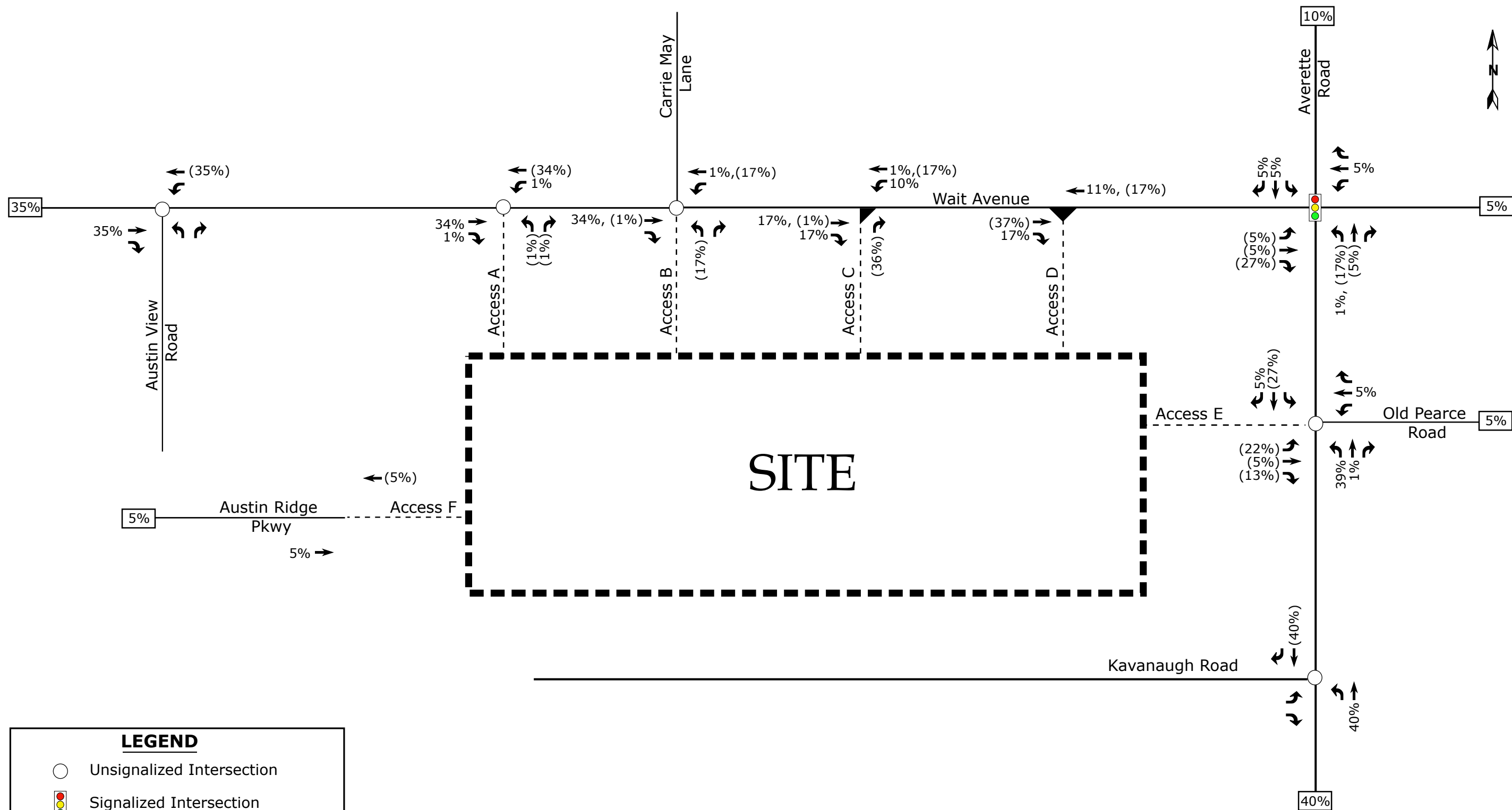
Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point



Wait Avenue Mixed-Use
Rolesville, NC

Residential Site
Trip Distribution
Scenario-2

Scale: Not to Scale



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% ➡ Entering Trip Distribution
- (y%) ➡ Exiting Trip Distribution
- XX% Regional Trip Distribution

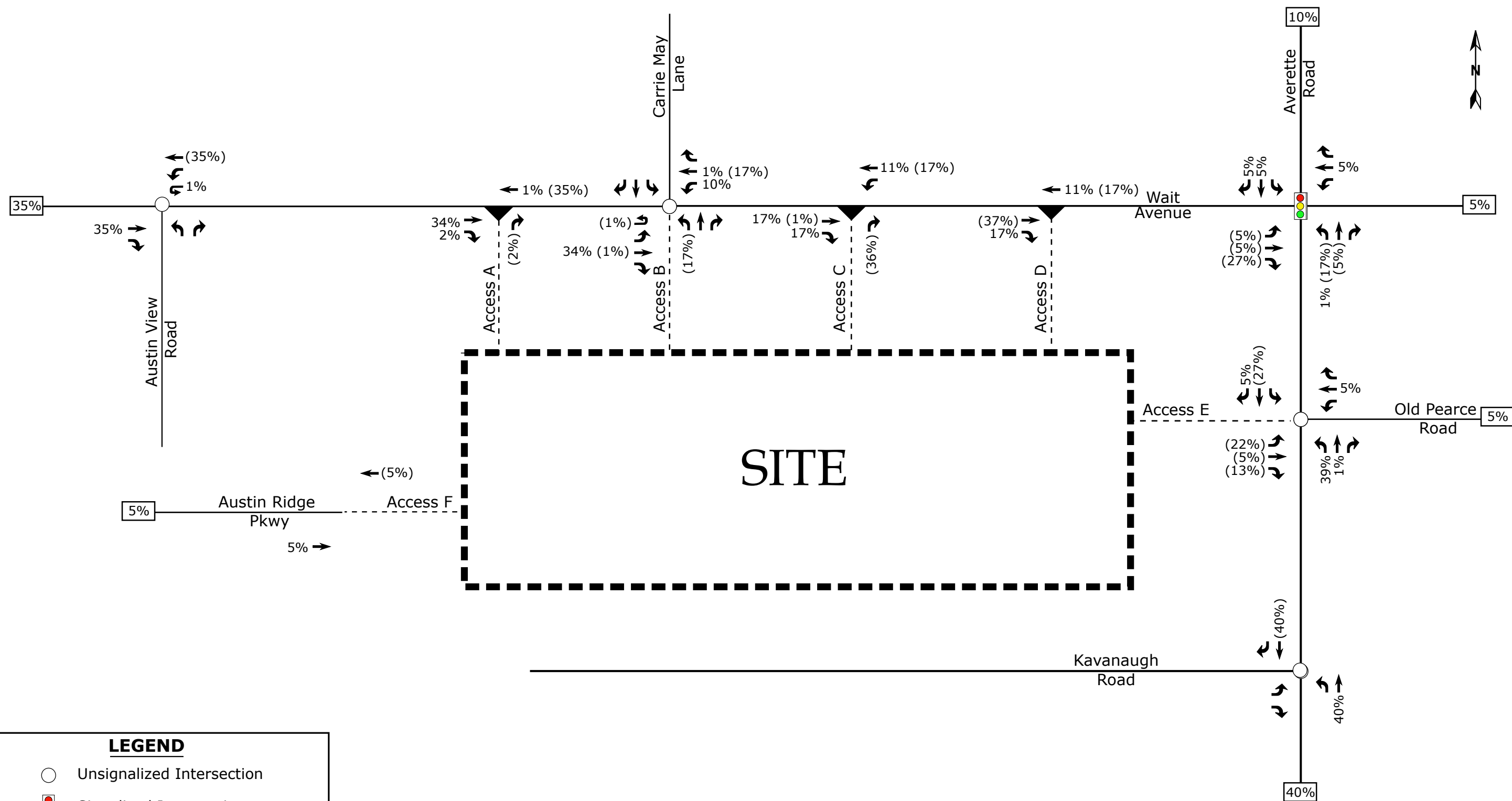
Note: Under Scenario 1, Access A will be considered a full-movement driveway.



Wait Avenue Mixed-Use
Rolesville, NC

Commercial Site
Trip Distribution
Scenario-1

Scale: Not to Scale

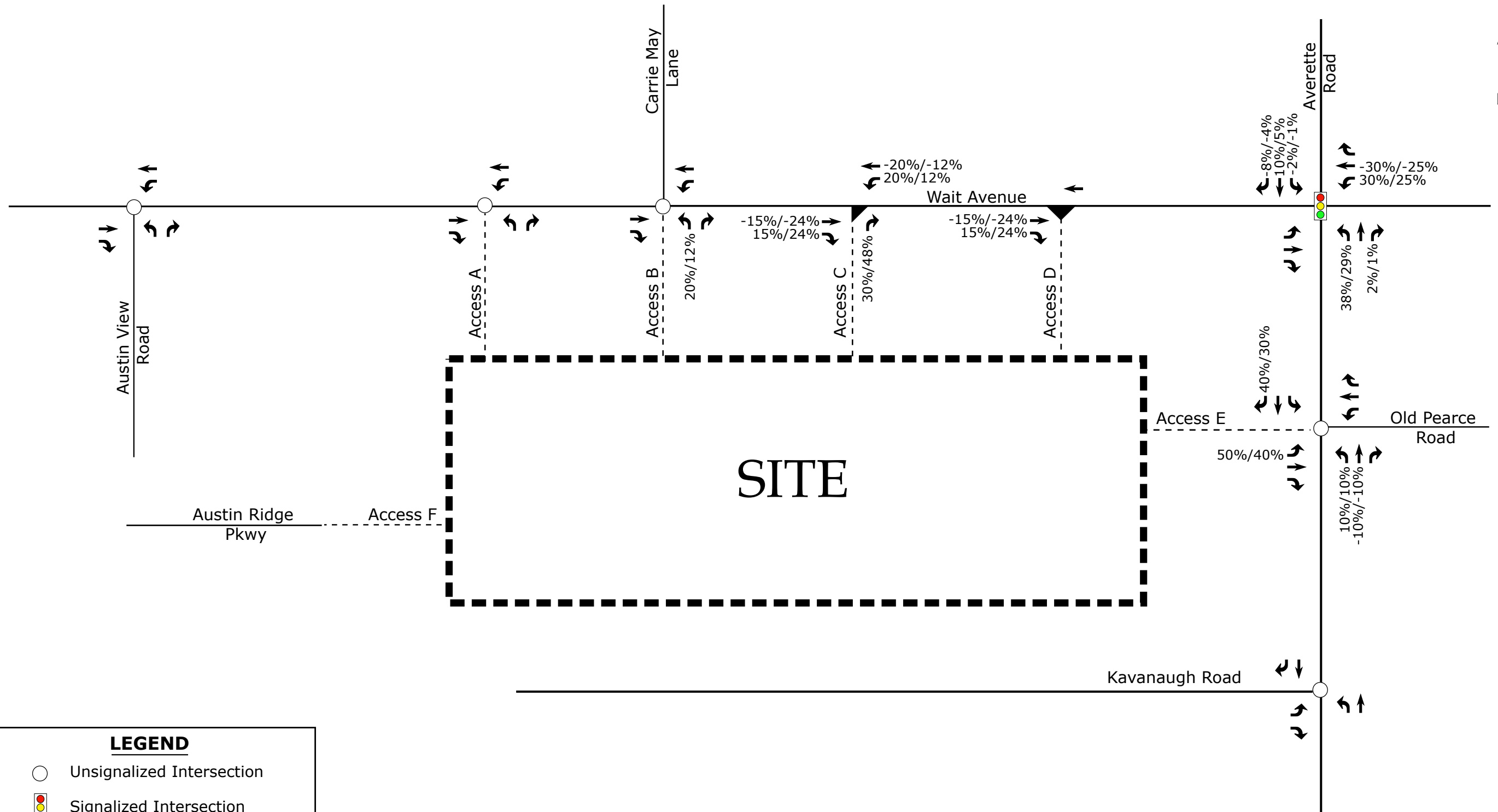


LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point

	Wait Avenue Mixed-Use Rolesville, NC	Commercial Site Trip Distribution Scenario-2	
		Scale: Not to Scale	



LEGEND

- Unsignalized Intersection
- Signalized Intersection
- Right-In/Right-Out Intersection
- Left-Over Intersection
- X% / Y% → Weekday AM / PM Pass-By Trip Distribution



Wait Avenue Mixed-Use
Rolesville, NC

Pass-By Site
Trip Distribution

Scale: Not to Scale

APPENDIX B

TRAFFIC COUNTS

National Data & Surveying Services

Intersection Turning Movement Count

Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(NB)

Project ID: 25-160032-001
Date: 5/7/2025

Data - Total

NS/EW Streets:	Austin View Blvd				Austin View Blvd				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	28	0	6	0	0	0	0	0	0	129	5	0	0	233	0	0	401
7:15 AM	13	0	10	0	0	0	0	0	0	133	7	0	0	262	0	0	425
7:30 AM	11	0	10	1	0	0	0	0	0	142	11	0	3	252	0	0	430
7:45 AM	10	0	6	0	0	0	0	0	0	129	8	0	6	224	0	0	353
8:00 AM	9	0	11	0	0	0	0	0	0	110	4	0	7	186	0	0	327
8:15 AM	15	0	6	0	0	0	0	0	0	108	9	0	2	188	0	0	328
8:30 AM	14	0	11	0	0	0	0	0	0	110	10	0	4	214	0	0	363
8:45 AM	13	0	4	0	0	0	0	0	0	115	6	0	3	223	0	0	364
TOTAL VOLUMES :	113	0	64	1	0	0	0	0	0	976	60	0	25	1782	0	0	3021
APPROACH %'s :	63.48%	0.00%	35.96%	0.56%					0.00%	94.21%	5.79%	0.00%	1.38%	98.62%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	62	0	32	1	0	0	0	0	0	533	31	0	9	971	0	0	1639
PEAK HR FACTOR :	0.554	0.000	0.800	0.250	0.000	0.000	0.000	0.000	0.000	0.938	0.705	0.000	0.375	0.927	0.000	0.000	0.953
											0.922					0.935	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	10	0	5	0	0	0	0	0	0	197	18	0	13	127	0	0	370
4:15 PM	8	0	1	0	0	0	0	0	0	210	20	0	7	143	0	0	389
4:30 PM	12	0	3	0	0	0	0	0	0	191	15	0	9	162	0	0	392
4:45 PM	7	0	6	1	0	0	0	0	0	229	10	0	6	153	0	0	412
5:00 PM	12	0	5	0	0	0	0	0	0	199	18	0	8	153	0	0	395
5:15 PM	11	0	11	0	0	0	0	0	0	234	16	0	7	189	0	0	468
5:30 PM	5	0	4	1	0	0	0	0	0	179	20	0	5	159	0	0	373
5:45 PM	5	0	10	0	0	0	0	0	0	195	20	0	9	142	0	0	381
TOTAL VOLUMES :	70	0	45	2	0	0	0	0	0	1634	137	0	64	1228	0	0	3180
APPROACH %'s :	59.83%	0.00%	38.46%	1.71%					0.00%	92.26%	7.74%	0.00%	4.95%	95.05%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	42	0	25	1	0	0	0	0	0	853	59	0	30	657	0	0	1667
PEAK HR FACTOR :	0.875	0.000	0.568	0.250	0.000	0.000	0.000	0.000	0.000	0.911	0.819	0.000	0.833	0.869	0.000	0.000	0.890
											0.912					0.876	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(NB)

Project ID: 25-160032-001
Date: 5/7/2025

Data - Cars

NS/EW Streets:	Austin View Blvd				Austin View Blvd				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	28	0	6	0	0	0	0	0	0	124	5	0	0	227	0	0	390
7:15 AM	13	0	10	0	0	0	0	0	0	128	6	0	0	249	0	0	406
7:30 AM	10	0	10	1	0	0	0	0	0	134	11	0	3	245	0	0	414
7:45 AM	10	0	5	0	0	0	0	0	0	122	7	0	5	220	0	0	369
8:00 AM	9	0	10	0	0	0	0	0	0	103	3	0	7	178	0	0	310
8:15 AM	15	0	6	0	0	0	0	0	0	103	9	0	2	186	0	0	321
8:30 AM	14	0	11	0	0	0	0	0	0	108	10	0	3	207	0	0	353
8:45 AM	12	0	4	0	0	0	0	0	0	112	6	0	1	214	0	0	349
TOTAL VOLUMES :	111	0	62	1	0	0	0	0	0	934	57	0	21	1726	0	0	2912
APPROACH %'s :	63.79%	0.00%	35.63%	0.57%					0.00%	94.25%	5.75%	0.00%	1.20%	98.80%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	61	0	31	1	0	0	0	0	0	508	29	0	8	941	0	0	1579
PEAK HR FACTOR :	0.545	0.000	0.775	0.250	0.000	0.000	0.000	0.000	0.000	0.948	0.659	0.000	0.400	0.945	0.000	0.000	0.954
			0.684							0.926				0.953			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	1 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	10	0	4	0	0	0	0	0	0	191	16	0	13	120	0	0	354
4:15 PM	7	0	0	0	0	0	0	0	0	204	20	0	7	141	0	0	379
4:30 PM	10	0	3	0	0	0	0	0	0	184	15	0	9	160	0	0	381
4:45 PM	7	0	6	1	0	0	0	0	0	224	10	0	6	151	0	0	405
5:00 PM	11	0	5	0	0	0	0	0	0	194	18	0	7	148	0	0	383
5:15 PM	11	0	11	0	0	0	0	0	0	231	16	0	7	185	0	0	461
5:30 PM	5	0	4	1	0	0	0	0	0	175	20	0	4	157	0	0	366
5:45 PM	5	0	10	0	0	0	0	0	0	184	20	0	9	142	0	0	370
TOTAL VOLUMES :	66	0	43	2	0	0	0	0	0	1587	135	0	62	1204	0	0	3099
APPROACH %'s :	59.46%	0.00%	38.74%	1.80%					0.00%	92.16%	7.84%	0.00%	4.90%	95.10%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	39	0	25	1	0	0	0	0	0	833	59	0	29	644	0	0	1630
PEAK HR FACTOR :	0.886	0.000	0.568	0.250	0.000	0.000	0.000	0.000	0.000	0.902	0.819	0.000	0.806	0.870	0.000	0.000	0.884
			0.739							0.903				0.876			

NS/EW Streets:		Austin View Blvd				Austin View Blvd				Wait Ave/SR 98				Wait Ave/SR 98					
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
		0	1	0	0	0	0	0	0	0	1	1	0	0					
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	7:00 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	6	0	0	11
	7:15 AM	0	0	0	0	0	0	0	0	0	5	1	0	0	0	13	0	0	19
7:30 AM	1	0	0	0	0	0	0	0	0	8	0	0	0	0	7	0	0	16	
7:45 AM	0	0	1	0	0	0	0	0	0	7	1	0	0	1	4	0	0	14	
8:00 AM	0	0	1	0	0	0	0	0	0	7	1	0	0	0	8	0	0	17	
8:15 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	7	
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	7	0	0	10	
8:45 AM	1	0	0	0	0	0	0	0	0	3	0	0	0	2	9	0	0	15	
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :		50.00%	0.00%	50.00%	0.00%	0	0	0	0	0	42	3	0	0	4	56	0	0	109
PEAK HR :		07:00 AM - 08:00 AM								0.00%	93.33%	6.67%	0.00%	6.67%	93.33%	0.00%	0.00%	TOTAL	
PEAK HR VOL :		1	0	1	0	0	0	0	0	0	25	2	0	1	30	0	0	60	
PEAK HR FACTOR :		0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.781	0.500	0.000	0.250	0.577	0.000	0.000	0.789	
		0.500								0.844				0.596					
PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
		0	1	0	0	0	0	0	0	0	1	1	0	0					
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	4:00 PM	0	0	0	0	0	0	0	0	0	6	2	0	0	0	7	0	0	16
	4:15 PM	1	0	1	0	0	0	0	0	0	6	0	0	0	0	2	0	0	10
	4:30 PM	2	0	0	0	0	0	0	0	0	7	0	0	0	2	7	0	0	11
	4:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	7
	5:00 PM	1	0	0	0	0	0	0	0	0	5	0	0	0	1	5	0	0	12
	5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4	0	0	7
	5:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	2	0	0	7
	5:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	11
	TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :		66.67%	0.00%	33.33%	0.00%	0	0	0	0	0	47	2	0	2	24	0	0	81	
PEAK HR :		04:30 PM - 05:30 PM								0.00%	95.92%	4.08%	0.00%	7.69%	92.31%	0.00%	0.00%	TOTAL	
PEAK HR VOL :		3	0	0	0	0	0	0	0	0	20	0	0	1	13	0	0	37	
PEAK HR FACTOR :		0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.714	0.000	0.000	0.250	0.650	0.000	0.000	0.771	
		0.375								0.714				0.583					

Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(NB)

Data - Bikes

NS/EW Streets:		Austin View Blvd				Austin View Blvd				Wait Ave/SR 98				Wait Ave/SR 98				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :		NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 0
PEAK HR :		07:00 AM - 08:00 AM				0				0				0				TOTAL 0
PEAK HR VOL :		0				0				0				0				
PEAK HR FACTOR :		0.000				0.000				0.000				0.000				

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :		NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 0
PEAK HR :		04:30 PM - 05:30 PM				0				0				0				TOTAL 0
PEAK HR VOL :		0				0				0				0				
PEAK HR FACTOR :		0.000				0.000				0.000				0.000				

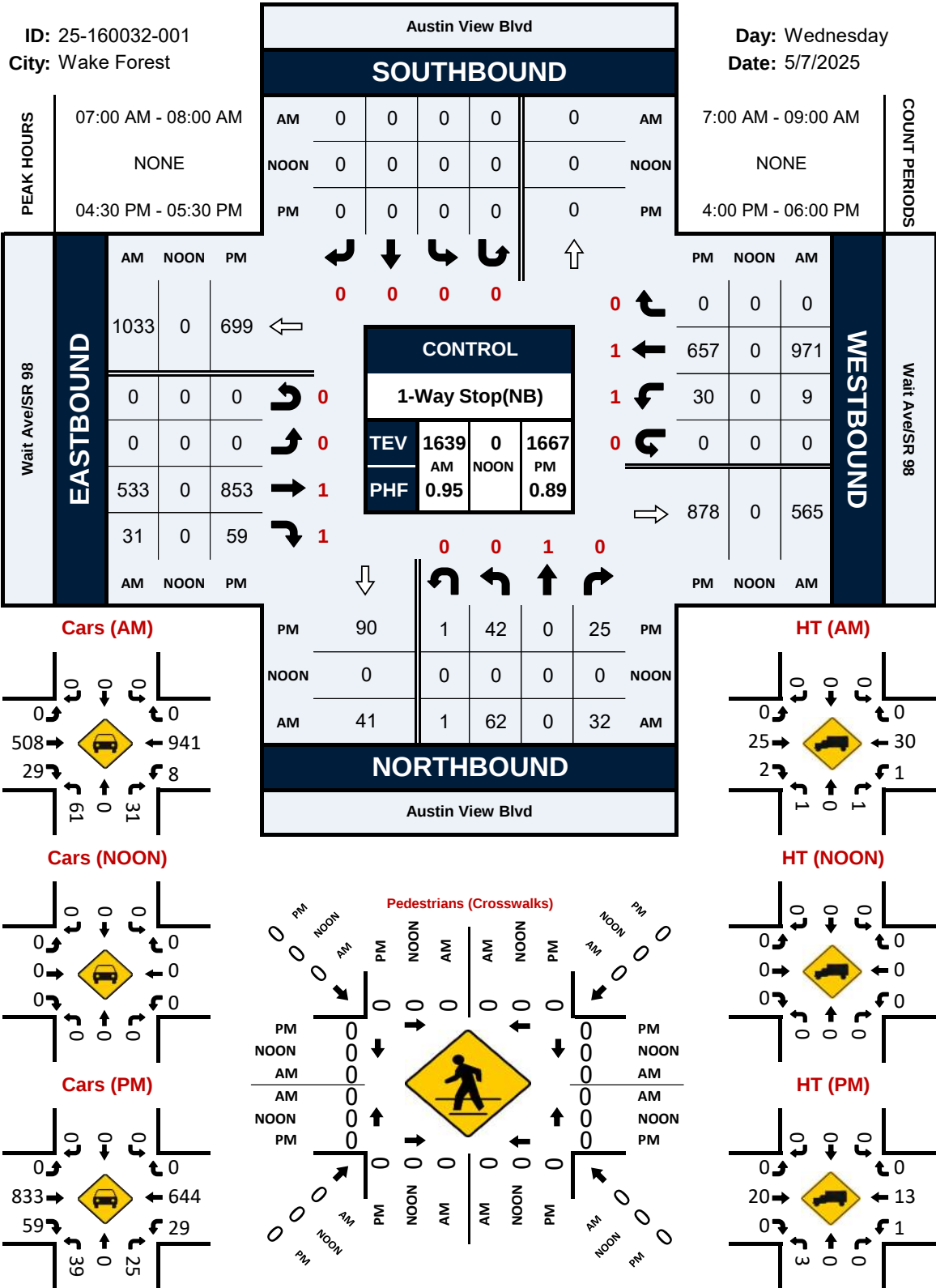
Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest

Data - Pedestrians (Crosswalks)

[illegible]

Austin View Blvd & Wait Ave/SR 98

Peak Hour Turning Movement Count



Project ID: 25-160032-001
Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest

Day: Wednesday
Date: 5/7/2025

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Austin View Blvd Northbound						Austin View Blvd Southbound						Wait Ave/SR 98 Eastbound						Wait Ave/SR 98 Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	28	0	6	0	0	34	0	0	0	0	0	0	0	129	5	0	0	134	0	233	0	0	0	233	401
7:15 AM	13	0	10	0	0	23	0	0	0	0	0	0	0	133	7	0	0	140	0	262	0	0	0	262	425
7:30 AM	11	0	10	1	0	22	0	0	0	0	0	0	0	142	11	0	0	153	3	252	0	0	0	255	430
7:45 AM	10	0	6	0	0	16	0	0	0	0	0	0	0	129	8	0	0	137	6	224	0	0	0	230	383
Total	62	0	32	1	0	95	0	0	0	0	0	0	0	533	31	0	0	564	9	971	0	0	0	980	1639
8:00 AM	9	0	11	0	0	20	0	0	0	0	0	0	0	110	4	0	0	114	7	186	0	0	0	193	327
8:15 AM	15	0	6	0	0	21	0	0	0	0	0	0	0	108	9	0	0	117	2	188	0	0	0	190	328
8:30 AM	14	0	11	0	0	25	0	0	0	0	0	0	0	110	10	0	0	120	4	214	0	0	0	218	363
8:45 AM	13	0	4	0	0	17	0	0	0	0	0	0	0	115	6	0	0	121	3	223	0	0	0	226	364
Total	51	0	32	0	0	83	0	0	0	0	0	0	0	443	29	0	0	472	16	811	0	0	0	827	1382
BREAK																									
4:00 PM	10	0	5	0	0	15	0	0	0	0	0	0	0	197	18	0	0	215	13	127	0	0	0	140	370
4:15 PM	8	0	1	0	0	9	0	0	0	0	0	0	0	210	20	0	0	230	7	143	0	0	0	150	389
4:30 PM	12	0	3	0	0	15	0	0	0	0	0	0	0	191	15	0	0	206	9	162	0	0	0	171	392
4:45 PM	7	0	6	1	0	14	0	0	0	0	0	0	0	229	10	0	0	239	6	153	0	0	0	159	412
Total	37	0	15	1	0	53	0	0	0	0	0	0	0	827	63	0	0	890	35	585	0	0	0	620	1563
5:00 PM	12	0	5	0	0	17	0	0	0	0	0	0	0	199	18	0	0	217	8	153	0	0	0	161	395
5:15 PM	11	0	11	0	0	22	0	0	0	0	0	0	0	234	16	0	0	250	7	189	0	0	0	196	468
5:30 PM	5	0	4	1	0	10	0	0	0	0	0	0	0	179	20	0	0	199	5	159	0	0	0	164	373
5:45 PM	5	0	10	0	0	15	0	0	0	0	0	0	0	195	20	0	0	215	9	142	0	0	0	151	381
Total	33	0	30	1	0	64	0	0	0	0	0	0	0	807	74	0	0	881	29	643	0	0	0	672	1617
Grand Total	183	0	109	3	0	295	0	0	0	0	0	0	0	2610	197	0	0	2807	89	3010	0	0	0	3099	6201
Apprch %	62.0	0.0	36.9	1.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	93.0	7.0	0.0	0.0		2.9	97.1	0.0	0.0	0.0		
Total %	3.0	0.0	1.8	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.1	3.2	0.0	0.0	45.3	1.4	48.5	0.0	0.0	0.0	50.0	
Cars, PU, Vans	177	0	105	3		285	0	0	0	0		0	0	2521	192	0		2713	83	2930	0	0		3013	6011
% Cars, PU, Vans	96.7	0.0	96.3	100.0		96.6	0.0	0.0	0.0	0.0		0.0	0.0	96.6	97.5	0.0		96.7	93.3	97.3	0.0	0.0		97.2	96.9
Heavy trucks	6	0	4	0		10	0	0	0	0		0	0	89	5	0		94	6	80	0	0		86	190
%Heavy trucks	3.3	0.0	3.7	0.0		3.4	0.0	0.0	0.0	0.0		0.0	0.0	3.4	2.5	0.0		3.3	6.7	2.7	0.0	0.0		2.8	3.1

National Data & Surveying Services

Intersection Turning Movement Count

Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(SB)

Project ID: 25-160032-002
Date: 5/7/2025

Data - Total

NS/EW Streets:	Carrie May Ln				Carrie May Ln				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	1	0	0	124	0	0	0	229	1	0	355
7:15 AM	0	0	0	0	0	0	2	0	1	141	0	0	0	272	1	0	417
7:30 AM	0	0	0	0	0	0	0	0	0	164	0	0	0	243	0	0	407
7:45 AM	0	0	0	0	1	0	0	0	0	136	0	0	0	229	0	0	366
8:00 AM	0	0	0	0	0	0	0	0	0	116	0	0	0	202	0	0	318
8:15 AM	0	0	0	0	1	0	1	0	0	119	0	0	0	187	0	0	308
8:30 AM	0	0	0	0	0	0	0	0	0	120	0	0	0	217	0	0	337
8:45 AM	0	0	0	0	1	0	1	0	0	109	0	0	0	222	1	0	334
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	3	0	5	0	1	1029	0	0	0	1801	3	0	2842
PEAK HR :	07:00 AM - 08:00 AM				37.50%	0.00%	62.50%	0.00%	0.10%	99.90%	0.00%	0.00%	0.00%	99.83%	0.17%	0.00%	
PEAK HR VOL :	0	0	0	0	1	0	3	0	1	565	0	0	0	973	2	0	1545
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.250	0.861	0.000	0.000	0.000	0.894	0.500	0.000	0.926
						0.500				0.863				0.893			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	199	0	0	0	144	0	0	343
4:15 PM	0	0	0	0	1	0	0	0	0	217	0	0	0	154	0	0	372
4:30 PM	0	0	0	0	1	0	0	0	2	196	0	0	0	167	0	0	366
4:45 PM	0	0	0	0	2	0	2	0	1	235	0	0	0	163	0	0	403
5:00 PM	0	0	0	0	0	0	1	0	0	193	0	0	0	159	0	0	353
5:15 PM	0	0	0	0	1	0	0	0	0	243	0	0	0	192	1	0	437
5:30 PM	0	0	0	0	0	0	2	0	2	184	0	0	0	156	0	0	344
5:45 PM	0	0	0	0	2	0	0	0	1	198	0	0	0	155	2	0	358
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	7	0	5	0	6	1665	0	0	0	1290	3	0	2976
PEAK HR :	04:30 PM - 05:30 PM				58.33%	0.00%	41.67%	0.00%	0.36%	99.64%	0.00%	0.00%	0.00%	99.77%	0.23%	0.00%	
PEAK HR VOL :	0	0	0	0	4	0	3	0	3	867	0	0	0	681	1	0	1559
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.375	0.000	0.375	0.892	0.000	0.000	0.000	0.887	0.250	0.000	0.892
						0.438				0.895				0.883			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(SB)

Project ID: 25-160032-002
Date: 5/7/2025

Data - Cars

NS/EW Streets:	Carrie May Ln				Carrie May Ln				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	1	0	0	119	0	0	0	222	1	0	343
7:15 AM	0	0	0	0	0	0	2	0	1	137	0	0	0	261	1	0	402
7:30 AM	0	0	0	0	0	0	0	0	0	155	0	0	0	236	0	0	391
7:45 AM	0	0	0	0	1	0	0	0	0	128	0	0	0	225	0	0	354
8:00 AM	0	0	0	0	0	0	0	0	0	109	0	0	0	191	0	0	300
8:15 AM	0	0	0	0	1	0	1	0	0	113	0	0	0	183	0	0	298
8:30 AM	0	0	0	0	0	0	0	0	0	118	0	0	0	209	0	0	327
8:45 AM	0	0	0	0	1	0	1	0	0	105	0	0	0	212	1	0	320
TOTAL VOLUMES :	0	0	0	0	3	0	5	0	1	984	0	0	0	1739	3	0	2735
APPROACH %'s :					37.50%	0.00%	62.50%	0.00%	0.10%	99.90%	0.00%	0.00%	0.00%	99.83%	0.17%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	3	0	1	539	0	0	0	944	2	0	1490
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.250	0.869	0.000	0.000	0.000	0.904	0.500	0.000	0.927
						0.500				0.871				0.903			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	192	0	0	0	139	0	0	331
4:15 PM	0	0	0	0	1	0	0	0	0	210	0	0	0	152	0	0	363
4:30 PM	0	0	0	0	1	0	0	0	2	189	0	0	0	163	0	0	355
4:45 PM	0	0	0	0	2	0	2	0	1	230	0	0	0	161	0	0	396
5:00 PM	0	0	0	0	0	0	1	0	0	190	0	0	0	154	0	0	345
5:15 PM	0	0	0	0	1	0	0	0	0	239	0	0	0	188	1	0	429
5:30 PM	0	0	0	0	0	0	2	0	2	181	0	0	0	153	0	0	338
5:45 PM	0	0	0	0	2	0	0	0	1	186	0	0	0	155	2	0	346
TOTAL VOLUMES :	0	0	0	0	7	0	5	0	6	1617	0	0	0	1265	3	0	2903
APPROACH %'s :					58.33%	0.00%	41.67%	0.00%	0.37%	99.63%	0.00%	0.00%	0.00%	99.76%	0.24%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	4	0	3	0	3	848	0	0	0	666	1	0	1525
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.375	0.000	0.375	0.887	0.000	0.000	0.000	0.886	0.250	0.000	0.889
						0.438				0.890				0.882			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(SB)

Project ID: 25-160032-002
Date: 5/7/2025

Data - HT

NS/EW Streets:	Carrie May Ln				Carrie May Ln				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	12
7:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	11	0	0	15
7:30 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	7	0	0	16
7:45 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	4	0	0	12
8:00 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	0	18
8:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	0	10
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	0	14
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	45	0	0	0	62	0	0	107
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM									26	0	0		29	0	0	55
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0.722	0.000	0.000	0	0.659	0.000	0.000	0.859
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.722	0.000	0.000	0.000	0.659	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	0	12
4:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	0	9
4:30 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	0	11
4:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	2	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	8
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	48	0	0	0	25	0	0	73
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM									19	0	0		15	0	0	34
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0.679	0.000	0.000	0	0.750	0.000	0.000	0.773
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.679	0.000	0.000	0.000	0.750	0.000	0.000	

Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest
Control: 1-Way Stop(SB)

Data - Bikes

[illegible]

National Data & Surveying Services
Intersection Turning Movement Count

Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest

Project ID: 25-160032-002
Date: 5/7/2025

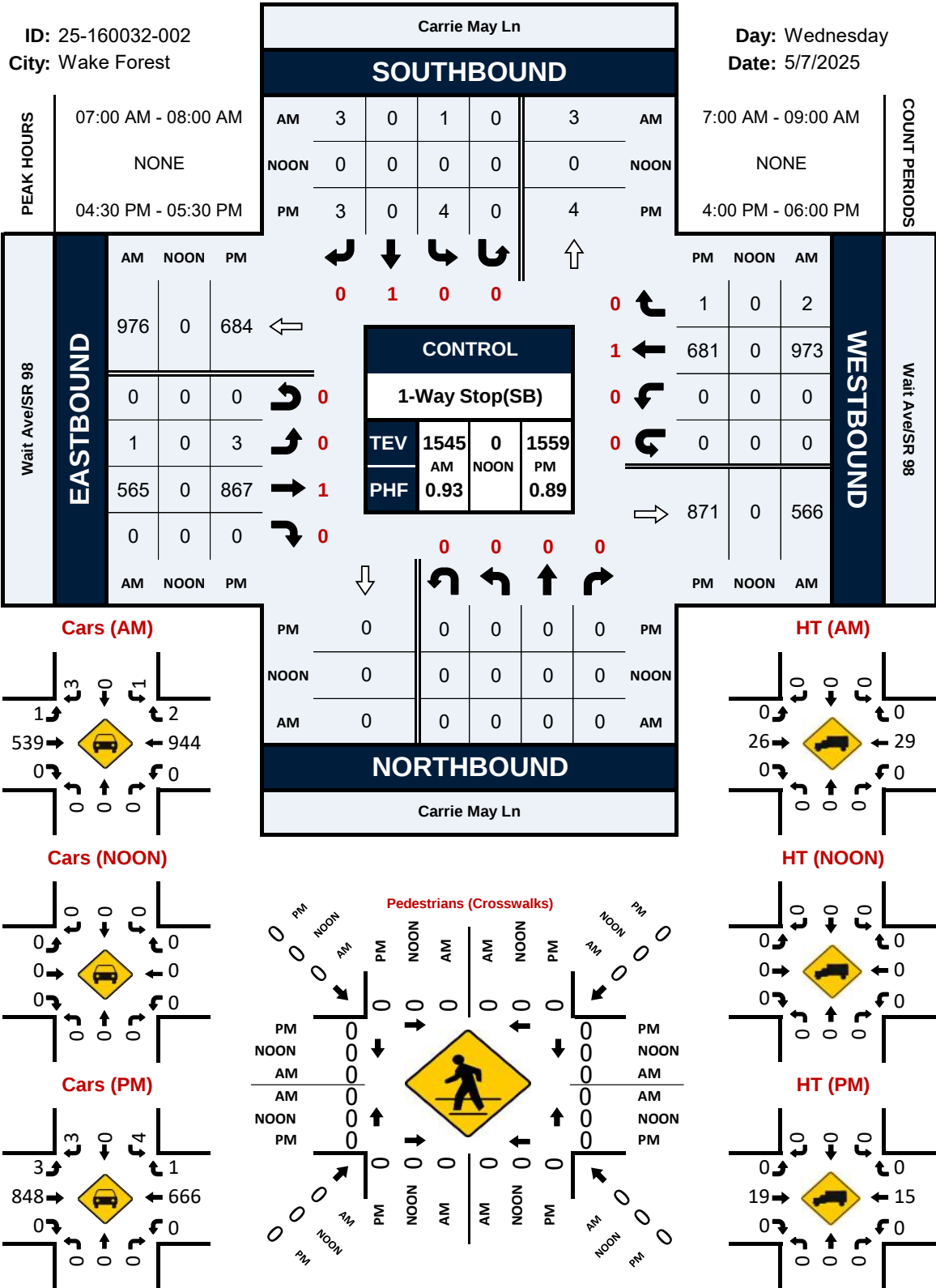
Data - Pedestrians (Crosswalks)

NS/EW Streets:	Carrie May Ln		Carrie May Ln		Wait Ave/SR 98		Wait Ave/SR 98		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	07:00 AM - 08:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Carrie May Ln & Wait Ave/SR 98

Peak Hour Turning Movement Count



Project ID: 25-160032-002
Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest

Day: Wednesday
Date: 5/7/2025

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Carrie May Ln Northbound						Carrie May Ln Southbound						Wait Ave/SR 98 Eastbound						Wait Ave/SR 98 Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	124	0	0	0	124	0	229	1	0	0	230	355	
7:15 AM	0	0	0	0	0	0	0	0	2	0	0	2	1	141	0	0	0	142	0	272	1	0	0	273	417	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	164	0	0	0	164	0	243	0	0	0	243	407	
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	136	0	0	0	136	0	229	0	0	0	229	366	
Total	0	0	0	0	0	0	1	0	3	0	0	4	1	565	0	0	0	566	0	973	2	0	0	975	1545	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	116	0	0	0	116	0	202	0	0	0	202	318	
8:15 AM	0	0	0	0	0	0	1	0	1	0	0	2	0	119	0	0	0	119	0	187	0	0	0	187	308	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	120	0	0	0	120	0	217	0	0	0	217	337	
8:45 AM	0	0	0	0	0	0	1	0	1	0	0	2	0	109	0	0	0	109	0	222	1	0	0	223	334	
Total	0	0	0	0	0	0	2	0	2	0	0	4	0	464	0	0	0	464	0	828	1	0	0	829	1297	
BREAK																										
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	199	0	0	0	199	0	144	0	0	0	144	343	
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	217	0	0	0	217	0	154	0	0	0	154	372	
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	1	2	196	0	0	0	198	0	167	0	0	0	167	366	
4:45 PM	0	0	0	0	0	0	2	0	2	0	0	4	1	235	0	0	0	236	0	163	0	0	0	163	403	
Total	0	0	0	0	0	0	4	0	2	0	0	6	3	847	0	0	0	850	0	628	0	0	0	628	1484	
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	193	0	0	0	193	0	159	0	0	0	159	353	
5:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	243	0	0	0	243	0	192	1	0	0	193	437	
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	2	184	0	0	0	186	0	156	0	0	0	156	344	
5:45 PM	0	0	0	0	0	0	2	0	0	0	0	2	1	198	0	0	0	199	0	155	2	0	0	157	358	
Total	0	0	0	0	0	0	3	0	3	0	0	6	3	818	0	0	0	821	0	662	3	0	0	665	1492	
Grand Total	0	0	0	0	0	0	10	0	10	0	0	20	7	2694	0	0	0	2701	0	3091	6	0	0	3097	5818	
Apprch %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	1	0.3	99.7	0.0	0.0	0.0	2701	0.0	99.8	0.2	0.0	0.0	3097	5818	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.3	0.1	46.3	0.0	0.0	0.0	46.4	0.0	53.1	0.1	0.0	0.0	53.2	1492	
Cars, PU, Vans	0	0	0	0	0	0	10	0	10	0	0	20	7	2601	0	0	0	2608	0	3004	6	0	0	3010	5638	
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	96.5	0.0	0.0	0.0	96.6	0.0	97.2	100.0	0.0	0.0	97.2	96.9	
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	93	0	0	0	93	0	87	0	0	0	87	180	
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.4	0.0	2.8	0.0	0.0	0.0	2.8	3.1	

Project ID: 25-160032-002
Location: Carrie May Ln & Wait Ave/SR 98
City: Wake Forest

PEAK HOURS

Day: Wednesday
Date: 5/7/2025

AM

	Carrie May Ln Northbound					Carrie May Ln Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	124	0	0	124	0	229	1	0	230	355
7:15 AM	0	0	0	0	0	0	0	2	0	2	1	141	0	0	142	0	272	1	0	273	417
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	164	0	0	164	0	243	0	0	243	407
7:45 AM	0	0	0	0	0	1	0	0	0	1	0	136	0	0	136	0	229	0	0	229	366
Total Volume	0	0	0	0	0	1	0	3	0	4	1	565	0	0	566	0	973	2	0	975	1545
% App. Total	0.0	0.0	0.0	0.0	0	25.0	0.0	75.0	0.0	100	0.2	99.8	0.0	0.0	100	0.0	99.8	0.2	0.0	100	
PHF						0.500					0.863					0.893					0.926
Cars, PU, Vans	0	0	0	0	0	1	0	3	0	4	1	539	0	0	540	0	944	2	0	946	1490
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	95.4	0.0	0.0	95.4	0.0	97.0	100.0	0.0	97.0	96.4
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	26	0	0	26	0	29	0	0	29	55
% Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	4.6	0.0	3.0	0.0	0.0	3.0	3.6

PM

	Carrie May Ln Northbound					Carrie May Ln Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	0	0	0	0	0	1	0	0	0	1	2	196	0	0	198	0	167	0	0	167	366
4:45 PM	0	0	0	0	0	2	0	2	0	4	1	235	0	0	236	0	163	0	0	163	403
5:00 PM	0	0	0	0	0	0	0	1	0	1	0	193	0	0	193	0	159	0	0	159	353
5:15 PM	0	0	0	0	0	1	0	0	0	1	0	243	0	0	243	0	192	1	0	193	437
Total Volume	0	0	0	0	0	4	0	3	0	7	3	867	0	0	870	0	681	1	0	682	1559
% App. Total	0.0	0.0	0.0	0.0	0	57.1	0.0	42.9	0.0	100	0.3	99.7	0.0	0.0	100	0.0	99.9	0.1	0.0	100	
PHF						0.438					0.895					0.883					0.892
Cars, PU, Vans	0	0	0	0	0	4	0	3	0	7	3	848	0	0	851	0	666	1	0	667	1525
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	97.8	0.0	0.0	97.8	0.0	97.8	100.0	0.0	97.8	97.8
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	19	0	0	19	0	15	0	0	15	34
%Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0	2.2	0.0	0.0	2.2	2.2

Project ID: 25-160032-001
Location: Austin View Blvd & Wait Ave/SR 98
City: Wake Forest

PEAK HOURS

Day: Wednesday
Date: 5/7/2025

AM

	Austin View Blvd Northbound					Austin View Blvd Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	28	0	6	0	34	0	0	0	0	0	0	129	5	0	134	0	233	0	0	233	401
7:15 AM	13	0	10	0	23	0	0	0	0	0	0	133	7	0	140	0	262	0	0	262	425
7:30 AM	11	0	10	1	22	0	0	0	0	0	0	142	11	0	153	3	252	0	0	255	430
7:45 AM	10	0	6	0	16	0	0	0	0	0	0	129	8	0	137	6	224	0	0	230	383
Total Volume	62	0	32	1	95	0	0	0	0	0	0	533	31	0	564	9	971	0	0	980	1639
% App. Total	65.3	0.0	33.7	1.1	100	0.0	0.0	0.0	0.0	0	0.0	94.5	5.5	0.0	100	0.9	99.1	0.0	0.0	100	
PHF	0.699										0.922					0.935					0.953
Cars, PU, Vans	61	0	31	1	93	0	0	0	0	0	0	508	29	0	537	8	941	0	0	949	1579
% Cars, PU, Vans	98.4	0.0	96.9	100.0	97.9	0.0	0.0	0.0	0.0	0.0	0.0	95.3	93.5	0.0	95.2	88.9	96.9	0.0	0.0	96.8	96.3
Heavy trucks	1	0	1	0	2	0	0	0	0	0	0	25	2	0	27	1	30	0	0	31	60
%Heavy trucks	1.6	0.0	3.1	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	4.7	6.5	0.0	4.8	11.1	3.1	0.0	0.0	3.2	3.7

PM

	Austin View Blvd Northbound					Austin View Blvd Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	12	0	3	0	15	0	0	0	0	0	0	191	15	0	206	9	162	0	0	171	392
4:45 PM	7	0	6	1	14	0	0	0	0	0	0	229	10	0	239	6	153	0	0	159	412
5:00 PM	12	0	5	0	17	0	0	0	0	0	0	199	18	0	217	8	153	0	0	161	395
5:15 PM	11	0	11	0	22	0	0	0	0	0	0	234	16	0	250	7	189	0	0	196	468
Total Volume	42	0	25	1	68	0	0	0	0	0	0	853	59	0	912	30	657	0	0	687	1667
% App. Total	61.8	0.0	36.8	1.5	100	0.0	0.0	0.0	0.0	0	0.0	93.5	6.5	0.0	100	4.4	95.6	0.0	0.0	100	
PHF	0.773										0.912					0.876					0.890
Cars, PU, Vans	39	0	25	1	65	0	0	0	0	0	0	833	59	0	892	29	644	0	0	673	1630
% Cars, PU, Vans	92.9	0.0	100.0	100.0	95.6	0.0	0.0	0.0	0.0	0.0	0.0	97.7	100.0	0.0	97.8	96.7	98.0	0.0	0.0	98.0	97.8
Heavy trucks	3	0	0	0	3	0	0	0	0	0	0	20	0	0	20	1	13	0	0	14	37
%Heavy trucks	7.1	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.2	3.3	2.0	0.0	0.0	2.0	2.2

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest
Control: Signalized

Project ID: 25-160032-003
Date: 5/7/2025

Data - Total

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0.5	0.5	1	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	17	19	12	0	5	23	21	0	11	94	11	0	10	202	2	0	427
7:15 AM	15	13	19	0	13	26	26	0	6	119	20	0	23	226	2	0	508
7:30 AM	25	12	15	0	9	44	38	0	14	137	18	0	10	188	4	0	514
7:45 AM	10	20	13	0	5	30	27	0	15	110	14	0	11	178	1	0	434
8:00 AM	14	4	13	0	6	27	23	0	13	93	12	0	18	166	3	0	392
8:15 AM	10	8	13	0	7	18	16	0	10	104	9	0	13	166	4	0	378
8:30 AM	9	6	9	0	12	18	18	0	9	94	12	0	5	186	3	0	381
8:45 AM	17	12	11	0	3	15	25	0	13	95	10	0	8	181	7	0	397
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	117	94	105	0	60	201	194	0	91	846	106	0	98	1493	26	0	3431
	37.03%	29.75%	33.23%	0.00%	13.19%	44.18%	42.64%	0.00%	8.72%	81.11%	10.16%	0.00%	6.06%	92.33%	1.61%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	67	64	59	0	32	123	112	0	46	460	63	0	54	794	9	0	1883
PEAK HR FACTOR :	0.670	0.800	0.776	0.000	0.615	0.699	0.737	0.000	0.767	0.839	0.788	0.000	0.587	0.878	0.563	0.000	0.916
	0.913				0.734				0.842				0.854				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0.5	0.5	1	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	22	14	21	0	0	11	9	0	16	169	18	0	7	117	6	0	410
4:15 PM	16	16	14	0	1	33	19	0	18	183	22	0	7	117	3	0	449
4:30 PM	21	20	16	0	5	14	24	0	13	155	30	0	15	117	8	0	438
4:45 PM	17	18	14	0	0	15	11	0	22	187	31	0	4	140	6	0	465
5:00 PM	18	22	15	0	4	22	19	0	27	137	26	0	8	123	1	0	422
5:15 PM	12	28	14	0	4	23	23	0	37	186	25	0	14	160	11	0	537
5:30 PM	19	18	16	0	7	21	15	0	17	156	16	0	6	123	7	0	421
5:45 PM	11	31	20	0	3	24	21	0	16	154	24	0	21	121	11	0	457
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	136	167	130	0	24	163	141	0	166	1327	192	0	82	1018	53	0	3599
	31.41%	38.57%	30.02%	0.00%	7.32%	49.70%	42.99%	0.00%	9.85%	78.75%	11.39%	0.00%	7.11%	88.29%	4.60%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	68	88	59	0	13	74	77	0	99	665	112	0	41	540	26	0	1862
PEAK HR FACTOR :	0.810	0.786	0.922	0.000	0.650	0.804	0.802	0.000	0.669	0.889	0.903	0.000	0.683	0.844	0.591	0.000	0.867
	0.943				0.820				0.883				0.820				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest
Control: Signalized

Project ID: 25-160032-003
Date: 5/7/2025

Data - Cars

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0.5 SL	0.5 ST	1 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	17	18	12	0	5	23	21	0	10	91	10	0	9	195	2	0	413
7:15 AM	13	12	17	0	13	26	26	0	6	116	19	0	23	217	2	0	490
7:30 AM	19	11	15	0	9	43	38	0	13	131	16	0	10	185	4	0	494
7:45 AM	10	20	13	0	4	30	27	0	15	105	11	0	9	175	1	0	420
8:00 AM	13	4	10	0	6	25	23	0	11	89	11	0	18	157	2	0	369
8:15 AM	10	8	10	0	7	18	16	0	9	99	9	0	10	162	4	0	362
8:30 AM	7	6	8	0	11	18	18	0	8	93	12	0	5	180	2	0	368
8:45 AM	16	9	10	0	2	15	25	0	11	93	10	0	8	172	7	0	378
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	105	88	95	0	57	198	194	0	83	817	98	0	92	1443	24	0	3294
	36.46%	30.56%	32.99%	0.00%	12.69%	44.10%	43.21%	0.00%	8.32%	81.86%	9.82%	0.00%	5.90%	92.56%	1.54%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	59	61	57	0	31	122	112	0	44	443	56	0	51	772	9	0	1817
PEAK HR FACTOR :	0.776	0.763	0.838	0.000	0.596	0.709	0.737	0.000	0.733	0.845	0.737	0.000	0.554	0.889	0.563	0.000	0.920
	0.941				0.736				0.848				0.860				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0.5 SL	0.5 ST	1 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	20	14	19	0	0	10	9	0	14	163	18	0	7	113	6	0	393
4:15 PM	16	16	14	0	0	31	18	0	17	177	22	0	7	115	3	0	436
4:30 PM	21	20	16	0	4	14	23	0	12	151	28	0	14	116	6	0	425
4:45 PM	17	17	13	0	0	14	11	0	21	185	29	0	4	138	5	0	454
5:00 PM	18	20	15	0	4	21	18	0	27	135	25	0	8	117	1	0	409
5:15 PM	12	28	13	0	4	21	23	0	36	183	25	0	13	158	11	0	527
5:30 PM	19	18	16	0	6	19	13	0	16	154	16	0	6	122	7	0	412
5:45 PM	11	31	20	0	3	24	21	0	16	142	24	0	21	121	11	0	445
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	134	164	126	0	21	154	136	0	159	1290	187	0	80	1000	50	0	3501
	31.60%	38.68%	29.72%	0.00%	6.75%	49.52%	43.73%	0.00%	9.72%	78.85%	11.43%	0.00%	7.08%	88.50%	4.42%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	68	85	57	0	12	70	75	0	96	654	107	0	39	529	23	0	1815
PEAK HR FACTOR :	0.810	0.759	0.891	0.000	0.750	0.833	0.815	0.000	0.667	0.884	0.922	0.000	0.696	0.837	0.523	0.000	0.861
	0.921				0.818				0.878				0.812				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest
Control: Signalized

Project ID: 25-160032-003
Date: 5/7/2025

Data - HT

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0.5	0.5	1	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	1	0	0	0	0	0	0	1	3	1	0	1	7	0	0	14
7:15 AM	2	1	2	0	0	0	0	0	0	3	1	0	0	9	0	0	18
7:30 AM	6	1	0	0	0	1	0	0	1	6	2	0	0	3	0	0	20
7:45 AM	0	0	0	0	1	0	0	0	0	5	3	0	2	3	0	0	14
8:00 AM	1	0	3	0	0	2	0	0	2	4	1	0	0	9	1	0	23
8:15 AM	0	0	3	0	0	0	0	0	1	5	0	0	3	4	0	0	16
8:30 AM	2	0	1	0	1	0	0	0	1	1	0	0	0	6	1	0	13
8:45 AM	1	3	1	0	1	0	0	0	2	2	0	0	0	9	0	0	19
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	12	6	10	0	3	3	0	0	8	29	8	0	6	50	2	0	137
	42.86%	21.43%	35.71%	0.00%	50.00%	50.00%	0.00%	0.00%	17.78%	64.44%	17.78%	0.00%	10.34%	86.21%	3.45%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	8	3	2	0	1	1	0	0	2	17	7	0	3	22	0	0	66
PEAK HR FACTOR :	0.333	0.750	0.250	0.000	0.250	0.250	0.000	0.000	0.500	0.708	0.583	0.000	0.375	0.611	0.000	0.000	0.825
			0.464				0.500				0.722				0.694		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0.5	0.5	1	0	1	0.5	0.5	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	2	0	2	0	0	1	0	0	2	6	0	0	0	4	0	0	17
4:15 PM	0	0	0	0	1	2	1	0	1	6	0	0	0	2	0	0	13
4:30 PM	0	0	0	0	1	0	1	0	1	4	2	0	1	1	2	0	13
4:45 PM	0	1	1	0	0	1	0	0	1	2	2	0	0	2	1	0	11
5:00 PM	0	2	0	0	0	1	1	0	0	2	1	0	0	6	0	0	13
5:15 PM	0	0	1	0	0	2	0	0	1	3	0	0	1	2	0	0	10
5:30 PM	0	0	0	0	1	2	2	0	1	2	0	0	0	1	0	0	9
5:45 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	3	4	0	3	9	5	0	7	37	5	0	2	18	3	0	98
	22.22%	33.33%	44.44%	0.00%	17.65%	52.94%	29.41%	0.00%	14.29%	75.51%	10.20%	0.00%	8.70%	78.26%	13.04%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	3	2	0	1	4	2	0	3	11	5	0	2	11	3	0	47
PEAK HR FACTOR :	0.000	0.375	0.500	0.000	0.250	0.500	0.500	0.000	0.750	0.688	0.625	0.000	0.500	0.458	0.375	0.000	0.904
			0.625				0.875				0.679				0.667		

National Data & Surveying Services
Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest

Project ID: 25-160032-003
Date: 5/7/2025

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Averette Rd/CR 1945		Averette Rd/CR 1945		Wait Ave/SR 98		Wait Ave/SR 98		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	07:00 AM - 08:00 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

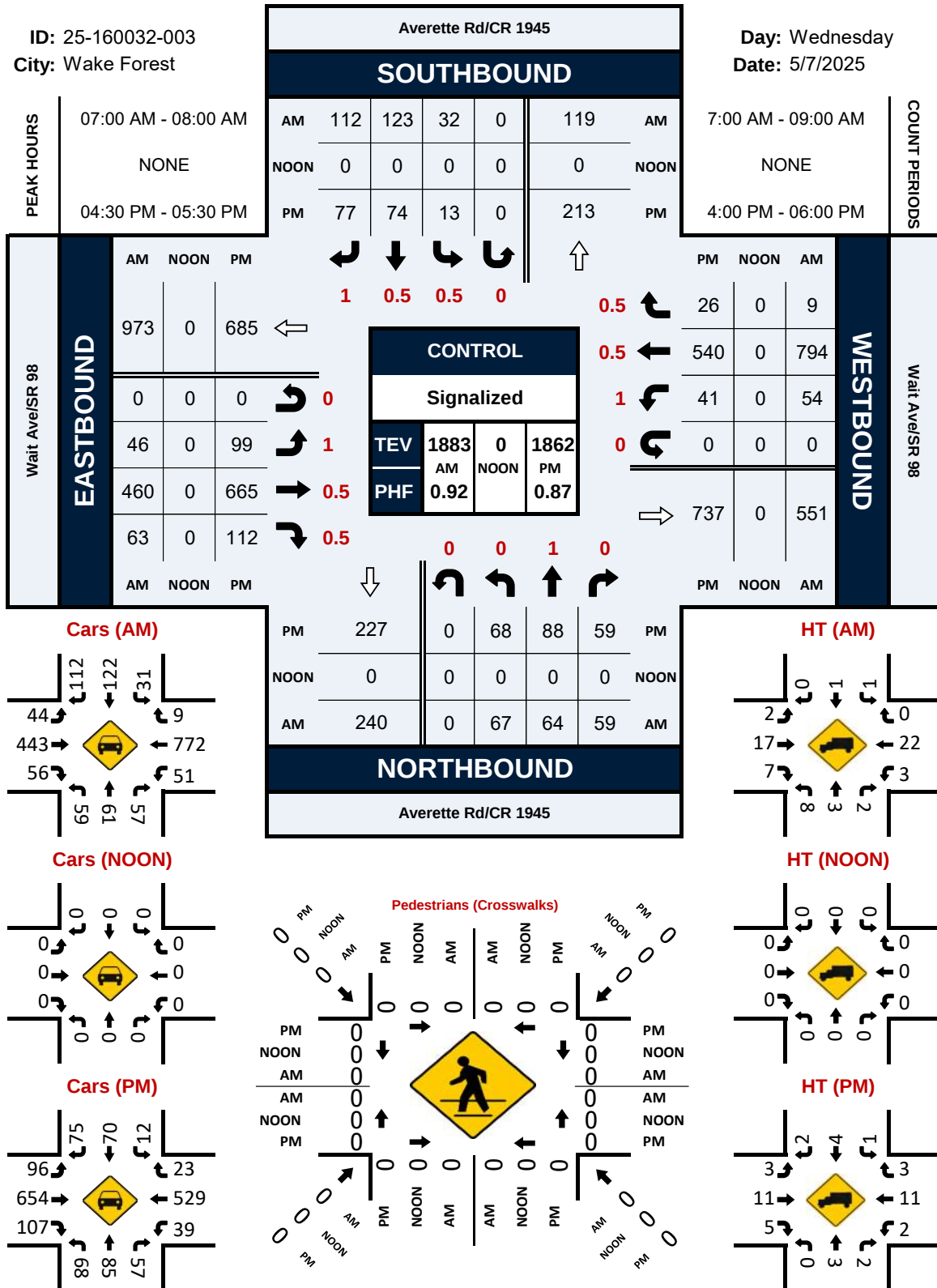
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

Averette Rd/CR 1945 & Wait Ave/SR 98

Peak Hour Turning Movement Count

ID: 25-160032-003
City: Wake Forest

Day: Wednesday
Date: 5/7/2025



Project ID: 25-160032-003
Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest

Day: Wednesday
Date: 5/7/2025

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Averette Rd/CR 1945 Northbound						Averette Rd/CR 1945 Southbound						Wait Ave/SR 98 Eastbound						Wait Ave/SR 98 Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	17	19	12	0	0	48	5	23	21	0	0	49	11	94	11	0	0	116	10	202	2	0	0	214	427
7:15 AM	15	13	19	0	0	47	13	26	26	0	0	65	6	119	20	0	0	145	23	226	2	0	0	251	508
7:30 AM	25	12	15	0	0	52	9	44	38	0	0	91	14	137	18	0	0	169	10	188	4	0	0	202	514
7:45 AM	10	20	13	0	0	43	5	30	27	0	0	62	15	110	14	0	0	139	11	178	1	0	0	190	434
Total	67	64	59	0	0	190	32	123	112	0	0	267	46	460	63	0	0	569	54	794	9	0	0	857	1883
8:00 AM	14	4	13	0	0	31	6	27	23	0	0	56	13	93	12	0	0	118	18	166	3	0	0	187	392
8:15 AM	10	8	13	0	0	31	7	18	16	0	0	41	10	104	9	0	0	123	13	166	4	0	0	183	378
8:30 AM	9	6	9	0	0	24	12	18	18	0	0	48	9	94	12	0	0	115	5	186	3	0	0	194	381
8:45 AM	17	12	11	0	0	40	3	15	25	0	0	43	13	95	10	0	0	118	8	181	7	0	0	196	397
Total	50	30	46	0	0	126	28	78	82	0	0	188	45	386	43	0	0	474	44	699	17	0	0	760	1548
BREAK																									
4:00 PM	22	14	21	0	0	57	0	11	9	0	0	20	16	169	18	0	0	203	7	117	6	0	0	130	410
4:15 PM	16	16	14	0	0	46	1	33	19	0	0	53	18	183	22	0	0	223	7	117	3	0	0	127	449
4:30 PM	21	20	16	0	0	57	5	14	24	0	0	43	13	155	30	0	0	198	15	117	8	0	0	140	438
4:45 PM	17	18	14	0	0	49	0	15	11	0	0	26	22	187	31	0	0	240	4	140	6	0	0	150	465
Total	76	68	65	0	0	209	6	73	63	0	0	142	69	694	101	0	0	864	33	491	23	0	0	547	1762
5:00 PM	18	22	15	0	0	55	4	22	19	0	0	45	27	137	26	0	0	190	8	123	1	0	0	132	422
5:15 PM	12	28	14	0	0	54	4	23	23	0	0	50	37	186	25	0	0	248	14	160	11	0	0	185	537
5:30 PM	19	18	16	0	0	53	7	21	15	0	0	43	17	156	16	0	0	189	6	123	7	0	0	136	421
5:45 PM	11	31	20	0	0	62	3	24	21	0	0	48	16	154	24	0	0	194	21	121	11	0	0	153	457
Total	60	99	65	0	0	224	18	90	78	0	0	186	97	633	91	0	0	821	49	527	30	0	0	606	1837
Grand Total	253	261	235	0	0	749	84	364	335	0	0	783	257	2173	298	0	0	2728	180	2511	79	0	0	2770	7030
Apprch %	33.8	34.8	31.4	0.0	0.0		10.7	46.5	42.8	0.0	0.0		9.4	79.7	10.9	0.0	0.0		6.5	90.6	2.9	0.0	0.0		
Total %	3.6	3.7	3.3	0.0	0.0	10.7	1.2	5.2	4.8	0.0	0.0	11.1	3.7	30.9	4.2	0.0	0.0	38.8	2.6	35.7	1.1	0.0	0.0	39.4	
Cars, PU, Vans	239	252	221	0		712	78	352	330	0		760	242	2107	285	0		2634	172	2443	74	0		2689	6795
% Cars, PU, Vans	94.5	96.6	94.0	0.0		95.1	92.9	96.7	98.5	0.0		97.1	94.2	97.0	95.6	0.0		96.6	95.6	97.3	93.7	0.0		97.1	96.7
Heavy trucks	14	9	14	0		37	6	12	5	0		23	15	66	13	0		94	8	68	5	0		81	235
%Heavy trucks	5.5	3.4	6.0	0.0		4.9	7.1	3.3	1.5	0.0		2.9	5.8	3.0	4.4	0.0		3.4	4.4	2.7	6.3	0.0		2.9	3.3

Project ID: 25-160032-003
Location: Averette Rd/CR 1945 & Wait Ave/SR 98
City: Wake Forest

PEAK HOURS

Day: Wednesday
Date: 5/7/2025

AM

	Averette Rd/CR 1945 Northbound					Averette Rd/CR 1945 Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
7:00 AM	17	19	12	0	48	5	23	21	0	49	11	94	11	0	116	10	202	2	0	214	427
7:15 AM	15	13	19	0	47	13	26	26	0	65	6	119	20	0	145	23	226	2	0	251	508
7:30 AM	25	12	15	0	52	9	44	38	0	91	14	137	18	0	169	10	188	4	0	202	514
7:45 AM	10	20	13	0	43	5	30	27	0	62	15	110	14	0	139	11	178	1	0	190	434
Total Volume	67	64	59	0	190	32	123	112	0	267	46	460	63	0	569	54	794	9	0	857	1883
% App. Total	35.3	33.7	31.1	0.0	100	12.0	46.1	41.9	0.0	100	8.1	80.8	11.1	0.0	100	6.3	92.6	1.1	0.0	100	
PHF	0.913					0.734					0.842					0.854					0.916
Cars, PU, Vans	59	61	57	0	177	31	122	112	0	265	44	443	56	0	543	51	772	9	0	832	1817
% Cars, PU, Vans	88.1	95.3	96.6	0.0	93.2	96.9	99.2	100.0	0.0	99.3	95.7	96.3	88.9	0.0	95.4	94.4	97.2	100.0	0.0	97.1	96.5
Heavy trucks	8	3	2	0	13	1	1	0	0	2	2	17	7	0	26	3	22	0	0	25	66
% Heavy trucks	11.9	4.7	3.4	0.0	6.8	3.1	0.8	0.0	0.0	0.7	4.3	3.7	11.1	0.0	4.6	5.6	2.8	0.0	0.0	2.9	3.5

PM

	Averette Rd/CR 1945 Northbound					Averette Rd/CR 1945 Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
4:30 PM	21	20	16	0	57	5	14	24	0	43	13	155	30	0	198	15	117	8	0	140	438
4:45 PM	17	18	14	0	49	0	15	11	0	26	22	187	31	0	240	4	140	6	0	150	465
5:00 PM	18	22	15	0	55	4	22	19	0	45	27	137	26	0	190	8	123	1	0	132	422
5:15 PM	12	28	14	0	54	4	23	23	0	50	37	186	25	0	248	14	160	11	0	185	537
Total Volume	68	88	59	0	215	13	74	77	0	164	99	665	112	0	876	41	540	26	0	607	1862
% App. Total	31.6	40.9	27.4	0.0	100	7.9	45.1	47.0	0.0	100	11.3	75.9	12.8	0.0	100	6.8	89.0	4.3	0.0	100	
PHF	0.943					0.820					0.883					0.820					0.867
Cars, PU, Vans	68	85	57	0	210	12	70	75	0	157	96	654	107	0	857	39	529	23	0	591	1815
% Cars, PU, Vans	100.0	96.6	96.6	0.0	97.7	92.3	94.6	97.4	0.0	95.7	97.0	98.3	95.5	0.0	97.8	95.1	98.0	88.5	0.0	97.4	97.5
Heavy trucks	0	3	2	0	5	1	4	2	0	7	3	11	5	0	19	2	11	3	0	16	47
% Heavy trucks	0.0	3.4	3.4	0.0	2.3	7.7	5.4	2.6	0.0	4.3	3.0	1.7	4.5	0.0	2.2	4.9	2.0	11.5	0.0	2.6	2.5

Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest
Control: 1-Way Stop(WB)

Data - Total

NS/ EW Streets:		Averette Rd/CR 1945				Averette Rd/CR 1945				Old Pearce Rd				Old Pearce Rd					
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
		0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0		
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	7:00 AM	0	38	23	0	13	32	0	0	0	0	0	0	0	22	0	7	0	135
	7:15 AM	0	49	21	0	16	53	0	0	0	0	0	0	0	20	0	4	0	163
7:30 AM	0	42	20	0	15	57	0	0	0	0	0	0	0	26	0	9	0	169	
7:45 AM	0	35	24	0	6	46	0	0	0	0	0	0	0	30	0	6	0	147	
8:00 AM	0	27	15	0	13	46	0	0	0	0	0	0	0	21	0	3	0	125	
8:15 AM	0	28	13	0	5	38	0	0	0	0	0	0	0	16	0	4	0	104	
8:30 AM	0	19	7	0	4	29	0	0	0	0	0	0	0	18	0	4	0	81	
8:45 AM	0	36	16	0	1	32	0	0	0	0	0	1	0	18	0	4	0	108	
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :		0.00%	66.34%	33.66%	0.00%	17.98%	82.02%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	80.66%	0.00%	19.34%	0.00%	1032	
PEAK HR :		07:00 AM - 08:00 AM																TOTAL	
PEAK HR VOL :		0	164	88	0	50	188	0	0	0	0	0	0	98	0	26	0	614	
PEAK HR FACTOR :		0.000	0.837	0.917	0.000	0.781	0.825	0.000	0.000	0.000	0.000	0.000	0.000	0.817	0.000	0.722	0.000	0.908	
		0.900				0.826								0.861					
PM																			
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
		0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0		
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	59	16	0	0	11	26	0	0	0	0	0	0	21	0	0	0	133	
4:15 PM	0	42	13	0	0	20	40	0	0	0	0	0	0	24	0	5	0	144	
4:30 PM	0	47	12	0	0	22	37	0	0	0	0	0	0	16	0	13	0	147	
4:45 PM	0	41	16	0	0	22	30	0	0	0	0	0	0	9	0	10	0	128	
5:00 PM	0	47	16	0	0	13	42	0	0	0	0	0	0	13	0	6	0	137	
5:15 PM	0	46	16	0	0	19	43	0	0	0	0	0	0	18	0	11	0	152	
5:30 PM	0	39	11	0	0	12	36	0	0	0	0	0	0	15	0	10	0	123	
5:45 PM	0	54	17	0	0	17	53	0	0	0	0	0	0	25	0	5	0	171	
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :		0.00%	374	117	0	136	307	0	0	0	0	0	0	141	0	60	0	1135	
		0.00%	76.17%	23.83%	0.00%	30.70%	69.30%	0.00%	0.00%					70.15%	0.00%	29.85%	0.00%		
PEAK HR :		05:00 PM - 06:00 PM																TOTAL	
PEAK HR VOL :		0	185	60	0	61	174	0	0	0	0	0	0	71	0	32	0	583	
PEAK HR FACTOR :		0.000	0.856	0.															

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest
Control: 1-Way Stop(WB)

Project ID: 25-160032-004
Date: 5/7/2025

Data - Cars

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Old Pearce Rd				Old Pearce Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	36	23	0	13	30	0	0	0	0	0	0	19	0	7	0	128
7:15 AM	0	43	20	0	16	52	0	0	0	0	0	0	19	0	4	0	154
7:30 AM	0	37	20	0	14	55	0	0	0	0	0	0	25	0	9	0	160
7:45 AM	0	35	23	0	5	42	0	0	0	0	0	0	29	0	6	0	140
8:00 AM	0	23	15	0	12	44	0	0	0	0	0	0	17	0	3	0	114
8:15 AM	0	25	13	0	5	35	0	0	0	0	0	0	16	0	4	0	98
8:30 AM	0	16	7	0	4	29	0	0	0	0	0	0	17	0	4	0	77
8:45 AM	0	32	15	0	1	32	0	0	0	0	0	0	18	0	3	0	101
TOTAL VOLUMES :	0	247	136	0	70	319	0	0	0	0	0	0	160	0	40	0	972
APPROACH %'s :	0.00%	64.49%	35.51%	0.00%	17.99%	82.01%	0.00%	0.00%	0	0	0	0	80.00%	0.00%	20.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	151	86	0	48	179	0	0	0	0	0	0	92	0	26	0	582
PEAK HR FACTOR :	0.000	0.878	0.935	0.000	0.750	0.814	0.000	0.000	0.000	0.000	0.000	0.000	0.793	0.000	0.722	0.000	0.909
	0.940				0.822								0.843				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	56	15	0	11	25	0	0	0	0	0	0	21	0	0	0	128
4:15 PM	0	42	13	0	19	39	0	0	0	0	0	0	23	0	5	0	141
4:30 PM	0	47	11	0	21	35	0	0	0	0	0	0	16	0	13	0	143
4:45 PM	0	39	15	0	22	27	0	0	0	0	0	0	9	0	8	0	120
5:00 PM	0	47	16	0	12	41	0	0	0	0	0	0	13	0	6	0	135
5:15 PM	0	44	15	0	19	40	0	0	0	0	0	0	18	0	11	0	147
5:30 PM	0	39	9	0	12	34	0	0	0	0	0	0	14	0	10	0	118
5:45 PM	0	54	17	0	17	53	0	0	0	0	0	0	25	0	5	0	171
TOTAL VOLUMES :	0	368	111	0	133	294	0	0	0	0	0	0	139	0	58	0	1103
APPROACH %'s :	0.00%	76.83%	23.17%	0.00%	31.15%	68.85%	0.00%	0.00%	0	0	0	0	70.56%	0.00%	29.44%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	184	57	0	60	168	0	0	0	0	0	0	70	0	32	0	571
PEAK HR FACTOR :	0.000	0.852	0.838	0.000	0.789	0.792	0.000	0.000	0.000	0.000	0.000	0.000	0.700	0.000	0.727	0.000	0.835
	0.849				0.814								0.850				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest
Control: 1-Way Stop(WB)

Project ID: 25-160032-004
Date: 5/7/2025

Data - HT

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Old Pearce Rd				Old Pearce Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	0	7
7:15 AM	0	6	1	0	0	1	0	0	0	0	0	0	1	0	0	0	9
7:30 AM	0	5	0	0	1	2	0	0	0	0	0	0	1	0	0	0	9
7:45 AM	0	0	1	0	1	4	0	0	0	0	0	0	1	0	0	0	7
8:00 AM	0	4	0	0	1	2	0	0	0	0	0	0	4	0	0	0	11
8:15 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4
8:45 AM	0	4	1	0	0	0	0	0	0	0	1	0	0	0	1	0	7
TOTAL VOLUMES :	0	27	3	0	3	14	0	0	0	0	1	0	11	0	1	0	60
APPROACH %'s :	0.00%	90.00%	10.00%	0.00%	17.65%	82.35%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	91.67%	0.00%	8.33%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	13	2	0	2	9	0	0	0	0	0	0	6	0	0	0	32
PEAK HR FACTOR :	0.000	0.542	0.500	0.000	0.500	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.889
	0.536				0.550								0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
4:00 PM	0	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	3
4:30 PM	0	0	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	2	1	0	0	3	0	0	0	0	0	0	0	0	2	0	8
5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	6	6	0	3	13	0	0	0	0	0	0	2	0	2	0	32
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	18.75%	81.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	3	0	1	6	0	0	0	0	0	0	1	0	0	0	12
PEAK HR FACTOR :	0.000	0.250	0.375	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.600
	0.500				0.583								0.250				

Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest
Control: 1-Way Stop(WB)

Data - Bikes

[illegible]

Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest

Data - Pedestrians (Crosswalks)

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0
PEAK HR :	05:00 PM - 06:00 PM		0	0	0	0	0	0	TOTAL 0
PEAK HR VOL :	0	0							
PEAK HR FACTOR :									

Project ID: 25-160032-004
Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest

Day: Wednesday
Date: 5/7/2025

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Averette Rd/CR 1945 Northbound						Averette Rd/CR 1945 Southbound						Old Pearce Rd Eastbound						Old Pearce Rd Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	0	38	23	0	0	61	13	32	0	0	0	45	0	0	0	0	0	0	22	0	7	0	0	29	135
7:15 AM	0	49	21	0	0	70	16	53	0	0	0	69	0	0	0	0	0	0	20	0	4	0	0	24	163
7:30 AM	0	42	20	0	0	62	15	57	0	0	0	72	0	0	0	0	0	0	26	0	9	0	0	35	169
7:45 AM	0	35	24	0	0	59	6	46	0	0	0	52	0	0	0	0	0	0	30	0	6	0	0	36	147
Total	0	164	88	0	0	252	50	188	0	0	0	238	0	0	0	0	0	0	98	0	26	0	0	124	614
8:00 AM	0	27	15	0	0	42	13	46	0	0	0	59	0	0	0	0	0	0	21	0	3	0	0	24	125
8:15 AM	0	28	13	0	0	41	5	38	0	0	0	43	0	0	0	0	0	0	16	0	4	0	0	20	104
8:30 AM	0	19	7	0	0	26	4	29	0	0	0	33	0	0	0	0	0	0	18	0	4	0	0	22	81
8:45 AM	0	36	16	0	0	52	1	32	0	0	0	33	0	0	1	0	0	1	18	0	4	0	0	22	108
Total	0	110	51	0	0	161	23	145	0	0	0	168	0	0	1	0	0	1	73	0	15	0	0	88	418
BREAK																									
4:00 PM	0	59	16	0	0	75	11	26	0	0	0	37	0	0	0	0	0	0	21	0	0	0	0	21	133
4:15 PM	0	42	13	0	0	55	20	40	0	0	0	60	0	0	0	0	0	0	24	0	5	0	0	29	144
4:30 PM	0	47	12	0	0	59	22	37	0	0	0	59	0	0	0	0	0	0	16	0	13	0	0	29	147
4:45 PM	0	41	16	0	0	57	22	30	0	0	0	52	0	0	0	0	0	0	9	0	10	0	0	19	128
Total	0	189	57	0	0	246	75	133	0	0	0	208	0	0	0	0	0	0	70	0	28	0	0	98	552
5:00 PM	0	47	16	0	0	63	13	42	0	0	0	55	0	0	0	0	0	0	13	0	6	0	0	19	137
5:15 PM	0	45	16	0	0	61	19	43	0	0	0	62	0	0	0	0	0	0	18	0	11	0	0	29	152
5:30 PM	0	39	11	0	0	50	12	36	0	0	0	48	0	0	0	0	0	0	15	0	10	0	0	25	123
5:45 PM	0	54	17	0	0	71	17	53	0	0	0	70	0	0	0	0	0	0	25	0	5	0	0	30	171
Total	0	185	60	0	0	245	61	174	0	0	0	235	0	0	0	0	0	0	71	0	32	0	0	103	583
Grand Total	0	648	256	0	0	904	209	640	0	0	0	849	0	0	1	0	0	1	312	0	101	0	0	413	2167
Apprch %	0.0	71.7	28.3	0.0	0.0		24.6	75.4	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		75.5	0.0	24.5	0.0	0.0		
Total %	0.0	29.9	11.8	0.0	0.0	41.7	9.6	29.5	0.0	0.0	0.0	39.2	0.0	0.0	0.0	0.0	0.0	0.0	14.4	0.0	4.7	0.0	0.0	19.1	
Cars, PU, Vans	0	615	247	0		862	203	613	0	0		816	0	0	0	0		0	299	0	98	0		397	2075
% Cars, PU, Vans	0.0	94.9	96.5	0.0		95.4	97.1	95.8	0.0	0.0		96.1	0.0	0.0	0.0	0.0		0.0	95.8	0.0	97.0	0.0		96.1	95.8
Heavy trucks	0	33	9	0		42	6	27	0	0		33	0	0	1	0		1	13	0	3	0		16	92
%Heavy trucks	0.0	5.1	3.5	0.0		4.6	2.9	4.2	0.0	0.0		3.9	0.0	0.0	100.0	0.0		100.0	4.2	0.0	3.0	0.0		3.9	4.2

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest
Control: 1-Way Stop(EB)

Project ID: 25-160032-005
Date: 5/7/2025

Data - Total

NS/ EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Kavanaugh Rd				Kavanaugh Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	0 NR	0 NU	0 SL	0.5 ST	0.5 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	3	53	0	0	0	45	3	0	8	0	5	0	0	0	0	0	117
7:15 AM	0	60	0	0	0	69	3	0	10	0	1	0	0	0	0	0	143
7:30 AM	3	51	0	0	0	73	10	0	11	0	6	0	0	0	0	0	154
7:45 AM	3	51	0	0	0	66	10	0	8	0	2	0	0	0	0	0	140
8:00 AM	2	35	0	0	0	56	10	0	8	0	5	0	0	0	0	0	116
8:15 AM	2	30	0	0	0	50	6	0	10	0	4	0	0	0	0	0	102
8:30 AM	2	21	0	0	0	39	8	0	6	0	12	0	0	0	0	0	88
8:45 AM	8	43	0	0	0	41	11	0	8	0	7	0	0	0	0	0	118
TOTAL VOLUMES :	NL 23	NT 344	NR 0	NU 0	SL 0	ST 439	SR 61	SU 0	EL 69	ET 0	ER 42	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 978
APPROACH %'s :	6.27%	93.73%	0.00%	0.00%	0.00%	87.80%	12.20%	0.00%	62.16%	0.00%	37.84%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	9	215	0	0	0	253	26	0	37	0	14	0	0	0	0	0	554
PEAK HR FACTOR :	0.750	0.896	0.000	0.000	0.000	0.866	0.650	0.000	0.841	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.899
	0.933				0.840				0.750								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	0 NR	0 NU	0 SL	0.5 ST	0.5 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	3	67	0	0	0	37	10	0	6	0	3	0	0	0	0	0	126
4:15 PM	6	50	0	0	0	57	10	0	5	0	2	0	0	0	0	0	130
4:30 PM	9	54	0	0	0	42	11	0	5	0	3	0	0	0	0	0	124
4:45 PM	7	50	0	0	0	34	4	0	7	0	4	0	0	0	0	0	107
5:00 PM	6	55	0	0	0	47	9	0	7	0	4	0	0	0	0	0	128
5:15 PM	5	55	0	0	0	50	10	0	7	0	9	0	0	0	0	0	136
5:30 PM	4	51	0	0	0	45	9	0	1	0	4	0	0	0	0	0	114
5:45 PM	2	64	0	0	0	69	7	0	8	0	6	0	0	0	0	0	156
TOTAL VOLUMES :	NL 42	NT 446	NR 0	NU 0	SL 0	ST 381	SR 70	SU 0	EL 46	ET 0	ER 36	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 1021
APPROACH %'s :	8.61%	91.39%	0.00%	0.00%	0.00%	84.48%	15.52%	0.00%	56.10%	0.00%	43.90%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	17	225	0	0	0	211	35	0	23	0	23	0	0	0	0	0	534
PEAK HR FACTOR :	0.708	0.879	0.000	0.000	0.000	0.764	0.875	0.000	0.719	0.000	0.639	0.000	0.000	0.000	0.000	0.000	0.856
	0.917				0.809				0.719								

Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest
Control: 1-Way Stop(EB)

Project ID: 25-160032-005
Date: 5/7/2025

NS/ EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Kavanaugh Rd				Kavanaugh Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	7:00 AM	3	51	0	0	0	42	2	0	8	0	5	0	0	0	0	0
	7:15 AM	0	53	0	0	0	67	3	0	10	0	1	0	0	0	0	0
7:30 AM	3	47	0	0	0	71	9	0	10	0	6	0	0	0	0	0	
7:45 AM	1	51	0	0	0	61	9	0	7	0	2	0	0	0	0	0	
8:00 AM	2	31	0	0	0	51	9	0	7	0	5	0	0	0	0	0	
8:15 AM	2	29	0	0	0	47	6	0	9	0	4	0	0	0	0	0	
8:30 AM	2	18	0	0	0	38	8	0	6	0	11	0	0	0	0	0	
8:45 AM	8	40	0	0	0	41	11	0	6	0	7	0	0	0	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	21	320	0	0	0	418	57	0	63	0	41	0	0	0	0	0	920
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	7	202	0	0	0	241	23	0	35	0	14	0	0	0	0	0	522
PEAK HR FACTOR :	0.583	0.953	0.000	0.000	0.000	0.849	0.639	0.000	0.875	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.894
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	4:00 PM	2	64	0	0	0	36	10	0	6	0	3	0	0	0	0	121
	4:15 PM	6	50	0	0	0	55	10	0	5	0	2	0	0	0	0	128
	4:30 PM	9	53	0	0	0	40	11	0	5	0	3	0	0	0	0	121
	4:45 PM	7	47	0	0	0	31	4	0	7	0	5	0	0	0	0	101
	5:00 PM	6	55	0	0	0	46	9	0	7	0	4	0	0	0	0	127
	5:15 PM	5	53	0	0	0	47	10	0	7	0	9	0	0	0	0	131
	5:30 PM	3	49	0	0	0	42	9	0	1	0	4	0	0	0	0	108
	5:45 PM	2	64	0	0	0	69	7	0	8	0	6	0	0	0	0	156
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	40	435	0	0	0	366	70	0	46	0	36	0	0	0	0	0	993
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	16	221	0	0	0	204	35	0	23	0	23	0	0	0	0	0	522
PEAK HR FACTOR :	0.667	0.863	0.000	0.000	0.000	0.739	0.875	0.000	0.719	0.000	0.639	0.000	0.000	0.000	0.000	0.000	0.837

National Data & Surveying Services

Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest
Control: 1-Way Stop(EB)

Project ID: 25-160032-005
Date: 5/7/2025

Data - HT

NS/ EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Kavanaugh Rd				Kavanaugh Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	0 SL	0.5 ST	0.5 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0	6
7:15 AM	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	0	9
7:30 AM	0	4	0	0	0	2	1	0	1	0	0	0	0	0	0	0	8
7:45 AM	2	0	0	0	0	5	1	0	1	0	0	0	0	0	0	0	9
8:00 AM	0	4	0	0	0	5	1	0	1	0	0	0	0	0	0	0	11
8:15 AM	0	1	0	0	0	3	0	0	1	0	0	0	0	0	0	0	5
8:30 AM	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	0	5
8:45 AM	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	24	0	0	0	21	4	0	6	0	1	0	0	0	0	0	58
	7.69%	92.31%	0.00%	0.00%	0.00%	84.00%	16.00%	0.00%	85.71%	0.00%	14.29%	0.00%					
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	13	0	0	0	12	3	0	2	0	0	0	0	0	0	0	32
PEAK HR FACTOR :	0.250	0.464	0.000	0.000	0.000	0.600	0.750	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.889
	0.536				0.625				0.500								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	0 SL	0.5 ST	0.5 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	2	0	0	0	3	0	0	0	2	0	0	0	0	0	0	5
5:30 PM	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	11	0	0	0	15	0	0	0	0	0	0	0	0	0	0	28
	15.38%	84.62%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.417				0.583												

Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest
Control: 1-Way Stop(EB)

Data - Bikes

[illegible]

National Data & Surveying Services
Intersection Turning Movement Count

Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest

Project ID: 25-160032-005
Date: 5/7/2025

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Averette Rd/CR 1945		Averette Rd/CR 1945		Kavanaugh Rd		Kavanaugh Rd	
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB
APPROACH %'s :	0	0	0	0	0	0	1	0
PEAK HR :	07:00 AM - 08:00 AM						100.00%	0.00%
PEAK HR VOL :	0	0	0	0	0	0	1	0
PEAK HR FACTOR :							0.250	0.250
								TOTAL
								1
								0.250

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB
APPROACH %'s :	0	0	0	0	0	0	0	0
PEAK HR :	05:00 PM - 06:00 PM						0	0
PEAK HR VOL :	0	0	0	0	0	0	0	0
PEAK HR FACTOR :								TOTAL
								0

Project ID: 25-160032-005
Location: Averette Rd/CR 1945 & Kavanaugh Rd
City: Wake Forest

Day: Wednesday
Date: 5/7/2025

Groups Printed - Cars, PU, Vans - Heavy Trucks

Start Time	Averette Rd/CR 1945 Northbound						Averette Rd/CR 1945 Southbound						Kavanaugh Rd Eastbound						Kavanaugh Rd Westbound						Int. Total
	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	
7:00 AM	3	53	0	0	0	56	0	45	3	0	0	48	8	0	5	0	0	13	0	0	0	0	0	0	117
7:15 AM	0	60	0	0	0	60	0	69	3	0	0	72	10	0	1	0	0	11	0	0	0	0	0	0	143
7:30 AM	3	51	0	0	0	54	0	73	10	0	0	83	11	0	6	0	0	17	0	0	0	0	0	0	154
7:45 AM	3	51	0	0	0	54	0	66	10	0	0	76	8	0	2	0	1	10	0	0	0	0	0	0	140
Total	9	215	0	0	0	224	0	253	26	0	0	279	37	0	14	0	1	51	0	0	0	0	0	0	554
8:00 AM	2	35	0	0	0	37	0	56	10	0	0	66	8	0	5	0	0	13	0	0	0	0	0	0	116
8:15 AM	2	30	0	0	0	32	0	50	6	0	0	56	10	0	4	0	0	14	0	0	0	0	0	0	102
8:30 AM	2	21	0	0	0	23	0	39	8	0	0	47	6	0	12	0	0	18	0	0	0	0	0	0	88
8:45 AM	8	43	0	0	0	51	0	41	11	0	0	52	8	0	7	0	0	15	0	0	0	0	0	0	118
Total	14	129	0	0	0	143	0	186	35	0	0	221	32	0	28	0	0	60	0	0	0	0	0	0	424
BREAK																									
4:00 PM	3	67	0	0	0	70	0	37	10	0	0	47	6	0	3	0	0	9	0	0	0	0	0	0	126
4:15 PM	6	50	0	0	0	56	0	57	10	0	0	67	5	0	2	0	0	7	0	0	0	0	0	0	130
4:30 PM	9	54	0	0	0	63	0	42	11	0	0	53	5	0	3	0	0	8	0	0	0	0	0	0	124
4:45 PM	7	50	0	0	0	57	0	34	4	0	0	38	7	0	5	0	0	12	0	0	0	0	0	0	107
Total	25	221	0	0	0	246	0	170	35	0	0	205	23	0	13	0	0	36	0	0	0	0	0	0	487
5:00 PM	6	55	0	0	0	61	0	47	9	0	0	56	7	0	4	0	0	11	0	0	0	0	0	0	128
5:15 PM	5	55	0	0	0	60	0	50	10	0	0	60	7	0	9	0	0	16	0	0	0	0	0	0	136
5:30 PM	4	51	0	0	0	55	0	45	9	0	0	54	1	0	4	0	0	5	0	0	0	0	0	0	114
5:45 PM	2	64	0	0	0	66	0	69	7	0	0	76	8	0	6	0	0	14	0	0	0	0	0	0	156
Total	17	225	0	0	0	242	0	211	35	0	0	246	23	0	23	0	0	46	0	0	0	0	0	0	534
Grand Total	65	790	0	0	0	855	0	820	131	0	0	951	115	0	78	0	1	193	0	0	0	0	0	0	1999
Apprch %	7.6	92.4	0.0	0.0	0.0		0.0	86.2	13.8	0.0	0.0		59.6	0.0	40.4	0.0	0.5		0.0	0.0	0.0	0.0	0.0		
Total %	3.3	39.5	0.0	0.0	0.0	42.8	0.0	41.0	6.6	0.0	0.0	47.6	5.8	0.0	3.9	0.0	0.1	9.7	0.0	0.0	0.0	0.0	0.0	0.0	
Cars, PU, Vans	61	755	0	0		816	0	784	127	0		911	109	0	77	0		186	0	0	0	0	0	0	1913
% Cars, PU, Vans	93.8	95.6	0.0	0.0		95.4	0.0	95.6	96.9	0.0		95.8	94.8	0.0	98.7	0.0		96.4	0.0	0.0	0.0	0.0	0.0	0.0	95.7
Heavy trucks	4	35	0	0		39	0	36	4	0		40	6	0	1	0		7	0	0	0	0	0	0	86
%Heavy trucks	6.2	4.4	0.0	0.0		4.6	0.0	4.4	3.1	0.0		4.2	5.2	0.0	1.3	0.0		3.6	0.0	0.0	0.0	0.0	0.0	0.0	4.3

Project ID: 25-160032-004
Location: Averette Rd/CR 1945 & Old Pearce Rd
City: Wake Forest

PEAK HOURS

Day: Wednesday
Date: 5/7/2025

AM

Start Time	Averette Rd/CR 1945 Northbound					Averette Rd/CR 1945 Southbound					Old Pearce Rd Eastbound					Old Pearce Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
7:00 AM	0	38	23	0	61	13	32	0	0	45	0	0	0	0	0	22	0	7	0	29	135
7:15 AM	0	49	21	0	70	16	53	0	0	69	0	0	0	0	0	20	0	4	0	24	163
7:30 AM	0	42	20	0	62	15	57	0	0	72	0	0	0	0	0	26	0	9	0	35	169
7:45 AM	0	35	24	0	59	6	46	0	0	52	0	0	0	0	0	30	0	6	0	36	147
Total Volume	0	164	88	0	252	50	188	0	0	238	0	0	0	0	0	98	0	26	0	124	614
% App. Total	0.0	65.1	34.9	0.0	100	21.0	79.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0	79.0	0.0	21.0	0.0	100	
PHF	0.900					0.826										0.861					0.908
Cars, PU, Vans	0	151	86	0	237	48	179	0	0	227	0	0	0	0	0	92	0	26	0	118	582
% Cars, PU, Vans	0.0	92.1	97.7	0.0	94.0	96.0	95.2	0.0	0.0	95.4	0.0	0.0	0.0	0.0	0.0	93.9	0.0	100.0	0.0	95.2	94.8
Heavy trucks	0	13	2	0	15	2	9	0	0	11	0	0	0	0	0	6	0	0	0	6	32
% Heavy trucks	0.0	7.9	2.3	0.0	6.0	4.0	4.8	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0	4.8	5.2

PM

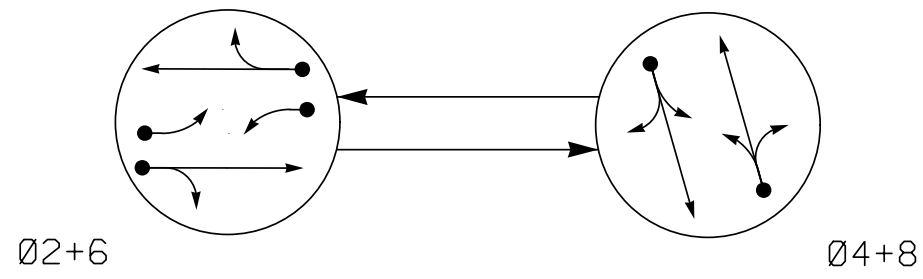
Start Time	Averette Rd/CR 1945 Northbound					Averette Rd/CR 1945 Southbound					Old Pearce Rd Eastbound					Old Pearce Rd Westbound					Int. Total
	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
5:00 PM	0	47	16	0	63	13	42	0	0	55	0	0	0	0	0	13	0	6	0	19	137
5:15 PM	0	45	16	0	61	19	43	0	0	62	0	0	0	0	0	18	0	11	0	29	152
5:30 PM	0	39	11	0	50	12	36	0	0	48	0	0	0	0	0	15	0	10	0	25	123
5:45 PM	0	54	17	0	71	17	53	0	0	70	0	0	0	0	0	25	0	5	0	30	171
Total Volume	0	185	60	0	245	61	174	0	0	235	0	0	0	0	0	71	0	32	0	103	583
% App. Total	0.0	75.5	24.5	0.0	100	26.0	74.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0	68.9	0.0	31.1	0.0	100	
PHF	0.863					0.839										0.858					0.852
Cars, PU, Vans	0	184	57	0	241	60	168	0	0	228	0	0	0	0	0	70	0	32	0	102	571
% Cars, PU, Vans	0.0	99.5	95.0	0.0	98.4	98.4	96.6	0.0	0.0	97.0	0.0	0.0	0.0	0.0	0.0	98.6	0.0	100.0	0.0	99.0	97.9
Heavy trucks	0	1	3	0	4	1	6	0	0	7	0	0	0	0	0	1	0	0	0	1	12
% Heavy trucks	0.0	0.5	5.0	0.0	1.6	1.6	3.4	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.0	2.1

APPENDIX C

SIGNAL PLANS

K:\RAL\TPTD\K_ITS\K11036492_U-6023_Wake Forest_Signal_System\Task\Task45\gn01_Design\MS4 - Signal_Design\MS4-1935.dgn 3/2/2023 11:37:20 AM MoflyBurke

PHASING DIAGRAM

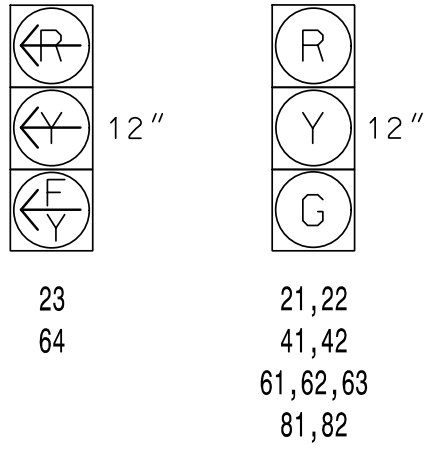


- PHASING DIAGRAM DETECTION LEGEND
- DETECTED MOVEMENT
 - UNDETECTED MOVEMENT (OVERLAP)
 - UNSIGNALIZED MOVEMENT
 - PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE		
	Ø2+6	Ø4+8	FLASH
21,22	G	R	Y
23	F	R	Y
41,42	R	G	R
64	F	R	Y
61,62,63	G	R	Y
81,82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.

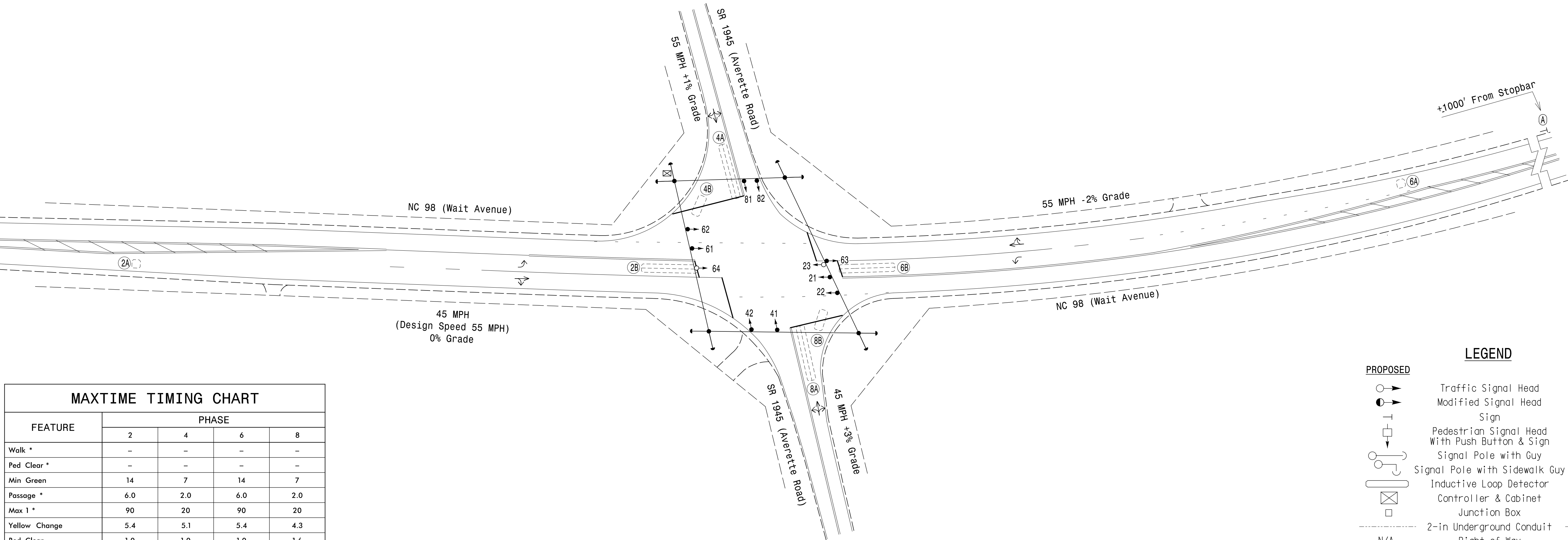


MAXTIME DETECTOR INSTALLATION CHART											
DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	URNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	QUEUE	CALL
2A	6X6	420	EXIST	-	2	-	-	X	X	-	X
2B	6X40	0	2-4-2	-	2	3	-	X	-	-	X
4A	6X40	0	2-4-2	-	4	5	-	X	-	-	X
4B	6X15	+5	EXIST	-	4	15	-	X	-	-	X
6A	6X6	420	EXIST	-	6	-	-	X	X	-	X
6B	6X40	0	2-4-2	-	6	3	-	X	-	-	X
8A	6X40	0	2-4-2	-	8	5	-	X	-	-	X
8B	6X15	+5	EXIST	-	8	15	-	X	-	-	X

2 PHASE
FULLY ACTUATED
(WAKE FOREST SIGNAL SYSTEM)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Reposition existing signal heads numbered 21, 22, 61, and 62.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
- Loop data based on previous plan and/or field observations.
- Install new cabinet on the existing cabinet foundation.



MAXTIME TIMING CHART				
FEATURE	PHASE			
	2	4	6	8
Walk *	-	-	-	-
Ped Clear *	-	-	-	-
Min Green	14	7	14	7
Passage *	6.0	2.0	6.0	2.0
Max 1 *	90	20	90	20
Yellow Change	5.4	5.1	5.4	4.3
Red Clear	1.0	1.0	1.0	1.6
Added Initial *	2.5	-	2.5	-
Maximum Initial *	46	-	46	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.4	-	3.4	-
Advance Walk	-	-	-	-
Non Lock Detector	-	X	-	X
Vehicle Recall	MIN RECALL	-	MIN RECALL	-
Dual Entry	-	X	-	X

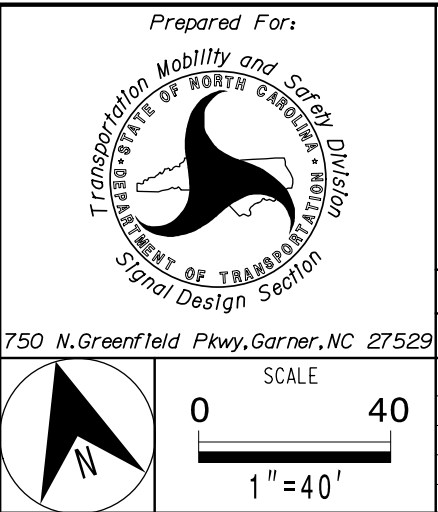
* These values may be field adjusted. Do not adjust Min Green and Passage times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

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 | |
| | Right of Way | |
| | Directional Arrow | |
| | Signal Ahead Sign (W3-3) | |

Signal Upgrade

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000



NC 98 (Wait Avenue) at SR 1945 (Averette Road)		
Division 5	Wake County	Wake Forest
PLAN DATE: December 2022	REVIEWED BY: CF Davis	
PREPARED BY: MC Burke	REVIEWED BY: SL Phillips	
REVISIONS	DATE	INIT.



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

SIGNATURE
DATE
SIG. INVENTORY NO. 05-1935

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

AVERETTE ROAD

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2025 Existing
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	460	63	54	800	9	67	64	59	32	123	112
Future Volume (vph)	46	460	63	54	800	9	67	64	59	32	123	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.982			0.998			0.958				0.850
Flt Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1770	1829	0	1787	1878	0	0	1728	0	0	1835	1575
Flt Permitted	0.140			0.356				0.818			0.910	
Satd. Flow (perm)	261	1829	0	670	1878	0	0	1438	0	0	1687	1575
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		1904			2587			518			1533	
Travel Time (s)		23.6			32.1			7.8			19.0	
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)	51	511	70	60	889	10	74	71	66	36	137	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	51	581	0	60	899	0	0	211	0	0	173	124
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Detector Phase	2	2		6	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		21.0	21.0		14.0	14.0		13.0	13.0	13.0
Total Split (s)	90.0	90.0		90.0	90.0		20.0	20.0		20.0	20.0	20.0
Total Split (%)	81.8%	81.8%		81.8%	81.8%		18.2%	18.2%		18.2%	18.2%	18.2%
Maximum Green (s)	83.6	83.6		83.6	83.6		13.9	13.9		14.1	14.1	14.1
Yellow Time (s)	5.4	5.4		5.4	5.4		5.1	5.1		4.3	4.3	4.3
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.6	1.6	1.6
Lost Time Adjust (s)	-1.4	-1.4		-1.4	-1.4			-1.1			-0.9	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.4	3.4		3.4	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	45.0	45.0		45.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Act Effect Green (s)	35.1	35.1		35.1	35.1			15.3			15.3	15.3
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.25			0.25	0.25
v/c Ratio	0.34	0.55		0.16	0.83			0.58			0.41	0.31
Control Delay	13.0	9.7		6.3	17.5			31.3			25.3	24.3
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2025 Existing
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	13.0	9.7		6.3	17.5			31.3			25.3	24.3
LOS	B	A		A	B			C			C	C
Approach Delay		9.9			16.8			31.3			24.9	
Approach LOS		A			B			C			C	
Queue Length 50th (ft)	8	112		9	228			65			50	35
Queue Length 95th (ft)	29	175		22	364			#195			133	100
Internal Link Dist (ft)		1824			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	261	1829		670	1878			363			426	398
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.20	0.32		0.09	0.48			0.58			0.41	0.31

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 60.6

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 17.3

Intersection LOS: B

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: 1: Averette Road & Wait Avenue

 Ø2	 Ø4
90 s	20 s
 Ø6	 Ø8
90 s	20 s

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2025 Existing
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	668	112	41	540	26	68	93	59	13	83	77
Future Volume (vph)	99	668	112	41	540	26	68	93	59	13	83	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.979			0.993			0.964				0.850
Flt Protected	0.950			0.950				0.985			0.993	
Satd. Flow (prot)	1770	1824	0	1787	1868	0	0	1742	0	0	1840	1575
Flt Permitted	0.322			0.162				0.859			0.944	
Satd. Flow (perm)	600	1824	0	305	1868	0	0	1519	0	0	1750	1575
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		1904			2587			518			1533	
Travel Time (s)		23.6			32.1			7.8			19.0	
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)	110	742	124	46	600	29	76	103	66	14	92	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	866	0	46	629	0	0	245	0	0	106	86
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		8
Detector Phase	2	2		6	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	14.0	14.0		14.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	21.0	21.0		21.0	21.0		14.0	14.0		13.0	13.0	13.0
Total Split (s)	90.0	90.0		90.0	90.0		20.0	20.0		20.0	20.0	20.0
Total Split (%)	81.8%	81.8%		81.8%	81.8%		18.2%	18.2%		18.2%	18.2%	18.2%
Maximum Green (s)	83.6	83.6		83.6	83.6		13.9	13.9		14.1	14.1	14.1
Yellow Time (s)	5.4	5.4		5.4	5.4		5.1	5.1		4.3	4.3	4.3
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.6	1.6	1.6
Lost Time Adjust (s)	-1.4	-1.4		-1.4	-1.4			-1.1			-0.9	-0.9
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.4	3.4		3.4	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	45.0	45.0		45.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Min	Min		Min	Min		None	None		None	None	None
Act Effect Green (s)	35.1	35.1		35.1	35.1			15.3			15.3	15.3
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.25			0.25	0.25
v/c Ratio	0.32	0.82		0.26	0.58			0.64			0.24	0.22
Control Delay	8.7	17.3		9.9	10.1			33.3			23.3	23.3
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2025 Existing
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	8.7	17.3		9.9	10.1			33.3			23.3	23.3
LOS	A	B		A	B			C			C	C
Approach Delay		16.3			10.1			33.3			23.3	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	18	217		7	125			78			30	24
Queue Length 95th (ft)	41	349		23	194			#231			86	74
Internal Link Dist (ft)		1824			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	600	1824		305	1868			383			441	398
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.18	0.47		0.15	0.34			0.64			0.24	0.22

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 60.7

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 16.9

Intersection LOS: B

Intersection Capacity Utilization 85.0%

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.

Splits and Phases: 1: Averette Road & Wait Avenue

 Ø2	 Ø4
90 s	20 s
 Ø6	 Ø8
90 s	20 s

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 No-Build
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	533	73	63	928	10	78	74	68	37	143	130
Future Volume (vph)	53	533	73	63	928	10	78	74	68	37	143	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.982			0.998			0.958				0.850
Flt Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1770	1829	0	1787	1878	0	0	1728	0	0	1835	1575
Flt Permitted	0.950			0.950				0.625			0.851	
Satd. Flow (perm)	1770	1829	0	1787	1878	0	0	1099	0	0	1577	1575
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		1904			2587			518			1533	
Travel Time (s)		23.6			32.1			7.8			19.0	
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)	59	592	81	70	1031	11	87	82	76	41	159	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	673	0	70	1042	0	0	245	0	0	200	144
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		8
Detector Phase	5	2		1	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	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	14.0
Total Split (s)	14.0	67.0		14.0	67.0		29.0	29.0		29.0	29.0	29.0
Total Split (%)	12.7%	60.9%		12.7%	60.9%		26.4%	26.4%		26.4%	26.4%	26.4%
Maximum Green (s)	7.0	60.0		7.0	60.0		22.0	22.0		22.0	22.0	22.0
Yellow Time (s)	5.0	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	2.0
Lost Time Adjust (s)	-2.0	-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	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4		3.0	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0		0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effect Green (s)	9.1	60.4		9.1	60.4			24.2			24.2	24.2
Actuated g/C Ratio	0.09	0.57		0.09	0.57			0.23			0.23	0.23
v/c Ratio	0.39	0.64		0.45	0.97			0.97			0.55	0.40
Control Delay	56.0	19.5		58.4	44.5			93.7			44.3	40.3
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 No-Build
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	56.0	19.5		58.4	44.5			93.7			44.3	40.3
LOS	E	B		E	D			F			D	D
Approach Delay		22.4			45.4			93.7			42.6	
Approach LOS		C			D			F			D	
Queue Length 50th (ft)	40	311		48	683			~184			127	88
Queue Length 95th (ft)	84	439		96	#1004			#343			206	150
Internal Link Dist (ft)		1824			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	152	1085		154	1114			252			362	361
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.39	0.62		0.45	0.94			0.97			0.55	0.40

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 105.4

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 43.0

Intersection LOS: D

Intersection Capacity Utilization 86.8%

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: 1: Averette Road & Wait Avenue

 Ø1	 Ø2	 Ø4
14 s	67 s	29 s
 Ø5	 Ø6	 Ø8
14 s	67 s	29 s

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 No-Build
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	775	130	48	626	30	79	108	68	15	96	89
Future Volume (vph)	115	775	130	48	626	30	79	108	68	15	96	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.979			0.993			0.964				0.850
Flt Protected	0.950			0.950				0.985			0.993	
Satd. Flow (prot)	1770	1824	0	1787	1868	0	0	1742	0	0	1840	1575
Flt Permitted	0.950			0.950				0.822			0.902	
Satd. Flow (perm)	1770	1824	0	1787	1868	0	0	1454	0	0	1672	1575
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		1904			2587			518			1533	
Travel Time (s)		23.6			32.1			7.8			19.0	
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)	128	861	144	53	696	33	88	120	76	17	107	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	1005	0	53	729	0	0	284	0	0	124	99
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		8
Detector Phase	5	2		1	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		13.6	13.6	13.6
Total Split (s)	14.0	54.0		14.0	54.0		22.0	22.0		22.0	22.0	22.0
Total Split (%)	15.6%	60.0%		15.6%	60.0%		24.4%	24.4%		24.4%	24.4%	24.4%
Maximum Green (s)	7.0	47.0		7.0	47.0		15.0	15.0		15.4	15.4	15.4
Yellow Time (s)	5.0	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		1.6	1.6	1.6
Lost Time Adjust (s)	-2.0	-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			4.6	4.6
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4		3.0	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0		0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effect Green (s)	9.1	49.3		9.1	43.1			17.1			17.5	17.5
Actuated g/C Ratio	0.11	0.58		0.11	0.51			0.20			0.21	0.21
v/c Ratio	0.67	0.94		0.28	0.76			0.97			0.36	0.30
Control Delay	57.3	36.6		41.1	22.6			81.8			33.9	33.3
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 No-Build
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	57.3	36.6		41.1	22.6			81.8			33.9	33.3
LOS	E	D		D	C			F			C	C
Approach Delay		39.0			23.8			81.8			33.6	
Approach LOS		D			C			F			C	
Queue Length 50th (ft)	72	~559		28	291			~175			62	49
Queue Length 95th (ft)	#158	#843		65	431			#330			115	96
Internal Link Dist (ft)		1824			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	190	1066		191	1092			294			347	326
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.67	0.94		0.28	0.67			0.97			0.36	0.30

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 84.4

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 38.6

Intersection LOS: D

Intersection Capacity Utilization 87.9%

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: 1: Averette Road & Wait Avenue

 Ø1	 Ø2	 Ø4
14 s	54 s	22 s
 Ø5	 Ø6	 Ø8
14 s	54 s	22 s

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build - Scenario-1

Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	581	149	106	907	10	166	79	71	34	165	127
Future Volume (vph)	58	581	149	106	907	10	166	79	71	34	165	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.969			0.998			0.970				0.850
Flt Protected	0.950			0.950				0.974			0.991	
Satd. Flow (prot)	1770	1805	0	1787	1878	0	0	1733	0	0	1837	1575
Flt Permitted	0.950			0.950				0.581			0.889	
Satd. Flow (perm)	1770	1805	0	1787	1878	0	0	1034	0	0	1648	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			1			11				141
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		476			2587			518			1533	
Travel Time (s)		5.9			32.1			7.8			19.0	
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)	64	646	166	118	1008	11	184	88	79	38	183	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	812	0	118	1019	0	0	351	0	0	221	141
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		8
Detector Phase	5	2		1	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	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	14.0
Total Split (s)	14.0	77.0		15.0	78.0		48.0	48.0		48.0	48.0	48.0
Total Split (%)	10.0%	55.0%		10.7%	55.7%		34.3%	34.3%		34.3%	34.3%	34.3%
Maximum Green (s)	7.0	70.0		8.0	71.0		41.0	41.0		41.0	41.0	41.0
Yellow Time (s)	5.0	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	2.0
Lost Time Adjust (s)	-2.0	-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	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4		3.0	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0		0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effect Green (s)	9.0	69.1		10.0	73.1			43.1			43.1	43.1
Actuated g/C Ratio	0.07	0.50		0.07	0.53			0.31			0.31	0.31
v/c Ratio	0.55	0.89		0.91	1.02			1.06			0.43	0.24
Control Delay	81.8	42.9		120.8	65.6			109.4			41.3	6.4
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	81.8	42.9		120.8	65.6			109.4			41.3	6.4
LOS	F	D		F	E			F			D	A
Approach Delay		45.8			71.3			109.4			27.7	
Approach LOS		D			E			F			C	
Queue Length 50th (ft)	58	624		109	~1000			~349			161	0
Queue Length 95th (ft)	#115	#861		#235	#1265			#551			242	50
Internal Link Dist (ft)		396			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	116	955		130	1001			332			517	591
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.55	0.85		0.91	1.02			1.06			0.43	0.24

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 137.2

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 62.2

Intersection LOS: E

Intersection Capacity Utilization 99.1%

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: 1: Averette Road & Wait Avenue

		
Ø1	Ø2	Ø4
15 s	77 s	48 s
		
Ø5	Ø6	Ø8
14 s	78 s	48 s

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	816	236	103	631	30	246	121	70	13	119	92
Future Volume (vph)	128	816	236	103	631	30	246	121	70	13	119	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		0	175		0	0		0	0		350
Storage Lanes	1		0	1		0	0		0	0		1
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		0.966			0.993			0.978				0.850
Flt Protected	0.950			0.950				0.973			0.995	
Satd. Flow (prot)	1770	1799	0	1787	1868	0	0	1746	0	0	1844	1575
Flt Permitted	0.950			0.950				0.681			0.944	
Satd. Flow (perm)	1770	1799	0	1787	1868	0	0	1222	0	0	1750	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			2			7				102
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		476			2587			518			1533	
Travel Time (s)		5.9			32.1			7.8			19.0	
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)	142	907	262	114	701	33	273	134	78	14	132	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	1169	0	114	734	0	0	485	0	0	146	102
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			4			8	
Permitted Phases							4			8		8
Detector Phase	5	2		1	6		4	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	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	14.0
Total Split (s)	21.0	84.0		14.0	77.0		52.0	52.0		52.0	52.0	52.0
Total Split (%)	14.0%	56.0%		9.3%	51.3%		34.7%	34.7%		34.7%	34.7%	34.7%
Maximum Green (s)	14.0	77.0		7.0	70.0		45.0	45.0		45.0	45.0	45.0
Yellow Time (s)	5.0	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	2.0
Lost Time Adjust (s)	-2.0	-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	5.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4		3.0	3.4		0.2	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0		0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effect Green (s)	15.5	79.0		9.0	72.5			47.0			47.0	47.0
Actuated g/C Ratio	0.10	0.53		0.06	0.48			0.31			0.31	0.31
v/c Ratio	0.78	1.23		1.07	0.81			1.25			0.27	0.18
Control Delay	92.6	143.1		169.6	41.8			175.3			40.2	7.1
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build - Scenario-1

Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	92.6	143.1		169.6	41.8			175.3			40.2	7.1
LOS	F	F		F	D			F			D	A
Approach Delay		137.6			59.0			175.3			26.6	
Approach LOS		F			E			F			C	
Queue Length 50th (ft)	137	~1402		~123	603			~588			107	0
Queue Length 95th (ft)	#243	#1673		#256	790			#816			169	44
Internal Link Dist (ft)		396			2507			438			1453	
Turn Bay Length (ft)	200			175								350
Base Capacity (vph)	188	954		107	903			387			548	563
Starvation Cap Reductn	0	0		0	0			0			0	0
Spillback Cap Reductn	0	0		0	0			0			0	0
Storage Cap Reductn	0	0		0	0			0			0	0
Reduced v/c Ratio	0.76	1.23		1.07	0.81			1.25			0.27	0.18

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 111.3

Intersection LOS: F

Intersection Capacity Utilization 106.5%

ICU Level of Service G

Analysis Period (min) 15

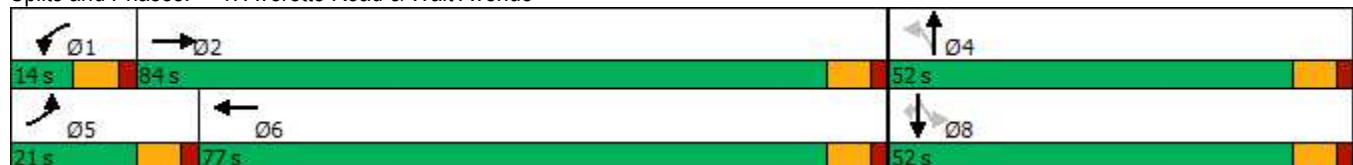
~ Volume exceeds capacity, queue is theoretically infinite.

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: 1: Averette Road & Wait Avenue



Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	581	149	106	907	10	166	79	71	34	165	127
Future Volume (vph)	58	581	149	106	907	10	166	79	71	34	165	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		100	175		0	300		0	0		350
Storage Lanes	1		1	1		0	1		0	0		1
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			0.850		0.998			0.929				0.850
Flt Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1770	1863	1583	1787	1878	0	1743	1705	0	0	1837	1575
Flt Permitted	0.950			0.950			0.950				0.903	
Satd. Flow (perm)	1770	1863	1583	1787	1878	0	1743	1705	0	0	1674	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			140		1			32				141
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		476			2587			518			1533	
Travel Time (s)		5.9			32.1			7.8			19.0	
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)	64	646	166	118	1008	11	184	88	79	38	183	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	64	646	166	118	1019	0	184	167	0	0	221	141
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases			2							8		8
Detector Phase	5	2	2	1	6		7	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0	21.0	14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	14.0	74.0	74.0	21.0	81.0		22.0	45.0		23.0	23.0	23.0
Total Split (%)	10.0%	52.9%	52.9%	15.0%	57.9%		15.7%	32.1%		16.4%	16.4%	16.4%
Maximum Green (s)	7.0	67.0	67.0	14.0	74.0		15.0	38.0		16.0	16.0	16.0
Yellow Time (s)	5.0	5.0	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	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	0.0	-2.0	-2.0		0.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0	7.0	5.0	5.0		7.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0	6.0	3.0	6.0		3.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4	3.4	3.0	3.4		3.0	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
Act Effect Green (s)	9.0	67.3	65.3	14.5	75.9		15.0	40.1			18.0	18.0
Actuated g/C Ratio	0.07	0.49	0.48	0.11	0.55		0.11	0.29			0.13	0.13
v/c Ratio	0.55	0.71	0.20	0.62	0.98		0.96	0.32			1.00	0.43
Control Delay	81.7	32.4	5.3	74.0	54.1		117.5	33.1			120.7	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build Improved Scenario-1

Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	81.7	32.4	5.3	74.0	54.1		117.5	33.1			120.7	12.7
LOS	F	C	A	E	D		F	C			F	B
Approach Delay	30.9			56.2			77.3			78.6		
Approach LOS	C			E			E			E		
Queue Length 50th (ft)	58	447	12	104	897		170	96			~214	0
Queue Length 95th (ft)	#115	595	53	172	#1226		#328	164			#384	64
Internal Link Dist (ft)	396			2507			438			1453		
Turn Bay Length (ft)	200		100	175			300					350
Base Capacity (vph)	116	945	850	209	1044		191	521			220	329
Starvation Cap Reductn	0	0	0	0	0		0	0			0	0
Spillback Cap Reductn	0	0	0	0	0		0	0			0	0
Storage Cap Reductn	0	0	0	0	0		0	0			0	0
Reduced v/c Ratio	0.55	0.68	0.20	0.56	0.98		0.96	0.32			1.00	0.43

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 137

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 53.8

Intersection LOS: D

Intersection Capacity Utilization 90.6%

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: 1: Averette Road & Wait Avenue



Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	816	236	103	631	30	246	121	70	13	119	92
Future Volume (vph)	128	816	236	103	631	30	246	121	70	13	119	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			-2%			3%			1%	
Storage Length (ft)	200		100	175		0	300		0	0		350
Storage Lanes	1		1	1		0	1		0	0		1
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			0.850		0.993			0.945				0.850
Flt Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1770	1863	1583	1787	1868	0	1743	1734	0	0	1844	1575
Flt Permitted	0.950			0.950			0.950				0.937	
Satd. Flow (perm)	1770	1863	1583	1787	1868	0	1743	1734	0	0	1737	1575
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164		3			25				164
Link Speed (mph)		55			55			45			55	
Link Distance (ft)		476			2587			518			1533	
Travel Time (s)		5.9			32.1			7.8			19.0	
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)	142	907	262	114	701	33	273	134	78	14	132	102
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	907	262	114	734	0	273	212	0	0	146	102
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		7	4			8	
Permitted Phases			2							8		8
Detector Phase	5	2	2	1	6		7	4		8	8	8
Switch Phase												
Minimum Initial (s)	7.0	14.0	14.0	7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0	21.0	14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	18.0	65.0	65.0	14.0	61.0		25.0	41.0		16.0	16.0	16.0
Total Split (%)	15.0%	54.2%	54.2%	11.7%	50.8%		20.8%	34.2%		13.3%	13.3%	13.3%
Maximum Green (s)	11.0	58.0	58.0	7.0	54.0		18.0	34.0		9.0	9.0	9.0
Yellow Time (s)	5.0	5.0	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	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	0.0	-2.0	-2.0		0.0	-2.0			-2.0	-2.0
Total Lost Time (s)	5.0	5.0	7.0	5.0	5.0		7.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Vehicle Extension (s)	3.0	6.0	6.0	3.0	6.0		3.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	3.0	3.4	3.4	3.0	3.4		3.0	0.2		0.2	0.2	0.2
Time Before Reduce (s)	0.0	15.0	15.0	0.0	15.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	45.0	45.0	0.0	45.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
Act Effect Green (s)	12.8	59.3	57.3	9.0	55.5		18.0	36.0			11.0	11.0
Actuated g/C Ratio	0.11	0.50	0.48	0.08	0.47		0.15	0.30			0.09	0.09
v/c Ratio	0.75	0.98	0.31	0.84	0.84		1.04	0.39			0.91	0.35
Control Delay	76.5	55.2	7.9	100.1	38.6		115.8	31.7			105.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0

Lanes, Volumes, Timings
1: Averette Road & Wait Avenue

2031 Build Improved Scenario-1

Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	76.5	55.2	7.9	100.1	38.6		115.8	31.7			105.8	4.1
LOS	E	E	A	F	D		F	C			F	A
Approach Delay	48.0			46.8			79.0			64.0		
Approach LOS	D			D			E			E		
Queue Length 50th (ft)	108	664	41	89	485		~229	114			114	0
Queue Length 95th (ft)	#207	#958	94	#197	#679		#402	186			#242	7
Internal Link Dist (ft)	396			2507			438			1453		
Turn Bay Length (ft)	200		100	175			300					350
Base Capacity (vph)	192	936	853	135	878		263	540			160	294
Starvation Cap Reductn	0	0	0	0	0		0	0			0	0
Spillback Cap Reductn	0	0	0	0	0		0	0			0	0
Storage Cap Reductn	0	0	0	0	0		0	0			0	0
Reduced v/c Ratio	0.74	0.97	0.31	0.84	0.84		1.04	0.39			0.91	0.35

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 119.3

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 54.2

Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

Analysis Period (min) 15

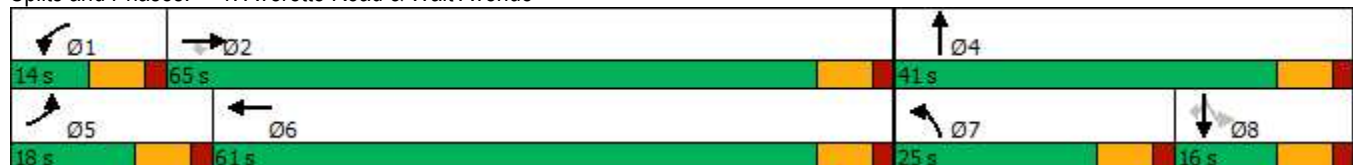
~ Volume exceeds capacity, queue is theoretically infinite.

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: 1: Averette Road & Wait Avenue



APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

CARRIE MAY LANE/ACCESS B

HCM 6th TWSC
2: Wait Avenue & Carrie May Lane

2025 Existing
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	568	977	4	4	4
Future Vol, veh/h	4	568	977	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	631	1086	4	4	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1090	0	-	0	1727	1088
Stage 1	-	-	-	-	1088	-
Stage 2	-	-	-	-	639	-
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	640	-	-	-	97	262
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	526	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	640	-	-	-	96	262
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	526	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		32.2		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	640	-	-	-	141	
HCM Lane V/C Ratio	0.007	-	-	-	0.063	
HCM Control Delay (s)	10.7	0	-	-	32.2	
HCM Lane LOS	B	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th TWSC
2: Wait Avenue & Carrie May Lane

2025 Existing
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	875	684	4	4	4
Future Vol, veh/h	4	875	684	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	972	760	4	4	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	764	0	-	0	1742	762
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	980	-
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	849	-	-	-	95	405
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	849	-	-	-	94	405
Mov Cap-2 Maneuver	-	-	-	-	94	-
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	364	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		30		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	849	-	-	-	153	
HCM Lane V/C Ratio	0.005	-	-	-	0.058	
HCM Control Delay (s)	9.3	0	-	-	30	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th TWSC
2: Wait Avenue & Carrie May Lane

2031 No-Build
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	659	1133	4	4	4
Future Vol, veh/h	4	659	1133	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	732	1259	4	4	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1263	0	-	0	2001	1261
Stage 1	-	-	-	-	1261	-
Stage 2	-	-	-	-	740	-
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	550	-	-	-	66	208
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	550	-	-	-	65	208
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	264	-
Stage 2	-	-	-	-	472	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		44.9		
HCM LOS				E		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	550	-	-	-	99	
HCM Lane V/C Ratio	0.008	-	-	-	0.09	
HCM Control Delay (s)	11.6	0	-	-	44.9	
HCM Lane LOS	B	A	-	-	E	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

HCM 6th TWSC
2: Wait Avenue & Carrie May Lane

2031 No-Build
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1015	793	4	5	4
Future Vol, veh/h	4	1015	793	4	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	1128	881	4	6	4
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	885	0	-	0	2019	883
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	1136	-
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	765	-	-	-	64	345
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	306	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	765	-	-	-	63	345
Mov Cap-2 Maneuver	-	-	-	-	63	-
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	306	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		45.4		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	765	-	-	-	99	
HCM Lane V/C Ratio	0.006	-	-	-	0.101	
HCM Control Delay (s)	9.7	0	-	-	45.4	
HCM Lane LOS	A	A	-	-	E	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

HCM 6th TWSC
2: Access B/Carrie May Lane & Wait Avenue

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	100.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔			↔			↔	
Traffic Vol, veh/h	4	718	14	19	1151	4	95	4	56	4	4	4
Future Vol, veh/h	4	718	14	19	1151	4	95	4	56	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	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	4	798	16	21	1279	4	106	4	62	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1283	0	0	814	0	0	2133	2131	798	2170	2145	1281
Stage 1	-	-	-	-	-	-	806	806	-	1323	1323	-
Stage 2	-	-	-	-	-	-	1327	1325	-	847	822	-
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	541	-	-	813	-	-	~ 36	50	386	34	49	202
Stage 1	-	-	-	-	-	-	376	395	-	192	226	-
Stage 2	-	-	-	-	-	-	191	225	-	357	388	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	541	-	-	813	-	-	~ 32	48	386	26	47	202
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 32	48	-	26	47	-
Stage 1	-	-	-	-	-	-	371	389	-	189	220	-
Stage 2	-	-	-	-	-	-	178	219	-	292	383	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	\$ 1340.6	112.5
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	48	541	-	-	813	-	-	46
HCM Lane V/C Ratio	3.588	0.008	-	-	0.026	-	-	0.29
HCM Control Delay (s)	\$ 1340.6	11.7	0	-	9.5	-	-	112.5
HCM Lane LOS	F	B	A	-	A	-	-	F
HCM 95th %tile Q(veh)	18.9	0	-	-	0.1	-	-	1

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

HCM 6th TWSC
2: Access B/Carrie May Lane & Wait Avenue

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	176											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔			↔			↔	
Traffic Vol, veh/h	4	1108	47	63	841	4	105	4	37	5	4	4
Future Vol, veh/h	4	1108	47	63	841	4	105	4	37	5	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	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	4	1231	52	70	934	4	117	4	41	6	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	938	0	0	1283	0	0	2319	2317	1231	2364	2367	936
Stage 1	-	-	-	-	-	-	1239	1239	-	1076	1076	-
Stage 2	-	-	-	-	-	-	1080	1078	-	1288	1291	-
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	730	-	-	541	-	-	~ 26	38	216	24	35	321
Stage 1	-	-	-	-	-	-	215	247	-	266	296	-
Stage 2	-	-	-	-	-	-	264	295	-	201	234	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	730	-	-	541	-	-	~ 20	32	216	15	30	321
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 20	32	-	15	30	-
Stage 1	-	-	-	-	-	-	211	242	-	261	258	-
Stage 2	-	-	-	-	-	-	223	257	-	157	230	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	\$ 2655.9	241.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	26	730	-	-	541	-	-	27
HCM Lane V/C Ratio	6.239	0.006	-	-	0.129	-	-	0.535
HCM Control Delay (s)	\$ 2655.9	10	0	-	12.6	-	-	241.2
HCM Lane LOS	F	A	A	-	B	-	-	F
HCM 95th %tile Q(veh)	20.1	0	-	-	0.4	-	-	1.7

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

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved Scenario-1

Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	718	14	19	1151	4	95	4	56	4	4	4
Future Volume (vph)	4	718	14	19	1151	4	95	4	56	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	125		0	0		0	0		0
Storage Lanes	0		1	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			0.850					0.951			0.955	
Flt Protected				0.950				0.970			0.984	
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	1718	0	0	1750	0
Flt Permitted		0.893		0.950				0.805			0.908	
Satd. Flow (perm)	0	1663	1583	1770	1863	0	0	1426	0	0	1615	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			25			25	
Link Distance (ft)		547			720			1076			1193	
Travel Time (s)		6.8			8.9			29.3			32.5	
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)	4	798	16	21	1279	4	106	4	62	4	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	802	16	21	1283	0	0	172	0	0	12	0
Turn Type	Perm	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4				2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.0	20.0	20.0	14.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0	56.0	14.0	70.0		20.0	20.0		20.0	20.0	
Total Split (%)	62.2%	62.2%	62.2%	15.6%	77.8%		22.2%	22.2%		22.2%	22.2%	
Maximum Green (s)	49.0	49.0	49.0	7.0	63.0		13.0	13.0		13.0	13.0	
Yellow Time (s)	5.0	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	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	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Act Effct Green (s)		56.8	56.8	9.1	62.2			14.3			14.3	
Actuated g/C Ratio		0.66	0.66	0.11	0.72			0.17			0.17	
v/c Ratio		0.74	0.02	0.11	0.96			0.73			0.05	
Control Delay		17.6	7.6	38.6	29.4			55.1			32.2	
Queue Delay		0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay		17.6	7.6	38.6	29.4			55.1			32.2	
LOS		B	A	D	C			E			C	
Approach Delay		17.4			29.5			55.1			32.2	
Approach LOS		B			C			E			C	

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		205	2	11	546			94			6	
Queue Length 95th (ft)		#617	12	33	#977			#189			21	
Internal Link Dist (ft)		467			640			996			1113	
Turn Bay Length (ft)			50	125								
Base Capacity (vph)		1091	1039	185	1409			248			282	
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		0.74	0.02	0.11	0.91			0.69			0.04	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 86.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 27.1

Intersection LOS: C

Intersection Capacity Utilization 85.0%

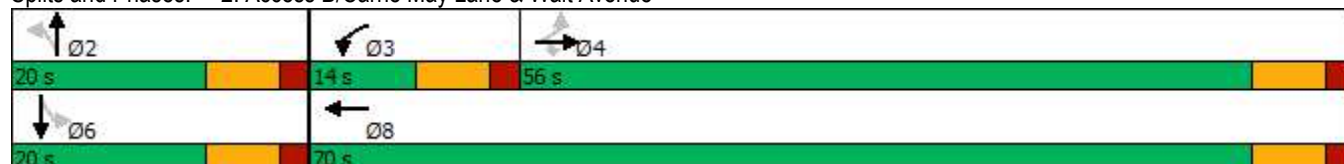
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Access B/Carrie May Lane & Wait Avenue



Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved Scenario-1

Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1108	47	63	841	4	105	4	37	5	4	4
Future Volume (vph)	4	1108	47	63	841	4	105	4	37	5	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	125		0	0		0	0		0
Storage Lanes	0		1	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			0.850		0.999			0.966			0.961	
Flt Protected				0.950				0.965			0.979	
Satd. Flow (prot)	0	1863	1583	1770	1861	0	0	1736	0	0	1753	0
Flt Permitted		0.998		0.950				0.778			0.885	
Satd. Flow (perm)	0	1859	1583	1770	1861	0	0	1400	0	0	1584	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			25			25	
Link Distance (ft)		547			720			1076			1193	
Travel Time (s)		6.8			8.9			29.3			32.5	
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)	4	1231	52	70	934	4	117	4	41	6	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1235	52	70	938	0	0	162	0	0	14	0
Turn Type	Perm	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4				2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.0	20.0	20.0	14.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	85.0	85.0	85.0	14.0	99.0		21.0	21.0		21.0	21.0	
Total Split (%)	70.8%	70.8%	70.8%	11.7%	82.5%		17.5%	17.5%		17.5%	17.5%	
Maximum Green (s)	78.0	78.0	78.0	7.0	92.0		14.0	14.0		14.0	14.0	
Yellow Time (s)	5.0	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	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	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Act Effct Green (s)		79.4	79.4	9.0	90.3			15.9			15.9	
Actuated g/C Ratio		0.68	0.68	0.08	0.78			0.14			0.14	
v/c Ratio		0.97	0.05	0.51	0.65			0.85			0.06	
Control Delay		38.9	7.1	67.0	8.3			86.2			46.5	
Queue Delay		0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay		38.9	7.1	67.0	8.3			86.2			46.5	
LOS		D	A	E	A			F			D	
Approach Delay		37.6			12.4			86.2			46.5	
Approach LOS		D			B			F			D	

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		870	13	53	264			125			10	
Queue Length 95th (ft)		#1253	27	103	369			#251			30	
Internal Link Dist (ft)		467			640			996			1113	
Turn Bay Length (ft)			50	125								
Base Capacity (vph)		1286	1095	137	1512			193			219	
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	0.05	0.51	0.62			0.84			0.06	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 116.2

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 30.6

Intersection LOS: C

Intersection Capacity Utilization 84.6%

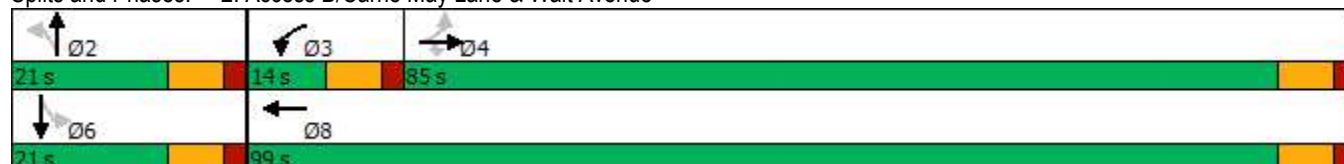
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Access B/Carrie May Lane & Wait Avenue



HCM 6th TWSC
2: Access B/Carrie May Lane & Wait Avenue

2031 Build - Scenario-2
Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	138.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	718	14	77	1122	4	95	4	56	4	4	4
Future Vol, veh/h	4	718	14	77	1122	4	95	4	56	4	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	350	-	-	-	-	-	-	-	-
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	4	798	16	86	1247	4	106	4	62	4	4	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1251	0	0	814	0	0	2231	2229	798	2268	2243	1249
Stage 1	-	-	-	-	-	-	806	806	-	1421	1421	-
Stage 2	-	-	-	-	-	-	1425	1423	-	847	822	-
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	556	-	-	813	-	-	~ 30	43	386	29	42	211
Stage 1	-	-	-	-	-	-	376	395	-	169	202	-
Stage 2	-	-	-	-	-	-	168	202	-	357	388	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	556	-	-	813	-	-	~ 24	38	386	20	37	211
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 24	38	-	20	37	-
Stage 1	-	-	-	-	-	-	371	390	-	167	181	-
Stage 2	-	-	-	-	-	-	143	181	-	292	383	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			\$ 1862.7			149.4		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	37	556	-	-	813	-	-	37				
HCM Lane V/C Ratio	4.655	0.008	-	-	0.105	-	-	0.36				
HCM Control Delay (s)	\$ 1862.7	11.5	0	-	9.9	-	-	149.4				
HCM Lane LOS	F	B	A	-	A	-	-	F				
HCM 95th %tile Q(veh)	20.1	0	-	-	0.4	-	-	1.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

HCM 6th TWSC
2: Access B/Carrie May Lane & Wait Avenue

2031 Build - Scenario-2

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	295.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1108	47	153	815	4	105	4	37	5	4	4
Future Vol, veh/h	5	1108	47	153	815	4	105	4	37	5	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	350	-	-	-	-	-	-	-	-
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	6	1231	52	170	906	4	117	4	41	6	4	4
Major/Minor	Major1		Major2			Minor1			Minor2			
Conflicting Flow All	910	0	0	1283	0	0	2495	2493	1231	2540	2543	908
Stage 1	-	-	-	-	-	-	1243	1243	-	1248	1248	-
Stage 2	-	-	-	-	-	-	1252	1250	-	1292	1295	-
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	748	-	-	541	-	-	~ 20	29	216	18	27	334
Stage 1	-	-	-	-	-	-	214	246	-	212	245	-
Stage 2	-	-	-	-	-	-	211	244	-	200	233	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	748	-	-	541	-	-	~ 12	19	216	9	18	334
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 12	19	-	9	18	-
Stage 1	-	-	-	-	-	-	208	239	-	206	168	-
Stage 2	-	-	-	-	-	-	139	167	-	154	226	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0		2.3			\$ 4578.6			\$ 511.3			
HCM LOS						F			F			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	16	748	-	-	541	-	-	16				
HCM Lane V/C Ratio	10.139	0.007	-	-	0.314	-	-	0.903				
HCM Control Delay (s)	\$ 4578.6	9.8	0	-	14.7	-	-	\$ 511.3				
HCM Lane LOS	F	A	A	-	B	-	-	F				
HCM 95th %tile Q(veh)	21.2	0	-	-	1.3	-	-	2.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved - Scenario-2

Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	718	14	77	1122	4	95	4	56	4	4	4
Future Volume (vph)	4	718	14	77	1122	4	95	4	56	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	350		0	0		0	0		0
Storage Lanes	0		1	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			0.850					0.951			0.955	
Flt Protected				0.950				0.970			0.984	
Satd. Flow (prot)	0	1863	1583	1770	1863	0	0	1718	0	0	1750	0
Flt Permitted		0.948		0.950				0.805			0.906	
Satd. Flow (perm)	0	1766	1583	1770	1863	0	0	1426	0	0	1612	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133					27			4	
Link Speed (mph)		55			55			25			25	
Link Distance (ft)		547			774			1076			1193	
Travel Time (s)		6.8			9.6			29.3			32.5	
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)	4	798	16	86	1247	4	106	4	62	4	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	802	16	86	1251	0	0	172	0	0	12	0
Turn Type	Perm	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4				2		6			
Detector Phase	4	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.0	20.0	20.0	14.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	56.0	56.0	56.0	14.0	70.0		20.0	20.0		20.0	20.0	
Total Split (%)	62.2%	62.2%	62.2%	15.6%	77.8%		22.2%	22.2%		22.2%	22.2%	
Maximum Green (s)	49.0	49.0	49.0	7.0	63.0		13.0	13.0		13.0	13.0	
Yellow Time (s)	5.0	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	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	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Act Effct Green (s)		49.6	49.6	9.2	60.2			13.6			13.6	
Actuated g/C Ratio		0.59	0.59	0.11	0.72			0.16			0.16	
v/c Ratio		0.77	0.02	0.44	0.94			0.68			0.05	
Control Delay		20.9	0.0	46.1	25.7			44.0			27.1	
Queue Delay		0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay		20.9	0.0	46.1	25.7			44.0			27.1	
LOS		C	A	D	C			D			C	
Approach Delay		20.5			27.1			44.0			27.1	
Approach LOS		C			C			D			C	

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		337	0	47	504			78			4	
Queue Length 95th (ft)		514	0	94	#937			#162			19	
Internal Link Dist (ft)		467			694			996			1113	
Turn Bay Length (ft)			50	350								
Base Capacity (vph)		1095	1032	194	1457			282			297	
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	0.02	0.44	0.86			0.61			0.04	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 84

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 26.0

Intersection LOS: C

Intersection Capacity Utilization 87.9%

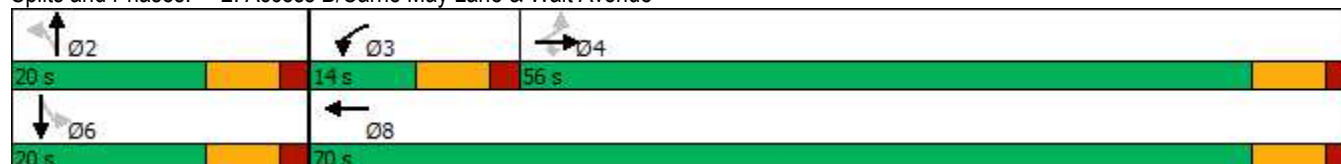
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Access B/Carrie May Lane & Wait Avenue



Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved - Scenario-2

Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1108	47	153	815	4	105	4	37	5	4	4
Future Volume (vph)	5	1108	47	153	815	4	105	4	37	5	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	350		0	0		0	0		0
Storage Lanes	0		1	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			0.850		0.999			0.966			0.961	
Flt Protected				0.950				0.965			0.979	
Satd. Flow (prot)	0	1863	1583	1770	1861	0	0	1736	0	0	1753	0
Flt Permitted		0.996		0.950				0.778			0.883	
Satd. Flow (perm)	0	1855	1583	1770	1861	0	0	1400	0	0	1581	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			100		1			12			4	
Link Speed (mph)		55			55			25			25	
Link Distance (ft)		547			774			1076			1193	
Travel Time (s)		6.8			9.6			29.3			32.5	
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)	6	1231	52	170	906	4	117	4	41	6	4	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1237	52	170	910	0	0	162	0	0	14	0
Turn Type	Perm	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4				2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	20.0	20.0	20.0	14.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	84.0	84.0	84.0	16.0	100.0		20.0	20.0		20.0	20.0	
Total Split (%)	70.0%	70.0%	70.0%	13.3%	83.3%		16.7%	16.7%		16.7%	16.7%	
Maximum Green (s)	77.0	77.0	77.0	9.0	93.0		13.0	13.0		13.0	13.0	
Yellow Time (s)	5.0	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	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	Lag	Lag	Lag	Lead								
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	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Act Effct Green (s)		79.0	79.0	11.0	95.0			15.0			15.0	
Actuated g/C Ratio		0.66	0.66	0.09	0.79			0.12			0.12	
v/c Ratio		1.01	0.05	1.05	0.62			0.88			0.07	
Control Delay		50.5	0.2	136.9	7.3			88.4			38.8	
Queue Delay		0.0	0.0	0.0	0.0			0.0			0.0	
Total Delay		50.5	0.2	136.9	7.3			88.4			38.8	
LOS		D	A	F	A			F			D	
Approach Delay		48.4			27.7			88.4			38.8	
Approach LOS		D			C			F			D	

Lanes, Volumes, Timings
2: Access B/Carrie May Lane & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		~940	0	~143	235			116			7	
Queue Length 95th (ft)		#1271	1	#285	328			#245			28	
Internal Link Dist (ft)		467			694			996			1113	
Turn Bay Length (ft)			50	350								
Base Capacity (vph)		1221	1076	162	1473			185			201	
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		1.01	0.05	1.05	0.62			0.88			0.07	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 42.1

Intersection LOS: D

Intersection Capacity Utilization 129.0%

ICU Level of Service H

Analysis Period (min) 15

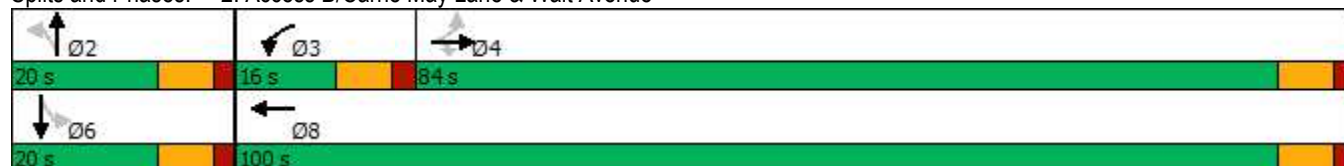
~ Volume exceeds capacity, queue is theoretically infinite.

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: 2: Access B/Carrie May Lane & Wait Avenue



APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

AUSTIN VIEW BLVD

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2025 Existing
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	5.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↘↗	
Traffic Vol, veh/h	537	31	9	971	63	32
Future Vol, veh/h	537	31	9	971	63	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	597	34	10	1079	70	36
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	631	0	1696	597
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	1099	-
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	-	-	951	-	102	503
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	319	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	951	-	101	503
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	315	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		86.7	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	138	-	-	951	-	
HCM Lane V/C Ratio	0.765	-	-	0.011	-	
HCM Control Delay (s)	86.7	-	-	8.8	-	
HCM Lane LOS	F	-	-	A	-	
HCM 95th %tile Q(veh)	4.6	-	-	0	-	

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2025 Existing
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	853	59	30	657	43	25
Future Vol, veh/h	853	59	30	657	43	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	948	66	33	730	48	28
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1014	0	1744	948
Stage 1	-	-	-	-	948	-
Stage 2	-	-	-	-	796	-
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	-	-	684	-	95	316
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	444	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	684	-	90	316
Mov Cap-2 Maneuver	-	-	-	-	90	-
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	423	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		73.6	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	122	-	-	684	-	
HCM Lane V/C Ratio	0.619	-	-	0.049	-	
HCM Control Delay (s)	73.6	-	-	10.5	-	
HCM Lane LOS	F	-	-	B	-	
HCM 95th %tile Q(veh)	3.2	-	-	0.2	-	

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 No-Build
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	15.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	623	36	10	1126	73	37
Future Vol, veh/h	623	36	10	1126	73	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	692	40	11	1251	81	41

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	732
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	873
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	873
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	268.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	95	-	-	873	-
HCM Lane V/C Ratio	1.287	-	-	0.013	-
HCM Control Delay (s)	268.9	-	-	9.2	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	8.7	-	-	0	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 No-Build
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	989	68	35	762	50	29
Future Vol, veh/h	989	68	35	762	50	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	1099	76	39	847	56	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1175
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	594
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	594
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	200.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	84	-	-	594	-
HCM Lane V/C Ratio	1.045	-	-	0.065	-
HCM Control Delay (s)	200.3	-	-	11.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	6	-	-	0.2	-

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	23					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘↗	
Traffic Vol, veh/h	697	36	10	1210	73	37
Future Vol, veh/h	697	36	10	1210	73	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	774	40	11	1344	81	41
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	814	0	2140	774
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	1366	-
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	-	-	813	-	~ 54	398
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	237	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	813	-	~ 53	398
Mov Cap-2 Maneuver	-	-	-	-	~ 53	-
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	234	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		\$ 429.8	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	75	-	-	813	-	
HCM Lane V/C Ratio	1.63	-	-	0.014	-	
HCM Control Delay (s)	\$ 429.8	-	-	9.5	-	
HCM Lane LOS	F	-	-	A	-	
HCM 95th %tile Q(veh)	10.3	-	-	0	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	17.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	1129	68	35	890	50	29
Future Vol, veh/h	1129	68	35	890	50	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	1254	76	39	989	56	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1330
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	519
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	519
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	\$ 474.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	-	-	519	-
HCM Lane V/C Ratio	1.626	-	-	0.075	-
HCM Control Delay (s)	\$ 474.3	-	-	12.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	8.2	-	-	0.2	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	23					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	697	36	10	1210	73	37
Future Vol, veh/h	697	36	10	1210	73	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	774	40	11	1344	81	41

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	814
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	813
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	813
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	\$ 429.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	75	-	-	813	-
HCM Lane V/C Ratio	1.63	-	-	0.014	-
HCM Control Delay (s)	\$ 429.8	-	-	9.5	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	10.3	-	-	0	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	17.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	1129	68	35	890	50	29
Future Vol, veh/h	1129	68	35	890	50	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	1254	76	39	989	56	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1330
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	519
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	519
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	\$ 474.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	-	-	519	-
HCM Lane V/C Ratio	1.626	-	-	0.075	-
HCM Control Delay (s)	\$ 474.3	-	-	12.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	8.2	-	-	0.2	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build - Scenario-2
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	23					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	697	36	11	1210	73	37
Future Vol, veh/h	697	36	11	1210	73	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	774	40	12	1344	81	41

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	814	0	2142	774
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	1368	-
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	-	-	813	-	~ 54	398
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	237	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	813	-	~ 53	398
Mov Cap-2 Maneuver	-	-	-	-	~ 53	-
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	233	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	\$ 429.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	75	-	-	813	-
HCM Lane V/C Ratio	1.63	-	-	0.015	-
HCM Control Delay (s)	\$ 429.8	-	-	9.5	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	10.3	-	-	0	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build - Scenario-2
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	17.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	1129	68	37	890	50	29
Future Vol, veh/h	1129	68	37	890	50	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	1254	76	41	989	56	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1330
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	519
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	519
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	\$ 474.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	-	-	519	-
HCM Lane V/C Ratio	1.626	-	-	0.079	-
HCM Control Delay (s)	\$ 474.3	-	-	12.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	8.2	-	-	0.3	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	23					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	697	36	11	1210	73	37
Future Vol, veh/h	697	36	11	1210	73	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	774	40	12	1344	81	41

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	814	0	2142	774
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	1368	-
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	-	-	813	-	~ 54	398
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	237	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	813	-	~ 53	398
Mov Cap-2 Maneuver	-	-	-	-	~ 53	-
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	233	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	\$ 429.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	75	-	-	813	-
HCM Lane V/C Ratio	1.63	-	-	0.015	-
HCM Control Delay (s)	\$ 429.8	-	-	9.5	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	10.3	-	-	0	-

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

HCM 6th TWSC
3: Austin View Blvd & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	17.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	1129	68	37	890	50	29
Future Vol, veh/h	1129	68	37	890	50	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	325	-	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	1254	76	41	989	56	32

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1330
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	519
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	519
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	\$ 474.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	54	-	-	519	-
HCM Lane V/C Ratio	1.626	-	-	0.079	-
HCM Control Delay (s)	\$ 474.3	-	-	12.5	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	8.2	-	-	0.3	-

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

APPENDIX G

CAPACITY ANALYSIS CALCULATIONS

Averette Road

&

OLD PEARCE ROAD

HCM 6th TWSC
4: Averette Road & Old Pearce Road

2025 Existing
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	98	26	164	88	50	190
Future Vol, veh/h	98	26	164	88	50	190
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	-	-	-	-	-
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	109	29	182	98	56	211
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	554	231	0	0	280	0
Stage 1	231	-	-	-	-	-
Stage 2	323	-	-	-	-	-
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	493	808	-	-	1283	-
Stage 1	807	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	469	808	-	-	1283	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.5	0		1.7		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 514		1283	-	
HCM Lane V/C Ratio	-	- 0.268		0.043	-	
HCM Control Delay (s)	-	- 14.5		7.9	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 1.1		0.1	-	

HCM 6th TWSC
4: Averette Road & Old Pearce Road

2025 Existing
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	32	188	60	61	175
Future Vol, veh/h	71	32	188	60	61	175
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	-	-	-	-	-
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	79	36	209	67	68	194
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	573	243	0	0	276	0
Stage 1	243	-	-	-	-	-
Stage 2	330	-	-	-	-	-
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	481	796	-	-	1287	-
Stage 1	797	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	453	796	-	-	1287	-
Mov Cap-2 Maneuver	453	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.8	0		2.1		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 523		1287	-	
HCM Lane V/C Ratio	-	- 0.219		0.053	-	
HCM Control Delay (s)	-	- 13.8		8	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.8		0.2	-	

HCM 6th TWSC
4: Averette Road & Old Pearce Road

2031 No-Build
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	4.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	114	30	190	102	58	220
Future Vol, veh/h	114	30	190	102	58	220
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	-	-	-	-	-
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	127	33	211	113	64	244
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	640	268	0	0	324	0
Stage 1	268	-	-	-	-	-
Stage 2	372	-	-	-	-	-
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	440	771	-	-	1236	-
Stage 1	777	-	-	-	-	-
Stage 2	697	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	414	771	-	-	1236	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17	0	1.7			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	458	1236	-	
HCM Lane V/C Ratio	-	-	0.349	0.052	-	
HCM Control Delay (s)	-	-	17	8.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.5	0.2	-	

HCM 6th TWSC
4: Averette Road & Old Pearce Road

2031 No-Build
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	82	37	218	70	71	203
Future Vol, veh/h	82	37	218	70	71	203
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	-	-	-	-	-
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	91	41	242	78	79	226
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	665	281	0	0	320	0
Stage 1	281	-	-	-	-	-
Stage 2	384	-	-	-	-	-
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	425	758	-	-	1240	-
Stage 1	767	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	394	758	-	-	1240	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.9	0		2.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	463	1240	-	
HCM Lane V/C Ratio	-	-	0.286	0.064	-	
HCM Control Delay (s)	-	-	15.9	8.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-	

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵			↵	↵
Traffic Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Future Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	104	6	14	127	9	33	88	213	113	64	329	72
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	924	959	329	949	975	270	401	0	0	326	0	0
Stage 1	457	457	-	446	446	-	-	-	-	-	-	-
Stage 2	467	502	-	503	529	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	257	712	240	251	769	1158	-	-	1234	-	-
Stage 1	583	568	-	591	574	-	-	-	-	-	-	-
Stage 2	576	542	-	551	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	222	712	206	216	769	1158	-	-	1234	-	-
Mov Cap-2 Maneuver	207	222	-	206	216	-	-	-	-	-	-	-
Stage 1	539	530	-	546	530	-	-	-	-	-	-	-
Stage 2	501	501	-	498	492	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	38.9		48.8			1.8			1.1			
HCM LOS	E		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1158	-	-	226	241	1234	-	-				
HCM Lane V/C Ratio	0.076	-	-	0.551	0.701	0.052	-	-				
HCM Control Delay (s)	8.4	-	-	38.9	48.8	8.1	0	-				
HCM Lane LOS	A	-	-	E	E	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	3	4.6	0.2	-	-				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build - Scenario-1

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵			↵	↵
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	220.8		82.1			2.3			1.3			
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1129	-	-	168	176	1200	-	-				
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-	-				
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0	-				
HCM Lane LOS	A	-	-	F	F	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Future Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	104	6	14	127	9	33	88	213	113	64	329	72

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	924	959	329	949	975	270	401	0	0	326	0	0
Stage 1	457	457	-	446	446	-	-	-	-	-	-	-
Stage 2	467	502	-	503	529	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	257	712	240	251	769	1158	-	-	1234	-	-
Stage 1	583	568	-	591	574	-	-	-	-	-	-	-
Stage 2	576	542	-	551	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	207	222	712	206	216	769	1158	-	-	1234	-	-
Mov Cap-2 Maneuver	207	222	-	206	216	-	-	-	-	-	-	-
Stage 1	539	530	-	546	530	-	-	-	-	-	-	-
Stage 2	501	501	-	498	492	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38.9		48.8		1.8		1.1	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1158	-	-	226 241	1234	-	-
HCM Lane V/C Ratio	0.076	-	-	0.551 0.701	0.052	-	-
HCM Control Delay (s)	8.4	-	-	38.9 48.8	8.1	0	-
HCM Lane LOS	A	-	-	E E	A A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3 4.6	0.2	-	-

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved Scenario-1

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	220.8		82.1		2.3		1.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1129	-	-	168	176	1200	-
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0
HCM Lane LOS	A	-	-	F	F	A	A
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-

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

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	12.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Future Vol, veh/h	94	5	13	114	8	30	79	192	102	58	296	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	104	6	14	127	9	33	88	213	113	64	329	72
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	924	959	329	949	975	270	401	0	0	326	0	0
Stage 1	457	457	-	446	446	-	-	-	-	-	-	-
Stage 2	467	502	-	503	529	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	257	712	240	251	769	1158	-	-	1234	-	-
Stage 1	583	568	-	591	574	-	-	-	-	-	-	-
Stage 2	576	542	-	551	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	222	712	206	216	769	1158	-	-	1234	-	-
Mov Cap-2 Maneuver	207	222	-	206	216	-	-	-	-	-	-	-
Stage 1	539	530	-	546	530	-	-	-	-	-	-	-
Stage 2	501	501	-	498	492	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	38.9		48.8		1.8		1.1					
HCM LOS	E		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1158	-	-	226	241	1234	-	-				
HCM Lane V/C Ratio	0.076	-	-	0.551	0.701	0.052	-	-				
HCM Control Delay (s)	8.4	-	-	38.9	48.8	8.1	0	-				
HCM Lane LOS	A	-	-	E	E	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	3	4.6	0.2	-	-				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved Scenario-1

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	220.8		82.1			2.3			1.3			
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1129	-	-	168	176	1200	-	-				
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-	-				
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0	-				
HCM Lane LOS	A	-	-	F	F	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build - Scenario-2

Timing Plan: AM Peak Hour

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵			↕	↵
Traffic Vol, veh/h	94	5	13	114	8	30	78	193	102	58	296	65
Future Vol, veh/h	94	5	13	114	8	30	78	193	102	58	296	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	104	6	14	127	9	33	87	214	113	64	329	72
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	923	958	329	948	974	271	401	0	0	327	0	0
Stage 1	457	457	-	445	445	-	-	-	-	-	-	-
Stage 2	466	501	-	503	529	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	250	257	712	241	252	768	1158	-	-	1233	-	-
Stage 1	583	568	-	592	575	-	-	-	-	-	-	-
Stage 2	577	543	-	551	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	208	222	712	207	217	768	1158	-	-	1233	-	-
Mov Cap-2 Maneuver	208	222	-	207	217	-	-	-	-	-	-	-
Stage 1	539	530	-	548	532	-	-	-	-	-	-	-
Stage 2	502	502	-	498	492	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	38.6		47.8			1.7			1.1			
HCM LOS	E		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1158	-	-	227	243	1233	-	-				
HCM Lane V/C Ratio	0.075	-	-	0.548	0.695	0.052	-	-				
HCM Control Delay (s)	8.4	-	-	38.6	47.8	8.1	0	-				
HCM Lane LOS	A	-	-	E	E	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	3	4.6	0.2	-	-				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build - Scenario-2

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	220.8		82.1		2.3		1.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1129	-	-	168	176	1200	-
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0
HCM Lane LOS	A	-	-	F	F	A	A
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-

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

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved - Scenario-2

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↵			↵	↵
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	220.8		82.1		2.3		1.3					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1129	-	-	168	176	1200	-	-				
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-	-				
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0	-				
HCM Lane LOS	A	-	-	F	F	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
4: Averette Road & Access E/Old Pearce Road

2031 Build Improved - Scenario-2

Timing Plan: PM Peak Hour

Intersection												
Int Delay, s/veh	45.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘			↗	↘
Traffic Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Future Vol, veh/h	147	13	35	82	12	37	116	253	70	71	309	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	75
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	163	14	39	91	13	41	129	281	78	79	343	87
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1106	1118	343	1149	1166	320	430	0	0	359	0	0
Stage 1	501	501	-	578	578	-	-	-	-	-	-	-
Stage 2	605	617	-	571	588	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	207	700	176	194	721	1129	-	-	1200	-	-
Stage 1	552	543	-	501	501	-	-	-	-	-	-	-
Stage 2	485	481	-	506	496	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 142	167	700	133	157	721	1129	-	-	1200	-	-
Mov Cap-2 Maneuver	~ 142	167	-	133	157	-	-	-	-	-	-	-
Stage 1	489	495	-	444	444	-	-	-	-	-	-	-
Stage 2	393	426	-	423	452	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	220.8		82.1			2.3			1.3			
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1129	-	-	168	176	1200	-	-				
HCM Lane V/C Ratio	0.114	-	-	1.29	0.827	0.066	-	-				
HCM Control Delay (s)	8.6	-	-	220.8	82.1	8.2	0	-				
HCM Lane LOS	A	-	-	F	F	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	12.6	5.7	0.2	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

APPENDIX H

CAPACITY ANALYSIS CALCULATIONS

AVERETTE ROAD

&

KAVANAUGH ROAD

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2025 Existing
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	14	9	215	262	26
Future Vol, veh/h	37	14	9	215	262	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	-	-	-
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	41	16	10	239	291	29
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	565	306	320	0	-	0
Stage 1	306	-	-	-	-	-
Stage 2	259	-	-	-	-	-
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	486	734	1240	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	784	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	482	734	1240	-	-	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	784	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.6	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1240	-	532	-	-	
HCM Lane V/C Ratio	0.008	-	0.107	-	-	
HCM Control Delay (s)	7.9	-	12.6	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.4	-	-	

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2025 Existing
Timing Plan: PM Peak Hour

Intersection

Int Delay, s/veh 1.3

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 23 23 17 225 211 35

Future Vol, veh/h 23 23 17 225 211 35

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 - - -

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 26 26 19 250 234 39

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 542 254 273 0 - 0

Stage 1 254 - - - - -

Stage 2 288 - - - - -

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 501 785 1290 - - -

Stage 1 788 - - - - -

Stage 2 761 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 493 785 1290 - - -

Mov Cap-2 Maneuver 493 - - - - -

Stage 1 776 - - - - -

Stage 2 761 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.5 0.6 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1290 - 606 - -

HCM Lane V/C Ratio 0.015 - 0.084 - -

HCM Control Delay (s) 7.8 - 11.5 - -

HCM Lane LOS A - B - -

HCM 95th %tile Q(veh) 0 - 0.3 - -

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2031 No-Build
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	16	10	249	304	30
Future Vol, veh/h	43	16	10	249	304	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	-	150	-	-	-
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	48	18	11	277	338	33
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	654	355	371	0	-	0
Stage 1	355	-	-	-	-	-
Stage 2	299	-	-	-	-	-
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	431	689	1188	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	427	689	1188	-	-	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.8	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1188	-	476	-	-	
HCM Lane V/C Ratio	0.009	-	0.138	-	-	
HCM Control Delay (s)	8.1	-	13.8	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.5	-	-	

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2031 No-Build
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	27	20	261	245	41
Future Vol, veh/h	27	27	20	261	245	41
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	-	-	-
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	30	30	22	290	272	46
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	629	295	318	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	334	-	-	-	-	-
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	446	744	1242	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	438	744	1242	-	-	-
Mov Cap-2 Maneuver	438	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.3	0.6		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1242	-	551	-	-	
HCM Lane V/C Ratio	0.018	-	0.109	-	-	
HCM Control Delay (s)	8	-	12.3	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	16	10	330	393	30
Future Vol, veh/h	43	16	10	330	393	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	-	150	-	-	-
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	48	18	11	367	437	33
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	843	454	470	0	-	0
Stage 1	454	-	-	-	-	-
Stage 2	389	-	-	-	-	-
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	334	606	1092	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	606	1092	-	-	-
Mov Cap-2 Maneuver	331	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.5	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1092	-	377	-	-	
HCM Lane V/C Ratio	0.01	-	0.174	-	-	
HCM Control Delay (s)	8.3	-	16.5	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.6	-	-	

HCM 6th TWSC
5: Averette Road & Kavanaugh Road

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	27	20	412	386	41
Future Vol, veh/h	27	27	20	412	386	41
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	-	-	-
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	30	30	22	458	429	46

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	954	452	475	0	-	0
Stage 1	452	-	-	-	-	-
Stage 2	502	-	-	-	-	-
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	287	608	1087	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	608	1087	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	608	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.1	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1087	-	384	-	-
HCM Lane V/C Ratio	0.02	-	0.156	-	-
HCM Control Delay (s)	8.4	-	16.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

APPENDIX I

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

ACCESS A

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	732	4	4	1219	4	4
Future Vol, veh/h	732	4	4	1219	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	813	4	4	1354	4	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	817	0	2177	815
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	1362	-
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	-	-	811	-	51	377
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	238	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	811	-	50	377
Mov Cap-2 Maneuver	-	-	-	-	50	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	233	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	50.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	88	-	-	811	-
HCM Lane V/C Ratio	0.101	-	-	0.005	-
HCM Control Delay (s)	50.5	-	-	9.5	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1155	4	4	922	4	4
Future Vol, veh/h	1155	4	4	922	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1283	4	4	1024	4	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1287	0	2317	1285
Stage 1	-	-	-	-	1285	-
Stage 2	-	-	-	-	1032	-
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	-	-	539	-	42	201
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	539	-	41	201
Mov Cap-2 Maneuver	-	-	-	-	41	-
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	338	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		65.7	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	68	-	-	539	-	
HCM Lane V/C Ratio	0.131	-	-	0.008	-	
HCM Control Delay (s)	65.7	-	-	11.7	0	
HCM Lane LOS	F	-	-	B	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	732	4	4	1219	4	4
Future Vol, veh/h	732	4	4	1219	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	813	4	4	1354	4	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	817	0	2177	815
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	1362	-
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	-	-	811	-	51	377
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	238	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	811	-	50	377
Mov Cap-2 Maneuver	-	-	-	-	50	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	233	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		50.5	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	88	-	-	811	-	
HCM Lane V/C Ratio	0.101	-	-	0.005	-	
HCM Control Delay (s)	50.5	-	-	9.5	0	
HCM Lane LOS	F	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1155	4	4	922	4	4
Future Vol, veh/h	1155	4	4	922	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1283	4	4	1024	4	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1287	0	2317	1285
Stage 1	-	-	-	-	1285	-
Stage 2	-	-	-	-	1032	-
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	-	-	539	-	42	201
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	539	-	41	201
Mov Cap-2 Maneuver	-	-	-	-	41	-
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	338	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		65.7	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	68	-	-	539	-	
HCM Lane V/C Ratio	0.131	-	-	0.008	-	
HCM Control Delay (s)	65.7	-	-	11.7	0	
HCM Lane LOS	F	-	-	B	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build - Scenario-2
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱		↱
Traffic Vol, veh/h	732	4	0	1221	0	4
Future Vol, veh/h	732	4	0	1221	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	813	4	0	1357	0	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	815
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	377
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	377
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	377	-	-	-		
HCM Lane V/C Ratio	0.012	-	-	-		
HCM Control Delay (s)	14.7	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build - Scenario-2
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱		↱
Traffic Vol, veh/h	1155	5	0	927	0	6
Future Vol, veh/h	1155	5	0	927	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1283	6	0	1030	0	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1286
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	201
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	201
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		23.5	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	201	-	-	-		
HCM Lane V/C Ratio	0.033	-	-	-		
HCM Control Delay (s)	23.5	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: AM Peak Hour

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↗
Traffic Vol, veh/h	732	4	0	1221	0	4
Future Vol, veh/h	732	4	0	1221	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	813	4	0	1357	0	4
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	815
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	377
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	377
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.7	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	377	-	-	-		
HCM Lane V/C Ratio	0.012	-	-	-		
HCM Control Delay (s)	14.7	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0	-	-	-		

HCM 6th TWSC
6: Access A & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: PM Peak Hour

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱		↱
Traffic Vol, veh/h	1155	5	0	927	0	6
Future Vol, veh/h	1155	5	0	927	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1283	6	0	1030	0	7
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1286
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	201
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	201
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		23.5	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	201	-	-	-		
HCM Lane V/C Ratio	0.033	-	-	-		
HCM Control Delay (s)	23.5	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

APPENDIX J

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

ACCESS C

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑		↗
Traffic Vol, veh/h	724	51	58	1143	0	115
Future Vol, veh/h	724	51	58	1143	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	175	-	-	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	804	57	64	1270	0	128
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	861	0	-	804
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	781	-	0	383
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	781	-	-	383
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		19	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	383	-	-	781	-	
HCM Lane V/C Ratio	0.334	-	-	0.083	-	
HCM Control Delay (s)	19	-	-	10	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	1.4	-	-	0.3	-	

Intersection						
Int Delay, s/veh	12					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑		↗
Traffic Vol, veh/h	1047	102	90	879	0	226
Future Vol, veh/h	1047	102	90	879	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	175	-	-	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	1163	113	100	977	0	251
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1276	0	-	1163
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	544	-	0 ~ 237	
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	544	-	- ~ 237	
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		119.7	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	237	-	-	544	-	
HCM Lane V/C Ratio	1.06	-	-	0.184	-	
HCM Control Delay (s)	119.7	-	-	13.1	-	
HCM Lane LOS	F	-	-	B	-	
HCM 95th %tile Q(veh)	10.6	-	-	0.7	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	724	51	58	1143	0	115
Future Vol, veh/h	724	51	58	1143	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	175	-	-	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	804	57	64	1270	0	128
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	861	0	-	804
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	781	-	0	383
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	781	-	-	383
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		19	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	383	-	-	781	-	
HCM Lane V/C Ratio	0.334	-	-	0.083	-	
HCM Control Delay (s)	19	-	-	10	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile Q(veh)	1.4	-	-	0.3	-	

Intersection						
Int Delay, s/veh	12					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑		↑
Traffic Vol, veh/h	1047	102	90	879	0	226
Future Vol, veh/h	1047	102	90	879	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	175	-	-	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	1163	113	100	977	0	251

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1276
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	544	0 ~ 237
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	544	- ~ 237
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	119.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	237	-	-	544	-
HCM Lane V/C Ratio	1.06	-	-	0.184	-
HCM Control Delay (s)	119.7	-	-	13.1	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	10.6	-	-	0.7	-

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

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	724	51	0	1201	0	115
Future Vol, veh/h	724	51	0	1201	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	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	804	57	0	1334	0	128
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	804
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	383
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	383
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		19	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	383	-	-	-		
HCM Lane V/C Ratio	0.334	-	-	-		
HCM Control Delay (s)	19	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	1.4	-	-	-		

Intersection						
Int Delay, s/veh	11.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	1047	102	0	969	0	226
Future Vol, veh/h	1047	102	0	969	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	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	1163	113	0	1077	0	251

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1163
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 ~ 237
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - ~ 237
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	119.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	237	-	-	-
HCM Lane V/C Ratio	1.06	-	-	-
HCM Control Delay (s)	119.7	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	10.6	-	-	-

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

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		↗
Traffic Vol, veh/h	724	51	0	1201	0	115
Future Vol, veh/h	724	51	0	1201	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	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	804	57	0	1334	0	128
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	804
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	383
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	383
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		19	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	383	-	-	-		
HCM Lane V/C Ratio	0.334	-	-	-		
HCM Control Delay (s)	19	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	1.4	-	-	-		

Intersection						
Int Delay, s/veh	11.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑		↑
Traffic Vol, veh/h	1047	102	0	969	0	226
Future Vol, veh/h	1047	102	0	969	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	-	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	1163	113	0	1077	0	251

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1163
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 ~ 237
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - ~ 237
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	119.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	237	-	-	-
HCM Lane V/C Ratio	1.06	-	-	-
HCM Control Delay (s)	119.7	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	10.6	-	-	-

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

APPENDIX K

CAPACITY ANALYSIS CALCULATIONS

WAIT AVENUE

&

ACCESS D

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build - Scenario-1
Timing Plan: AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	768	49	0	1201	0	0
Future Volume (Veh/h)	768	49	0	1201	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	853	54	0	1334	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.47		
vC, conflicting volume			907	2187		853
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			907	2946		853
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			750	8		359
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	853	54	1334			
Volume Left	0	0	0			
Volume Right	0	54	0			
cSH	1700	1700	1700			
Volume to Capacity	0.50	0.03	0.78			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			66.5%	ICU Level of Service	C	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build - Scenario-1
Timing Plan: PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	94	0	969	0	0
Future Volume (Veh/h)	1126	94	0	969	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1251	104	0	1077	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.66		
vC, conflicting volume			1355	2328		1251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1355	2757		1251
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			508	14		211
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	1251	104	1077			
Volume Left	0	0	0			
Volume Right	0	104	0			
cSH	1700	1700	1700			
Volume to Capacity	0.74	0.06	0.63			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			62.6%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 8: Access D & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		
Traffic Volume (veh/h)	768	49	0	1201	0	0
Future Volume (Veh/h)	768	49	0	1201	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	853	54	0	1334	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked					0.37	
vC, conflicting volume			907		2187	853
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			907		3350	853
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			750		3	359
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	853	54	1334			
Volume Left	0	0	0			
Volume Right	0	54	0			
cSH	1700	1700	1700			
Volume to Capacity	0.50	0.03	0.78			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			66.5%	ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build Improved Scenario-1
Timing Plan: PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	94	0	969	0	0
Future Volume (Veh/h)	1126	94	0	969	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1251	104	0	1077	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.65		
vC, conflicting volume			1355	2328		1251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1355	2782		1251
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			508	13		211
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	1251	104	1077			
Volume Left	0	0	0			
Volume Right	0	104	0			
cSH	1700	1700	1700			
Volume to Capacity	0.74	0.06	0.63			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			62.6%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build - Scenario-2
Timing Plan: AM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	768	49	0	1201	0	0
Future Volume (Veh/h)	768	49	0	1201	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	853	54	0	1334	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.48		
vC, conflicting volume			907	2187		853
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			907	2925		853
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			750	8		359
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	853	54	1334			
Volume Left	0	0	0			
Volume Right	0	54	0			
cSH	1700	1700	1700			
Volume to Capacity	0.50	0.03	0.78			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			66.5%	ICU Level of Service	C	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build - Scenario-2
Timing Plan: PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	94	0	969	0	0
Future Volume (Veh/h)	1126	94	0	969	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1251	104	0	1077	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.66		
vC, conflicting volume			1355	2328		1251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1355	2757		1251
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			508	14		211
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	1251	104	1077			
Volume Left	0	0	0			
Volume Right	0	104	0			
cSH	1700	1700	1700			
Volume to Capacity	0.74	0.06	0.63			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			62.6%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↑		
Traffic Volume (veh/h)	768	49	0	1201	0	0
Future Volume (Veh/h)	768	49	0	1201	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	853	54	0	1334	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked					0.46	
vC, conflicting volume			907		2187	853
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			907		2998	853
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			750		7	359
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	853	54	1334			
Volume Left	0	0	0			
Volume Right	0	54	0			
cSH	1700	1700	1700			
Volume to Capacity	0.50	0.03	0.78			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			66.5%	ICU Level of Service	C	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

8: Access D & Wait Avenue

2031 Build Improved - Scenario-2
Timing Plan: PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	94	0	969	0	0
Future Volume (Veh/h)	1126	94	0	969	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1251	104	0	1077	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				476		
pX, platoon unblocked				0.65		
vC, conflicting volume			1355	2328		1251
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1355	2782		1251
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			100	100		100
cM capacity (veh/h)			508	13		211
Direction, Lane #	EB 1	EB 2	WB 1			
Volume Total	1251	104	1077			
Volume Left	0	0	0			
Volume Right	0	104	0			
cSH	1700	1700	1700			
Volume to Capacity	0.74	0.06	0.63			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS						
Approach Delay (s)	0.0		0.0			
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			62.6%	ICU Level of Service	B	
Analysis Period (min)			15			

APPENDIX L

SIMTRAFFIC QUEUEING REPORTS

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	72	136	62	232	256	165	135
Average Queue (ft)	25	65	22	102	108	69	55
95th Queue (ft)	57	126	51	183	208	126	110
Link Distance (ft)		1815		2550	459	1482	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)				1			
Queuing Penalty (veh)				0			

Intersection: 2: Wait Avenue & Carrie May Lane

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	84	39
Average Queue (ft)	4	7
95th Queue (ft)	34	29
Link Distance (ft)	2067	1381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	26	116
Average Queue (ft)	3	45
95th Queue (ft)	17	94
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Old Pearce Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	87	13	83
Average Queue (ft)	22	1	14
95th Queue (ft)	54	6	51
Link Distance (ft)	1334	354	459
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	50	16
Average Queue (ft)	24	2
95th Queue (ft)	46	13
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	94	260	75	174	349	119	111
Average Queue (ft)	38	122	22	75	141	47	46
95th Queue (ft)	73	221	56	140	268	98	95
Link Distance (ft)		1815		2550	459	1482	
Upstream Blk Time (%)					0		
Queuing Penalty (veh)					0		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)		1		0			
Queuing Penalty (veh)		1		0			

Intersection: 2: Wait Avenue & Carrie May Lane

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	44	31
Average Queue (ft)	3	8
95th Queue (ft)	20	29
Link Distance (ft)	2067	1381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	39	81
Average Queue (ft)	12	30
95th Queue (ft)	35	62
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Old Pearce Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	66	4	66
Average Queue (ft)	19	0	18
95th Queue (ft)	48	3	54
Link Distance (ft)	1334	354	459
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	46	29
Average Queue (ft)	22	4
95th Queue (ft)	45	19
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	135	328	274	1236	418	278	191
Average Queue (ft)	38	168	108	656	246	112	77
95th Queue (ft)	90	283	278	1148	453	209	148
Link Distance (ft)		1815		2550	459	1482	
Upstream Blk Time (%)					5		
Queuing Penalty (veh)					11		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)		5	0	39		0	
Queuing Penalty (veh)		3	4	25		0	

Intersection: 2: Wait Avenue & Carrie May Lane

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	50	31
Average Queue (ft)	3	9
95th Queue (ft)	21	31
Link Distance (ft)	2067	1381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	27	176
Average Queue (ft)	4	65
95th Queue (ft)	18	139
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Old Pearce Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	146	86	142
Average Queue (ft)	43	16	27
95th Queue (ft)	136	113	87
Link Distance (ft)	1334	354	459
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	65	27
Average Queue (ft)	28	2
95th Queue (ft)	51	15
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 42

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	300	1097	121	378	366	133	115
Average Queue (ft)	153	645	34	174	219	52	51
95th Queue (ft)	341	1327	83	311	404	105	97
Link Distance (ft)		1815		2550	459	1482	
Upstream Blk Time (%)		0			3		
Queuing Penalty (veh)		1			8		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)	0	37		8			
Queuing Penalty (veh)	1	42		4			

Intersection: 2: Wait Avenue & Carrie May Lane

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	131	35
Average Queue (ft)	10	9
95th Queue (ft)	82	32
Link Distance (ft)	2067	1381
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	47	132
Average Queue (ft)	14	45
95th Queue (ft)	40	105
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Old Pearce Road

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	123	84	87
Average Queue (ft)	33	11	19
95th Queue (ft)	122	97	55
Link Distance (ft)	1334	354	459
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		1	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	79	27	6
Average Queue (ft)	29	5	0
95th Queue (ft)	57	21	4
Link Distance (ft)	1565		826
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 57

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	300	412	274	2361	466	208	154
Average Queue (ft)	99	341	201	1557	402	108	71
95th Queue (ft)	278	470	335	2911	568	185	134
Link Distance (ft)		401		2550	446	1482	
Upstream Blk Time (%)		8		21	36		
Queuing Penalty (veh)		62		0	115		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)		31	36	42			
Queuing Penalty (veh)		18	330	45			

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	WB	NB	SB
Directions Served	LT	L	LTR	LTR
Maximum Queue (ft)	138	29	862	60
Average Queue (ft)	8	7	537	12
95th Queue (ft)	80	25	954	41
Link Distance (ft)	492		1026	1159
Upstream Blk Time (%)			4	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)		125		
Storage Blk Time (%)	1			
Queuing Penalty (veh)	0			

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	32	230
Average Queue (ft)	5	95
95th Queue (ft)	22	211
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	482	520	176	282	124	13
Average Queue (ft)	223	289	39	104	25	1
95th Queue (ft)	613	931	148	289	83	8
Link Distance (ft)	1154	1338		358	446	
Upstream Blk Time (%)		2		2		
Queuing Penalty (veh)		0		6		
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)			0	18	1	
Queuing Penalty (veh)			0	15	1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	81	28	59
Average Queue (ft)	29	3	6
95th Queue (ft)	63	16	67
Link Distance (ft)	1565		826
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			1
Queuing Penalty (veh)			0

Intersection: 6: Access A & Wait Avenue

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	92	38
Average Queue (ft)	5	7
95th Queue (ft)	39	27
Link Distance (ft)	492	1041
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access C & Wait Avenue

Movement	EB	WB	NB
Directions Served	R	L	R
Maximum Queue (ft)	13	56	88
Average Queue (ft)	0	22	36
95th Queue (ft)	5	47	68
Link Distance (ft)			1066
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	376	90
Average Queue (ft)	76	9
95th Queue (ft)	272	66
Link Distance (ft)	661	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	9	
Queuing Penalty (veh)	5	

Network Summary

Network wide Queuing Penalty: 595

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	300	414	275	2409	468	184	105
Average Queue (ft)	165	407	250	1400	453	73	40
95th Queue (ft)	334	414	331	2792	493	145	86
Link Distance (ft)		401		2550	446	1482	
Upstream Blk Time (%)		39		21	44		
Queuing Penalty (veh)		438		0	194		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)	0	52	82	26			
Queuing Penalty (veh)	3	66	544	27			

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	507	150	85	46	1051	118
Average Queue (ft)	414	50	30	2	958	45
95th Queue (ft)	690	165	69	23	1220	119
Link Distance (ft)	492			662	1026	1159
Upstream Blk Time (%)	9				70	
Queuing Penalty (veh)	102				0	
Storage Bay Dist (ft)		50	125			
Storage Blk Time (%)	39		0	0		
Queuing Penalty (veh)	18		0	0		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	EB	EB	WB	NB
Directions Served	T	R	L	LR
Maximum Queue (ft)	782	104	77	541
Average Queue (ft)	234	27	20	232
95th Queue (ft)	1083	154	56	600
Link Distance (ft)	2004			1295
Upstream Blk Time (%)	2			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		150	325	
Storage Blk Time (%)	11			
Queuing Penalty (veh)	8			

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	1161	396	200	338	107	18
Average Queue (ft)	819	159	46	136	26	1
95th Queue (ft)	1460	415	158	304	77	10
Link Distance (ft)	1154	1338		358	446	
Upstream Blk Time (%)	38			2		
Queuing Penalty (veh)	0			7		
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)			0	22	1	
Queuing Penalty (veh)			0	25	1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	63	34	64
Average Queue (ft)	26	7	7
95th Queue (ft)	53	27	62
Link Distance (ft)	1565		826
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			1
Queuing Penalty (veh)			0

Intersection: 6: Access A & Wait Avenue

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	1491	128	75
Average Queue (ft)	819	10	13
95th Queue (ft)	1789	89	51
Link Distance (ft)	1492	492	1041
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	10		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Access C & Wait Avenue

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	R
Maximum Queue (ft)	678	150	112	21	1096
Average Queue (ft)	639	74	48	1	1065
95th Queue (ft)	792	196	101	19	1131
Link Distance (ft)	662			661	1066
Upstream Blk Time (%)	13				94
Queuing Penalty (veh)	144				0
Storage Bay Dist (ft)		50	175		
Storage Blk Time (%)	45				
Queuing Penalty (veh)	46				

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	678	150
Average Queue (ft)	667	34
95th Queue (ft)	676	136
Link Distance (ft)	661	
Upstream Blk Time (%)	24	
Queuing Penalty (veh)	300	
Storage Bay Dist (ft)		50
Storage Blk Time (%)	48	
Queuing Penalty (veh)	45	

Network Summary

Network wide Queuing Penalty: 1978

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	LT	R
Maximum Queue (ft)	299	409	200	275	1610	337	292	398	217
Average Queue (ft)	64	261	91	159	865	164	98	214	96
95th Queue (ft)	183	432	238	316	1489	298	232	419	241
Link Distance (ft)		395			2544		446	1480	
Upstream Blk Time (%)		3					1		
Queuing Penalty (veh)		22					2		
Storage Bay Dist (ft)	200		100	175		300			350
Storage Blk Time (%)		29	0	2	41	3	2	6	
Queuing Penalty (veh)		61	0	16	44	4	3	8	

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	450	52	188	431	172	48
Average Queue (ft)	160	4	22	227	90	10
95th Queue (ft)	339	27	88	387	146	37
Link Distance (ft)	492			662	1026	1159
Upstream Blk Time (%)	0					
Queuing Penalty (veh)	3					
Storage Bay Dist (ft)		50	125			
Storage Blk Time (%)	22	0		15		
Queuing Penalty (veh)	3	0		3		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	322
Average Queue (ft)	5	128
95th Queue (ft)	22	297
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	105	130	49	47	160	47
Average Queue (ft)	38	46	12	3	25	2
95th Queue (ft)	77	104	33	38	86	26
Link Distance (ft)	1154	1338		358	446	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)				0	1	
Queuing Penalty (veh)				0	1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	81	26
Average Queue (ft)	28	3
95th Queue (ft)	58	16
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Access A & Wait Avenue

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	74	185	33
Average Queue (ft)	3	13	7
95th Queue (ft)	38	100	27
Link Distance (ft)	1492	492	1041
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Access C & Wait Avenue

Movement	EB	WB	NB
Directions Served	R	L	R
Maximum Queue (ft)	4	62	104
Average Queue (ft)	0	25	41
95th Queue (ft)	5	55	79
Link Distance (ft)			1066
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50	175	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Access D & Wait Avenue

Movement	EB
Directions Served	T
Maximum Queue (ft)	315
Average Queue (ft)	29
95th Queue (ft)	154
Link Distance (ft)	661
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	3
Queuing Penalty (veh)	2

Network Summary

Network wide Queuing Penalty: 171

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	LT	R
Maximum Queue (ft)	300	412	200	275	862	347	333	339	186
Average Queue (ft)	150	401	142	183	433	221	143	176	57
95th Queue (ft)	321	440	276	328	841	356	315	397	174
Link Distance (ft)		395			2544		446	1480	
Upstream Blk Time (%)		27					1		
Queuing Penalty (veh)		309					3		
Storage Bay Dist (ft)	200		100	175		300			350
Storage Blk Time (%)	1	48	0	26	32	7	1	9	
Queuing Penalty (veh)	10	175	1	169	33	13	3	9	

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	507	150	181	320	236	52
Average Queue (ft)	457	31	60	115	109	16
95th Queue (ft)	608	122	125	240	194	45
Link Distance (ft)	492			662	1026	1159
Upstream Blk Time (%)	13					
Queuing Penalty (veh)	146					
Storage Bay Dist (ft)		50	125			
Storage Blk Time (%)	34	2	1	4		
Queuing Penalty (veh)	16	19	8	3		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	EB	EB	WB	NB
Directions Served	T	R	L	LR
Maximum Queue (ft)	221	54	65	559
Average Queue (ft)	39	9	20	276
95th Queue (ft)	268	83	50	715
Link Distance (ft)	2004			1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150	325	
Storage Blk Time (%)	3			
Queuing Penalty (veh)	2			

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	211	110	61	20	126	51
Average Queue (ft)	89	39	16	1	29	4
95th Queue (ft)	170	89	42	14	81	38
Link Distance (ft)	1154	1338		358	446	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)			0		1	
Queuing Penalty (veh)			0		0	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	84	30
Average Queue (ft)	28	7
95th Queue (ft)	61	27
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Access A & Wait Avenue

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	1033	264	66
Average Queue (ft)	642	24	13
95th Queue (ft)	1546	168	47
Link Distance (ft)	1492	492	1041
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	2	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Access C & Wait Avenue

Movement	EB	EB	WB	WB	NB
Directions Served	T	R	L	T	R
Maximum Queue (ft)	608	150	125	31	1079
Average Queue (ft)	197	31	53	1	766
95th Queue (ft)	557	126	101	22	1380
Link Distance (ft)	662			661	1066
Upstream Blk Time (%)	0				45
Queuing Penalty (veh)	3				0
Storage Bay Dist (ft)		50	175		
Storage Blk Time (%)	16	0			
Queuing Penalty (veh)	16	0			

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	677	150
Average Queue (ft)	548	45
95th Queue (ft)	861	157
Link Distance (ft)	661	
Upstream Blk Time (%)	5	
Queuing Penalty (veh)	66	
Storage Bay Dist (ft)		50
Storage Blk Time (%)	37	
Queuing Penalty (veh)	34	

Network Summary

Network wide Queuing Penalty: 1038

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	257	411	274	2539	463	250	152
Average Queue (ft)	96	336	182	1774	382	117	68
95th Queue (ft)	262	467	321	2955	548	213	135
Link Distance (ft)		401		2550	447	1482	
Upstream Blk Time (%)		6		21	19		
Queuing Penalty (veh)		49		0	61		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)	1	30	26	45			
Queuing Penalty (veh)	5	17	236	48			

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	L	LTR	LTR
Maximum Queue (ft)	66	30	57	908	49
Average Queue (ft)	3	1	23	586	15
95th Queue (ft)	34	21	49	1033	42
Link Distance (ft)	486			1026	1159
Upstream Blk Time (%)				6	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		50	350		
Storage Blk Time (%)	0				
Queuing Penalty (veh)	0				

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	27	297
Average Queue (ft)	4	138
95th Queue (ft)	19	337
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	204	200	112	204	106	12
Average Queue (ft)	72	71	15	40	25	1
95th Queue (ft)	203	207	63	159	76	7
Link Distance (ft)	1191	1338		358	447	
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				1		
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)				5	1	
Queuing Penalty (veh)				4	1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	68	27	6
Average Queue (ft)	28	3	0
95th Queue (ft)	55	17	4
Link Distance (ft)	1565		826
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Access A & Wait Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	29
Average Queue (ft)	3
95th Queue (ft)	18
Link Distance (ft)	1042
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Access C & Wait Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	36
95th Queue (ft)	71
Link Distance (ft)	1066
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	282	90
Average Queue (ft)	62	4
95th Queue (ft)	241	43
Link Distance (ft)	607	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	8	
Queuing Penalty (veh)	4	

Network Summary

Network wide Queuing Penalty: 425

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	300	416	275	1966	467	164	118
Average Queue (ft)	160	407	231	1170	450	71	44
95th Queue (ft)	335	414	339	2644	502	134	96
Link Distance (ft)		401		2550	447	1482	
Upstream Blk Time (%)		40		9	47		
Queuing Penalty (veh)		446		0	208		
Storage Bay Dist (ft)	200		175				350
Storage Blk Time (%)	0	53	63	27			
Queuing Penalty (veh)	2	68	417	28			

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	498	150	163	43	1045	135
Average Queue (ft)	386	46	70	1	962	50
95th Queue (ft)	687	159	138	31	1235	150
Link Distance (ft)	486			717	1026	1159
Upstream Blk Time (%)	9				77	
Queuing Penalty (veh)	105				0	
Storage Bay Dist (ft)		50	350			
Storage Blk Time (%)	39					
Queuing Penalty (veh)	18					

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	EB	EB	WB	NB
Directions Served	T	R	L	LR
Maximum Queue (ft)	1186	154	60	631
Average Queue (ft)	279	35	17	271
95th Queue (ft)	1184	177	49	696
Link Distance (ft)	2004			1295
Upstream Blk Time (%)	3			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		150	325	
Storage Blk Time (%)	16			
Queuing Penalty (veh)	11			

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	1218	523	199	350	94	9
Average Queue (ft)	854	246	44	143	23	1
95th Queue (ft)	1530	583	155	304	67	8
Link Distance (ft)	1191	1338		358	447	
Upstream Blk Time (%)	48			2		
Queuing Penalty (veh)	0			9		
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)				25	0	
Queuing Penalty (veh)				29	0	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	71	28	114
Average Queue (ft)	29	5	8
95th Queue (ft)	61	23	68
Link Distance (ft)	1565		826
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			1
Queuing Penalty (veh)			0

Intersection: 6: Access A & Wait Avenue

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	1283	37
Average Queue (ft)	839	5
95th Queue (ft)	1896	23
Link Distance (ft)	1498	1042
Upstream Blk Time (%)	2	
Queuing Penalty (veh)	18	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access C & Wait Avenue

Movement	EB	EB	NB
Directions Served	T	R	R
Maximum Queue (ft)	732	150	1098
Average Queue (ft)	676	64	1047
95th Queue (ft)	887	186	1183
Link Distance (ft)	717		1066
Upstream Blk Time (%)	12		87
Queuing Penalty (veh)	143		0
Storage Bay Dist (ft)		50	
Storage Blk Time (%)	46		
Queuing Penalty (veh)	47		

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	623	150
Average Queue (ft)	614	39
95th Queue (ft)	622	146
Link Distance (ft)	607	
Upstream Blk Time (%)	27	
Queuing Penalty (veh)	343	
Storage Bay Dist (ft)		50
Storage Blk Time (%)	49	
Queuing Penalty (veh)	46	

Network Summary

Network wide Queuing Penalty: 1936

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	LT	R
Maximum Queue (ft)	261	407	200	274	1803	284	233	479	231
Average Queue (ft)	65	262	88	149	1128	157	85	254	109
95th Queue (ft)	177	416	234	301	2127	254	172	531	280
Link Distance (ft)		395			2544		447	1480	
Upstream Blk Time (%)		1			1				
Queuing Penalty (veh)		7			0				
Storage Bay Dist (ft)	200		100	175		300			350
Storage Blk Time (%)		28		2	43	0	0	11	
Queuing Penalty (veh)		58		15	46	0	0	14	

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	421	148	120	330	191	45
Average Queue (ft)	177	8	54	185	82	10
95th Queue (ft)	320	53	103	305	149	36
Link Distance (ft)	486			717	1026	1159
Upstream Blk Time (%)	1					
Queuing Penalty (veh)	5					
Storage Bay Dist (ft)		50	350			
Storage Blk Time (%)	28	0		0		
Queuing Penalty (veh)	4	0		0		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	411
Average Queue (ft)	5	210
95th Queue (ft)	22	502
Link Distance (ft)		1295
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	325	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	91	106	45	4	148	43
Average Queue (ft)	41	37	11	0	28	2
95th Queue (ft)	77	80	33	2	96	26
Link Distance (ft)	1169	1338		358	447	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)					1	
Queuing Penalty (veh)					1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	68	27	9
Average Queue (ft)	28	4	0
95th Queue (ft)	56	20	6
Link Distance (ft)	1565		358
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Access A & Wait Avenue

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	105	29
Average Queue (ft)	7	3
95th Queue (ft)	82	18
Link Distance (ft)	1498	1042
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access C & Wait Avenue

Movement	NB
Directions Served	R
Maximum Queue (ft)	92
Average Queue (ft)	37
95th Queue (ft)	71
Link Distance (ft)	1066
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: Access D & Wait Avenue

Movement	EB
Directions Served	T
Maximum Queue (ft)	117
Average Queue (ft)	9
95th Queue (ft)	57
Link Distance (ft)	607
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	1
Queuing Penalty (veh)	0

Network Summary

Network wide Queuing Penalty: 150

Intersection: 1: Averette Road & Wait Avenue

Movement	EB	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	TR	LT	R
Maximum Queue (ft)	300	412	200	274	869	366	402	246	107
Average Queue (ft)	161	387	146	159	446	237	171	124	45
95th Queue (ft)	336	479	278	299	909	393	398	224	87
Link Distance (ft)		395			2544		447	1480	
Upstream Blk Time (%)		23					3		
Queuing Penalty (veh)		260					14		
Storage Bay Dist (ft)	200		100	175		300			350
Storage Blk Time (%)	0	46	0	9	37	16	2		
Queuing Penalty (veh)	4	166	1	60	38	30	6		

Intersection: 2: Access B/Carrie May Lane & Wait Avenue

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	L	TR	LTR	LTR
Maximum Queue (ft)	501	150	301	395	217	48
Average Queue (ft)	464	25	172	115	104	12
95th Queue (ft)	584	109	332	310	177	39
Link Distance (ft)	486			717	1026	1159
Upstream Blk Time (%)	13			0		
Queuing Penalty (veh)	151			0		
Storage Bay Dist (ft)		50	350			
Storage Blk Time (%)	35	0	5	1		
Queuing Penalty (veh)	16	0	40	1		

Intersection: 3: Austin View Blvd & Wait Avenue

Movement	EB	WB	NB
Directions Served	T	L	LR
Maximum Queue (ft)	28	54	480
Average Queue (ft)	2	19	248
95th Queue (ft)	30	46	614
Link Distance (ft)	2004		1295
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		325	
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 4: Averette Road & Access E/Old Pearce Road

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	L	TR	LT	R
Maximum Queue (ft)	250	167	53	45	106	17
Average Queue (ft)	94	45	18	7	30	1
95th Queue (ft)	208	113	41	43	79	9
Link Distance (ft)	1169	1338		358	447	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			100			75
Storage Blk Time (%)				0	1	
Queuing Penalty (veh)				0	1	

Intersection: 5: Averette Road & Kavanaugh Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	68	28
Average Queue (ft)	28	6
95th Queue (ft)	56	24
Link Distance (ft)	1565	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Access A & Wait Avenue

Movement	EB	NB
Directions Served	TR	R
Maximum Queue (ft)	1060	41
Average Queue (ft)	525	7
95th Queue (ft)	1219	31
Link Distance (ft)	1498	1042
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Access C & Wait Avenue

Movement	EB	EB	WB	NB
Directions Served	T	R	T	R
Maximum Queue (ft)	484	120	32	928
Average Queue (ft)	120	19	1	576
95th Queue (ft)	462	101	22	1231
Link Distance (ft)	717		607	1066
Upstream Blk Time (%)	0			25
Queuing Penalty (veh)	1			0
Storage Bay Dist (ft)		50		
Storage Blk Time (%)	10			
Queuing Penalty (veh)	11			

Intersection: 8: Access D & Wait Avenue

Movement	EB	EB
Directions Served	T	R
Maximum Queue (ft)	615	150
Average Queue (ft)	428	47
95th Queue (ft)	800	161
Link Distance (ft)	607	
Upstream Blk Time (%)	5	
Queuing Penalty (veh)	65	
Storage Bay Dist (ft)		50
Storage Blk Time (%)	31	
Queuing Penalty (veh)	29	

Network Summary

Network wide Queuing Penalty: 894



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

October 1, 2025

Wait Avenue Mixed-Use

Traffic Impact Analysis Review Report

Congestion Management Section

TIA Project: SC-2025-182
Division: 5
County: Wake



Clarence B. Bunting, P.E. Regional Engineer
Trevor S. Darnell, Project Design Engineer

Wait Avenue Mixed-Use

SC-2025-182

Rolesville

Wake County

Per your request, the Congestion Management Section (CMS) of the Transportation Mobility and Safety Division has completed a review of the subject site. The comments and recommendations contained in this review are based on data for background conditions presented in the Traffic Impact Analysis (TIA) and are subject to the approval of the local District Engineer's Office and appropriate local authorities.

Date Initially Received by CMS	08/07/25	Date of Site Plan	01/31/25
Date of Complete Information	08/07/25	Date of Sealed TIA	08/07/25

Proposed Development

The TIA assumes the development is completed by 2031 and consists of the following:

Land Use	Land Use Code	Size
Mini-Warehouse	151	107,049 sq.ft.
Single-Family Detached Housing	210	300 d.u.
Shopping Plaza (40-150k)	821	84,600 sq.ft.
Convenience Store/Gas Station- VFP (9-15)	945	5,000 sq.ft.

Trip Generation - Unadjusted Volumes During a Typical Weekday

	IN	OUT	TOTAL
AM Peak Hour	383	411	794
PM Peak Hour	689	647	1,336
Daily Trips			14,353

General Reference

For reference to various documents applicable to this review please reference the following link: <https://connect.ncdot.gov/resources/safety/Pages/Congestion-Management.aspx>

Once the driveway permit has been approved and issued, a copy of the final driveway permit requirements should be forwarded to this office. If we can provide further assistance, please contact the Congestion Management Section.

Access A

The proposed Access A is in close proximity to the Wait Avenue / Carrie May Lane / Access B intersection. If operational issues develop, access may need to be restricted. Care should be taken to maximize the distance between these two intersections.

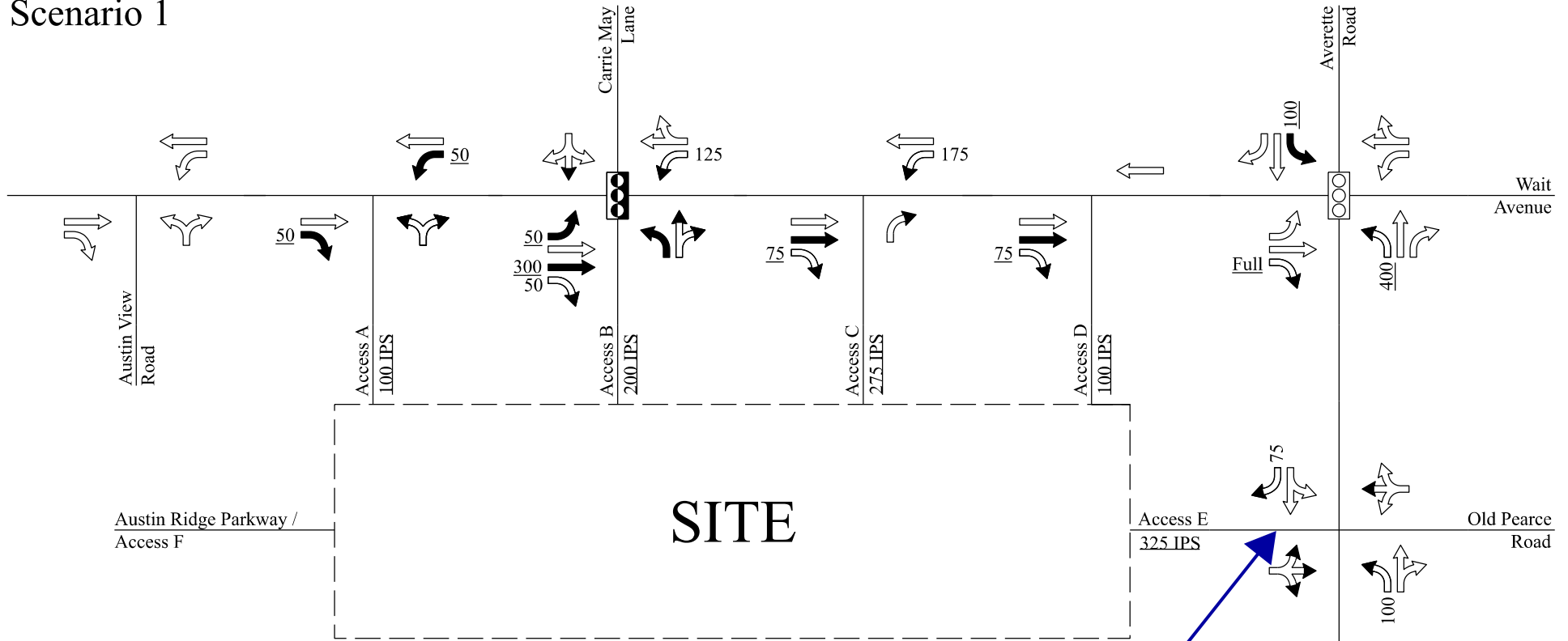
Access E

The proposed Access E is in close proximity to the Wait Avenue / Averette Road intersection. If operational issues develop, access may need to be restricted.

Signalization

We defer to the District Engineer, the Division Traffic Engineer, and the Regional Traffic Engineer for final decisions regarding signalization. The proposed signal may cause heavy queuing on Wait Avenue.

Scenario 1



Wait Avenue Mixed-Use SC-2025-182

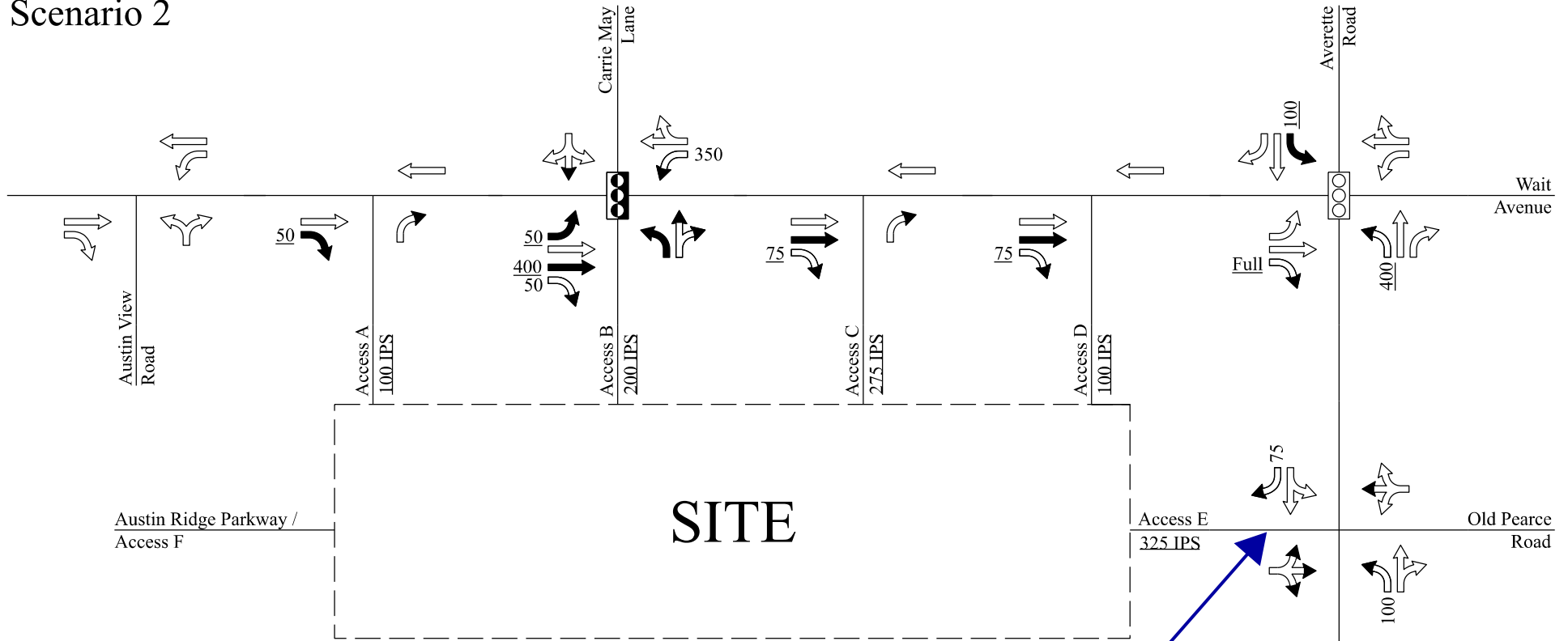
- Existing Laneage
- Recommended Laneage
- Laneage Built By Others
- NCDOT Recommendation
- Existing Signal
- Signal Proposed By Others
- Monitor for Signal
- XXX Storage
- XXX NCDOT Recommended Storage
- IPS Internal Protected Stem
- All Distances in Feet
- Drawing Not to Scale

District Note:
Add SB LTL on Averette onto Old Pearce utilizing the pavement provided for the NB LTL - tdd

Kavanaugh
Road



Scenario 2



Wait Avenue Mixed-Use SC-2025-182

- Existing Laneage
- Recommended Laneage
- Laneage Built By Others
- NCDOT Recommendation
- Existing Signal
- Signal Proposed By Others
- Monitor for Signal
- XXX Storage
- XXX NCDOT Recommended Storage
- IPS Internal Protected Stem
- All Distances in Feet
- Drawing Not to Scale

District Note:
Add SB LTL on Averette onto Old Pearce utilizing
the pavement provided for the NB LTL - tdd

