



**Town Board Meeting**  
April 7, 2026 – 6:30 PM  
502 Southtown Circle, Rolesville, NC 27571

## **Agenda**

1. Call to Order
2. Invocation & Pledge of Allegiance - Pastor Stewart of Neuse Baptist Church
3. Proclamations:
  - 3.a. Arbor Day
  - 3.b. Mayor's Monarch Pledge
  - 3.c. National Volunteer Week
4. Consider Approval of the Agenda
5. Consider Approval of the Consent Agenda
  - 5.a. Minutes for March 3, 2026, and March 17, 2026
  - 5.b. Fowler Road Ext Right-of-Way Acquisition
  - 5.b.08. Resolution In Support Of Roadway Reimbursement Agreement
6. Public Invited to be Heard  
*Individuals wishing to speak during the Public Invited to be Heard proceedings are encouraged to be prepared, and individuals will be limited to three (3) minutes. Written comments are welcome and should be given to the Town Clerk before the start of the meeting.*
7. Town Board Liaison Reports
8. Communication from Town Staff
  - 8.a. Stephen Wensman, Planning Director
  - 8.b. Mical McFarland, Economic Development Manager
9. Business
  - 9.a. Resolution Adopting Artificial Intelligence Guidelines for Boards and Commissions – Amy Stevens, Finance Director & Shannon Guaracino, Finance Admin Specialist
  - 9.b. Rolesville Chamber of Commerce MOU Update – Malcolm Allen, Executive Director, Chamber of Commerce
10. Legislative Hearing
  - 10.a. Continued Legislative Hearing – REZ-24-05 – Development Agreement - Atticus Woods – Stephen Wensman, Planning Director
11. Communications
  - 11.a. Town Attorney
  - 11.b. Town Manager
12. Closed Session - Pursuant to NCGS § 143-318.11(a)(3), to consult with the attorney and preserve the attorney-client privilege and NCGS § 143-318.11(a)(5), to discuss the acquisition of real property.

### 13. Adjourn

The Town of Rolesville will make reasonable accommodations for access to Town services, programs, and activities and will make special communication arrangements for persons with disabilities. Please call (919) 556-3506 by noon on the Thursday prior to the meeting to make arrangements.



## Proclamation of the Town of Rolesville National Arbor Day, April 24, 2026

**WHEREAS;** in 1872, the Nebraska Board of Agriculture established a special day to be set aside for the planting of trees, *and*

**WHEREAS;** this holiday, called Arbor Day, was first observed with the planting of more than a million trees in Nebraska, *and*

**WHEREAS;** Arbor Day is now observed throughout the nation and the world, *and*

**WHEREAS;** trees can be a solution to combating climate change by reducing the erosion of our precious topsoil by wind and water, cutting heating and cooling costs, moderating the temperature, cleaning the air, producing life-giving oxygen, and providing habitat for wildlife, *and*

**WHEREAS;** trees are a renewable resource, giving us paper wood for our homes, fuel for our fires, and countless other wood products, *and*

**WHEREAS;** trees in our city increase property values, enhance the economic vitality of business areas, and beautify our community, *and*

**WHEREAS;** trees — wherever they are planted — are a source of joy and spiritual renewal.

**NOW THEREFORE,** the Rolesville Board of Commissioners do hereby proclaim April 24, 2026, as “National Arbor Day” in the Town of Rolesville and commend its observance to all citizens.

**IN WITNESS WHEREOF,** I have set my signature and the seal of the Town of Rolesville, on this 7th day of April 2026

ATTEST:

\_\_\_\_\_  
Ronnie I. Currin, Mayor

\_\_\_\_\_  
Christy Frazier, Town Clerk



## Proclamation of the Town of Rolesville

### Mayor's Monarch Day

- WHEREAS,** The monarch butterfly is an iconic North American species whose multigenerational migration and metamorphosis from caterpillar to butterfly has captured the imagination of millions of Americans; and
- WHEREAS,** Both the western and eastern monarch populations have seen significant declines with less than one percent of the western monarch population remaining, while the eastern population has fallen by as much as ninety percent; and
- WHEREAS,** Town of Rolesville recognizes that human health ultimately depends on well-functioning ecosystems and that biodiverse regions can better support food production, healthy soil and air quality, and can foster healthy connections between humans and wildlife; and
- WHEREAS,** Cities, towns, and counties have a critical role to play to help save the monarch butterfly, and the Town of Rolesville is striving to become a leader; and
- WHEREAS,** On March 19, 2026, I, Ronnie Currin, signed the National Wildlife Federation's Mayors' Monarch Pledge and have officially committed to taking meaningful action to protect the monarch butterfly; and
- WHEREAS,** Every resident of the Town of Rolesville can make a difference for the monarch by planting native milkweed and nectar plants to provide habitat for the monarch and pollinators in locations where people live, work, learn, play, and worship; and
- WHEREAS,** Rolesville is committed to expanding pollinator-friendly habitats by planting native species, improving greenways and parks, and promoting education and community involvement. Through partnerships with residents and organizations, these efforts aim to support monarch butterflies while enhancing long-term environmental sustainability. and

**NOW, THEREFORE, I, Ronnie Currin,** by virtue of the authority vested in me as Mayor of the Town of Rolesville, do hereby proclaim April 7, 2026, as:

#### **Mayors' Monarch Pledge Day**

In the Town of Rolesville, we encourage all residents to participate in community activities that support and celebrate monarch conservation.



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Ronnie I. Currin, Mayor

ATTEST:

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Christy Frazier, Town Clerk



## Proclamation of the Town of Rolesville

### National Volunteer Week April 19 -25, 2026

**WHEREAS**, during National Volunteer Week, we celebrate the impact of volunteer service and come together to tackle community needs and foster a culture of civic engagement; and

**WHEREAS**, volunteer service is needed more than ever as people work to support their public schools and volunteer in the classroom to assist educators and students; and

**WHEREAS**, volunteers have dedicated countless hours to meeting the critical needs of North Carolinians and helping individuals survive and recover from natural disasters; and

**WHEREAS**, National Volunteer Week was enacted in 1974 by President Richard Nixon to celebrate the spirit of volunteerism, urging all Americans to seek opportunities to provide service to their community, and

**WHEREAS**, Town of Rolesville residents are encouraged to learn about local volunteer opportunities, volunteer centers around Wake County, and volunteer recognition at VolunteerNC.org; and

**WHEREAS**, National Volunteer Week should serve as a catalyst for residents to serve our town today; to commit to volunteer by signing up now for a volunteer slot with a litter sweep, a youth athletic coach, in a school and more; to promote volunteerism in our families and communities through an invitation to serve together; and to be all in for Town of Rolesville when it is needed most;

**NOW THEREFORE**, the Rolesville Board of Commissioners do hereby proclaim April 19 - 25, 2026, as “National Volunteer Week” in the Town of Rolesville and commend its observance to all citizens.

**IN WITNESS WHEREOF**, I have set my signature and the seal of the Town of Rolesville, on this 7th day of April 2026

ATTEST:

\_\_\_\_\_  
Ronnie I. Currin, Mayor

\_\_\_\_\_  
Christy Frazier, Town Clerk



**Board of Commissioners  
Regular Business Meeting**

March 3, 2026 – 6:30 PM

502 Southtown Circle, Rolesville, NC 27571

**MINUTES**

**Present:** Mayor Ronnie Currin                      Town Attorney Dave Neill  
Mayor Pro Tem Dan Alston                      Town Manager Eric Marsh  
Commissioner April Sneed                      Town Clerk Christy Frazier  
Commissioner Lenwood Long                      Police Chief David Simmons  
Commissioner Jenn Bernat                      Planning Director Stephen Wensman  
Commissioner Michael Paul (remote)  
Finance Director Amy Stevens  
Human Resources Director Chandra Wright

**1. Call to Order**

Mayor Ronnie Currin called the Rolesville Board of Commissioners meeting to order on March 3, 2026. He thanked everyone for their attendance, noting a good turnout for the evening. The Mayor acknowledged that Commissioner Michael Paul was not physically present but was participating remotely via streaming.

**2. Invocation & Pledge of Allegiance**

Reverend Steve Davis led the invocation.

**3. Proclamations: Women's History Month and Vietnam Veterans' Day**

**Women's History Month**

Commissioner Jenn Bernat read the proclamation declaring March 2026 as Women's History Month in the Town of Rolesville. The proclamation recognized women's historic contributions to the growth and strength of the town in countless ways, their critical economic, cultural, and social roles, and their leadership in various progressive social movements.

**Vietnam Veterans' Day**

Commissioner Lenwood Long read the proclamation declaring March 29, 2026, as Vietnam Veterans Day in the Town of Rolesville. The proclamation honored the more than 3 million Americans who served in the Vietnam War, paying tribute to those who lost their lives and reaffirming dedication to showing veterans respect and support. Commissioner Long noted that his father served in Vietnam, and Mayor Currin thanked all veterans present for their service.

**4. Consider Approval of the Agenda**

Mayor Currin noted no requested changes to the agenda, except to add a closed session at the end. Since Commissioner Paul was participating remotely, a roll call vote was required.

**Motion: Commissioner Sneed moved to approve the agenda and add a closed session. Commissioner Long seconded the motion. The motion passed unanimously by roll call vote.**

**Roll Call Vote:**

- Mayor Pro Tem Alston: Aye
- Commissioner Sneed: Aye
- Commissioner Long: Aye
- Commissioner Bernat: Aye
- Commissioner Paul: Aye

**Result:** Motion approved unanimously.

[5. Consider Approval of the Consent Agenda](#)

5.a. Minutes: February 3, 2026, and February 17, 2026

5.b. Town Code 113.5 Alcoholic Beverages Provision Waived For Town Events

5.c. Town Code 113.5 Alcoholic Beverages Provision Waived For The Chamber Mingle on Main Events

5.d. FY25-26 Audit Contract

Commissioner Bernat asked for clarification on the alcoholic beverages provision for town events, specifically whether it allowed independent groups to operate beer carts at Chamber events. Staff confirmed this was similar to existing arrangements.

**Motion: Commissioner Sneed moved to approve the consent agenda. Commissioner Long seconded the motion. The motion passed unanimously by roll call vote.**

**Roll Call Vote:**

- Mayor Pro Tem Alston: Aye
- Commissioner Sneed: Aye
- Commissioner Long: Aye
- Commissioner Bernat: Aye
- Commissioner Paul: Aye

**Result:** Motion approved unanimously.

[6. Public Invited to be Heard](#)

No one signed up to speak during the public comment period.

## 7. Town Board Liaison Reports

### Mayor Pro Tem Dan Alston

Commissioner Alston began by thanking Vietnam veterans for their service and sacrifice. He provided updates on the JOEL Fund, which is hosting a social-enrichment-focused veterans, military, and family alliance meeting on March 10th via Zoom. The JOEL Fund is partnering with the SAFE project (Stop the Addiction Fatality Epidemic) to provide a military wellness program with practical tools for navigating stress, PTSD, and civilian life transitions.

He announced an American Legion Post karaoke night on March 14th and the Legion's 106th birthday celebration on March 15th. Commissioner Alston also reported on attending mandatory ethics training at the UNC School of Government, emphasizing the importance of continuous learning in public service and suggesting that such training be required at the beginning of each term and refreshed every two years.

### Commissioner April Sneed

Commissioner Sneed reported on the Parks and Recreation meeting held on February 25th. The department welcomed a new cultural programs coordinator, Quincy Williams, starting March 9th. Current programs include wrapping up basketball registration, ongoing spring baseball registration, and soccer with 257 players on 24 teams. Summer camp is sold out.

Upcoming events include a blood drive on March 20th, a litter sweep, a shredding event, and an egg rush on March 28th at the middle school. A big recreation day is planned for April 11th, and the Arbor Day celebration will be held on April 24th at Millbridge National Nature Park. Juneteenth is scheduled for June 20th, and Trail Art will resume, with art pieces placed throughout the trails for people to find and keep.

She announced that the town was awarded \$380,000 from a tourism grant for the farm, with work required to be completed within three years.

### Commissioner Lenwood Long

As the new liaison to the planning department, Commissioner Long reported several updates. He noted ongoing discussions about buffers and subdivision definitions in the Land Development Ordinance (LDO) and Community Transportation Plan (CTP). Comprehensive Plan amendments are needed for Classical Way and LDO reviews of townhome separations.

He highlighted his attendance at the National League of Cities conference in DC last year, which led to partnerships for a cybersecurity assessment conducted by the National Guard. The first phase has been completed with the town manager and assistant town manager.

### Commissioner Jenn Bernat

Commissioner Bernat reported that the emergency services quarterly meeting would be held on Tuesday, March 24th, from 11 AM to 1 PM. She noted that when there's little to report to emergency services, it's generally a good thing, indicating smooth operations.

Commissioner Michael Paul (Remote)

Commissioner Paul reported on issues at the Grande, the town's only senior affordable housing development. The elevator was out for 12 of 15 days, leaving residents trapped on the upper floors. The fire and police departments conducted wellness checks on affected residents until the elevator was repaired. He expressed concerns about ongoing management issues at the building.

On a positive note, he announced progress on the senior center without walls program, working with Parks and Recreation Director June and town management. Programming will begin advertising in April for a May 11th start date at the community center, operating Mondays, Wednesdays, and Thursdays from 10 AM to 2 PM. The senior network is also looking at providing Tuesday programming, creating four days of senior activities per week.

Commissioner Paul also mentioned a planned trip to Forsyth County to visit their senior center, taking the senior network's passenger van with 14 interested individuals to gather ideas for better serving local senior residents.

## 8. Communication from Town Staff

Eric Marsh, Town Manager

Town Manager Marsh reported on several key initiatives. He and Economic Development Manager Michael McFarland attended the Hotel Development Summit at the Raleigh Convention Center, meeting with 12-16 developers and hotel builders to discuss hotel development in the Gateway 401 area. They plan to partner with the chamber of commerce to fund a feasibility study for hotels in the area.

He acknowledged the \$380,000 tourism grant funding from the visitor's bureau, thanking Wake County commissioners and Raleigh City Council for their support in the approval process.

Regarding recent power outages, Marsh provided detailed updates from Duke Energy. The utility company apologized for reliability issues and outlined both short-term and long-term solutions. Immediate measures include proactive infrared analysis of main lines, forensic review of failed components, and evaluation of power rerouting options. Long-term improvements include vegetation management, upgrading the main power line feeding Rolesville, and planning underground infrastructure improvements.

Commissioner Bernat clarified that none of the power outages were related to ongoing fiber installation, though there have been some fiber outages during the installation. The town is working with AT&T and Bright Speed to address service interruptions and ensure proper restoration of property damaged during fiber installation.

Marsh also reported progress on the second phase of the cybersecurity assessment and ongoing departmental budget meetings. The budget committee, consisting of Commissioners Paul and Long, will review requests before broader presentation to the board.

Amy Stevens, Finance Director

Finance Director Stevens reported that town revenues are on track to meet projections eight months into the fiscal year, with no significant concerns regarding expenditures. The town is monitoring fund balance reserves due to significant transfers supporting capital projects to ensure compliance with minimum fund balance policy objectives.

She outlined several special projects beyond routine financial operations, including staff training and revamping the employee onboarding process with HR. Her department provides support for capital projects, including the town campus construction manager-at-risk process and owner's representative onboarding.

Stevens reported work on AI policy and employee training, recognizing that staff are already using AI tools and need guidelines for appropriate use. The policy is nearly complete and will be rolled out with training. She also noted regular device replacement schedules, including the installation of new multifunction copiers throughout town facilities.

Chandra Wright, Human Resources Director

HR Director Wright, in her first report after three weeks on the job, noted that four key staff members have been added since January 1st: planning director, fire chief, HR director, and town engineer. Current initiatives include meeting with all department directors to identify immediate HR needs, completing health insurance renewal documentation for open enrollment, and managing active recruitments for two engineering positions, one HR position, and several police officer candidates.

Upcoming initiatives include the open enrollment process from the end of April through the beginning of May, reestablishing a safety committee that will include participation from fire and police, and developing an HR training calendar. For summer camp staffing, applications will be posted on Mondays, and interested young people can find information on the website and social media platforms.

## 9. Business

No items were listed under this agenda section.

## 10. Legislative Hearings

### 10. a. Continued Legislative Hearing – REZ-25-05/ANX-25-03 – Scarborough Village

Planning Director Stephen Wensman presented the continued hearing for the Scarborough Village rezoning and annexation. The development proposes single-family attached housing and commercial development along South Main Street. The board had previously closed the public hearing and requested specific conditions regarding the timing of development.

The key condition added requires that no more than 75 percent of building permits be issued until the foundation and footings for the non-residential building on South Main Street are completed. Staff recommended approval, citing compliance with the land use plan, an appropriate density of 6.08 units per acre, compliant vehicle circulation, a greenway connection, diverse housing types that support Main Street goals, and a commercial component that supports town center development.

Worth Mills, representing the applicant, confirmed the addition of four prohibited uses: lodge or private clubs, preserved open space, minor utilities, and minor transportation installation, addressing previous board concerns.

**Motion: Commissioner Sneed moved to approve REZ 25-05, based on its consistency with Rolesville's Comprehensive Plan, and to adopt a statement of consistency and reasonableness, noting that it adds housing diversity for existing and future businesses and includes a street connector that helps alleviate Main Street traffic congestion. Commissioner Alston seconded the motion. The motion passed by roll-call vote.**

**Roll Call Vote:**

- Mayor Pro Tem Alston: Aye
- Commissioner Sneed: Aye
- Commissioner Long: Aye
- Commissioner Bernat: Nay
- Commissioner Paul: Nay

**Result:** Motion approved 3-2

10.b. Legislative Hearing - CPA-26-01 – Collector Roadway Network

Planning Director Wensman presented amendments to the comprehensive transportation plan, specifically removing collector road connections that no longer made sense given changes to the Comprehensive Plan. The amendments eliminate a north-south collector connection from Elizabeth Springs and an east-west collector connection to Everett Road in the area south of Wade Avenue and west of Everett Road.

The changes were deemed appropriate because the current Comprehensive Plan envisions commercial development in this area, which wasn't contemplated when the original transportation plan was created. A collector road dividing commercial development wouldn't be practical, and the connection would create cut-through traffic problems.

**Motion: Commissioner Alston moved to approve the Comprehensive Plan amendment CPA-26-01 for its consistency with the Rolesville Comprehensive Plan and to adopt a statement of consistency and reasonableness, as the amendment aligns with the transportation focus area. Commissioner Sneed seconded the motion. The motion passed unanimously by roll call vote.**

**Roll Call Vote:**

- Mayor Pro Tem Alston: Aye
- Commissioner Sneed: Aye
- Commissioner Long: Aye

- Commissioner Bernat: Aye
- Commissioner Paul: Aye

**Result:** Motion approved unanimously.

10.c. Continued Legislative Hearing – REZ-24-05/Atticus Woods – Wade Avenue  
Planning Director Wensman presented the Atticus Woods rezoning request for property at Wade Avenue and Averett Road, seeking to rezone from residential and PUD to a neighborhood center conditional zoning district (NCSCZ). The proposal includes single-family housing and commercial development, with commercial areas shown in blue and residential areas in tan on the concept plan.

The development proposes up to 300 single-family detached and attached housing units, prohibits certain commercial uses (commercial parking, flex industrial, fulfillment center), includes a 2.4-acre self-storage facility in the northwest corner, and provides a 50-foot perimeter buffer abutting Elizabeth Springs lots with no commercial buildings within 100 feet of neighboring properties.

Key conditions include fountains in stormwater ponds within 300 feet of Elizabeth Springs; no vehicular access from the Classical Way connection to minimize impact on the southern development; and the donation of a single-family home to a veteran. A development agreement provides additional guidance, including minimum 5-foot side setbacks for detached homes, maximum 100,000-square-foot single-use buildings, and maximum 65,000-square-foot grocery stores.

Public Comment:

Mayor Currin opened public comment, and several residents spoke:

The public hearing drew a large turnout from Elizabeth Springs residents and other community members. Several speakers expressed support for certain conditions, neutrality toward concerns, or opposition to various aspects of the project.

Ed Doe, a resident, appreciated the commissioners' detailed questions and expressed concern about the developer's lack of specific financial answers, particularly regarding the 300-home number without a clear rationale. He mentioned stormwater issues in Elizabeth Springs, including an overflowing retention pond that wasn't properly addressed.

Michael Givens from Cavanaugh Road noted that the applicant also serves as head of the Elizabeth Springs HOA, creating potential conflicts, as neither side of future discussions has yet turned over HOA control to residents.

Kevin Billy from Cavanaugh Road supported the project but expressed concerns about the applicant's track record in Elizabeth Springs, citing construction debris, poorly maintained greenways covered with dirt and grass, resulting in weeds, and promised amenities like dog parks that weren't completed properly.

Molly Hurst from Cavanaugh Road expressed support for development and businesses but was concerned about giving developers "blank checks" through special permits and large building allowances. She worried about creating another Gateway Commons rather than something more thoughtful, like Cobblestone Village, that would make Rolesville a place where people want to live and do business.

Margaret Watkins from Bell Mellon Court provided detailed requests if the project is approved: 75% brick facades to match Thales Academy, no truck stops or overnight parking, prohibited driveways within 200 feet of existing residents, no menu boards or speakers facing homes, no 24-hour businesses, fully enclosed gas station lighting, reduced pump numbers, full cutoff lighting fixtures, 20-foot light pole limits, reduced foot candles, screened rooftop HVAC systems, no loading docks within 200 feet of residential areas, fully shielded trash compactors, completed turn lanes before commercial occupancy certificates, signal warrant determination and developer cost sharing, long-term buffer maintenance clarification, increased 75-foot buffer with berm, no fuel tanker access off residential roads, 10-foot path along Wade Avenue, construction traffic route planning to avoid Elizabeth Springs, and construction hour limitations matching noise ordinances.

Josh Hurst from Kavanaugh Road raised four technical concerns about buffer conditions: LDO requires highest berm point at buffer center (25 feet from property line), but applicant's exhibit shows 18-foot minimum; LDO prohibits accessory uses within buffers, but condition 5 seeks exception for stormwater control measures; property descriptions list 13 residences but HOA owns narrow parcels between applicant property and 5 residences not included in condition 5; and environmental conditions language needs clarification to prevent mud or snow from exempting buffer requirements.

Heather Ingard from Kavanaugh Road described flooding issues in her backyard behind the existing pond, expressing concerns about buffer-area impacts and runoff visibility into the commercial property, noting the lack of buffer protection and a clear fence line that provides direct views.

George Wrenn from Carrie Mae Lane questioned the project's scale, traffic impacts, and developer trustworthiness, noting promises of single-level homes at 3 per acre but hearing discussions about townhouses, and questioning storage facility needs and repetitive commercial development patterns.

Betty Freeman from Averett Road, a 75-year resident whose family owned the property under discussion, raised concerns about impacts on the Little River Watershed, changes in water flow, 600 additional cars from 300 houses, and traffic problems that create 30-minute delays when exiting her driveway.

Emailed Public Comment: Andre Boorady from 128 Kavanaugh Road.

First, I want to thank the Board and Town Staff for listening to our community and limiting Classical Way to a residential-to-residential street. It's a massive win for the safety of our neighborhood, and a decision that directly honors the Rolesville 2050 goal of maintaining safe, close-knit neighborhoods, and we appreciate it.

Tonight, I am speaking on behalf of my family and neighbors regarding the commercial buffer. My property sits directly against the proposed commercial anchor at Kavanaugh and Classical Way. Because of this, if the buffer fails to protect our family and neighbors from a 24-hour commercial operation, it fails the Rolesville 2050 standard for compatible growth.

### **Point 1: The Usable Buffer Width & SCM Loophole**

Right now, the proposed buffer does not pass that test. Regarding the buffer itself, Zoning Condition #5 currently requires an exception to allow Stormwater Control Measures and maintenance access within the 50-foot buffer. If an access road and a stormwater pond take up the first 32 feet, we are effectively left with an 18-foot visual buffer. Furthermore, the Town's own Land Development Ordinance — specifically LDO 6.2.2.1.C.2 — does not allow accessory uses within a buffer. We ask that all stormwater accessories be moved completely outside the screening zone. We have specific concerns regarding Zoning Condition #5 and the applicant's site plan.

### **Point 2: Topography, Berms, and Walls**

The elevation along Kavanaugh Road varies. Some homes sit level with the commercial site, while my house has a steep drop-off at the property line. A flat strip of grass will not block commercial truck noise or headlights. To achieve true compatible growth, we need immediate verticality.

We are asking for an engineered berm topped with a solid masonry wall. The ordinance (LDO 6.2.2.1.D.3) requires the highest point of a berm to be in the strict center of the buffer. The applicant's Exhibit 1 shows it pushed 18 feet toward our homes. We ask that the ordinance be strictly enforced to ensure the berm is centered, maximizing its height and stability for everyone.

### **Point 3: The Planting Loophole**

Zoning Condition #5 contains vague language allowing the developer to skip landscaping if "environmental conditions" prohibit it. We ask that this be tightened to strict "environmental regulations", so muddy soil isn't used as an excuse to avoid planting. We need a guarantee of three staggered rows of fast-growing, dense evergreens — like Thuja Green Giants — planted at a minimum starting height of 8 to 10 feet to provide an immediate, year-round visual wall, not slow-growing saplings.

### **Point 4: Conflict of Interest**

Finally, the applicant for this commercial development still controls the Elizabeth Springs HOA. This means the developer sits on both sides of the property line, giving them an unfair level of autonomy and leverage over our residential edge compared to a standard builder-to-builder scenario. We ask the Board to heavily scrutinize this dynamic and ensure it is the voices of the actual residents protecting our neighborhood, not an HOA controlled by the commercial applicant.

### **Conclusion:**

We ask that this entire buffer — the berm, the wall, and the trees — be fully installed PRIOR to the start of any commercial construction. We are not anti-growth and absolutely want Rolesville to thrive and are in complete alignment with the Rolesville 2050 plan, which promises smart growth that respects the people who already call this town home. Please ensure a buffer that delivers on that promise.

### **Board Discussion**

Commissioner Bernat raised several detailed questions about the development agreement provisions, particularly the request to increase the grocery store size from the standard 25,000 square feet to 65,000 square feet. She argued that this

exceeded neighborhood center standards and would create a destination more like Gateway Commons than a walkable neighborhood center. The developer explained that this was based on their Sweetwater development in Apex, featuring a 65,000-square-foot Harris Teeter.

Commissioner Long questioned why the developer couldn't provide a ratio of townhomes to single-family homes, noting it was illogical that they wouldn't have preliminary numbers. He also asked about alternatives to a large grocery store, expressing interest in different retail options given proximity to existing grocery stores.

Commissioner Alston focused on stormwater concerns, questioning liability and asking about infrastructure capacity for 300 additional homes. The project engineer explained that stormwater ponds would be designed to release water at rates no higher than current conditions, in accordance with North Carolina law regarding water flow onto neighboring properties.

Commissioner Sneed asked about increasing veteran housing beyond one home, given the 300-unit development, and inquired about the relationship between the proposed development and the Sweetwater model. She also emphasized the need for commercial development to support the tax base while balancing concerns about the number of residential units.

The board identified several issues requiring resolution, including defining prohibited uses, establishing a ratio between single-family and townhomes (discussed a range of 75% single-family), addressing development agreement provisions such as building sizes, considering additional veteran and affordable housing, and resolving buffer and stormwater concerns raised by neighboring residents.

**Motion: Commissioner Bernat moved to continue REZ-24-05 Atticus Woods to the April 7, 2026, Town Board meeting to allow time to address board and community concerns. Commissioner Alston seconded the motion. The motion passed unanimously.**

## [11. Communications](#)

Dave Neill, Town Attorney

Town Attorney Neill requested that staff retrieve the Scarborough case to complete the annexation portion that was not addressed earlier in the meeting.

**Motion: Commissioner Alston moved to annex the property identified in ANX-25-03. Commissioner Sneed seconded the motion. The motion passed unanimously.**

Neill also noted that a closed-session motion had been prepared for the end of the meeting.

Town Board

No additional communications from board members were presented.

## [12. Closed Session](#)

**Motion: Commissioner Long moved that the board go into closed session to instruct public staff regarding material terms for acquisition of real property and consider a personnel matter pursuant to Chapter 143, Sections 318.11(a)(5) and (6) of the North Carolina General Statutes. Commissioner Sneed seconded the motion. The motion passed unanimously.**

Following the closed session, Mayor Currin announced that no action was taken and that the board received updates from the town attorney and town manager.

**Motion: Commissioner Long moved to adjourn. The motion passed without opposition.**



## Board of Commissioners

### Work Session

**March 17, 2026**

**6:30 PM**

#### **MINUTES**

**Present:** Mayor Ronnie Currin  
Mayor Pro Tem Dan Alston  
Commissioner April Sneed  
Commissioner Lenwood Long  
Commissioner Michael Paul  
Commissioner Jenn Bernat  
Town Attorney Dave Neill  
Town Manager Eric Marsh  
Town Clerk Christy Frazier  
Police Captain Richard Haynes  
Planning Director Stephen Wensman  
Town Engineer Scott Miles

#### **1. Call to Order**

The Mayor called the Rolesville Board of Commissioners Work Session to order on Tuesday, March 17, 2026, at 6:30 PM. The Mayor thanked everyone in attendance and noted that several items were on the agenda for the evening's work session, emphasizing that this was primarily for presentations and discussions, with one legislative hearing continuation planned for TA-25-11.

#### **2. Consideration of Agenda**

Town Manager Eric Marsh noted that the presenter for item 4, the Farm Master Plan with ADW Architects, would be approximately 10-15 minutes late, so the order of agenda items would likely change accordingly.

**Commissioner Michael Paul made a motion to consider the agenda, which was seconded by Commissioner Jenn Bernat. The Mayor acknowledged this adjustment, and the motion was approved unanimously without further discussion.**

### [3. Pre-Application Preview for 0 Quarry /Pin 1768467947 – Center Park Group](#)

Town Manager Eric Marsh introduced this new pre-application preview process, explaining that it came from conversations with the mayor of Hillsboro and his manager (also named Eric). Marsh emphasized that this process helps put development ideas before the board before formal application submission, allowing for initial feedback while being more intentional about smart growth and ensuring "growth happens for us, not to us."

Planning Director Stephen Wensman introduced Justin Brown from Pennoni Associates, who presented the proposal for a 14.03-acre property located east of the intersection of East Young Street and Quarry Road, directly across from Rolesville High School. The property is currently zoned RL (residential low density), with no frontage along East Young Street and approximately 1,700 linear feet of frontage along Quarry Road.

Brown explained that the comprehensive plan designates this area as a commercial center, surrounded by rural residential, agriculture, civic use, and a mixed residential community. The commercial center area totals approximately 228 acres, with this proposal representing about 6.5% of that designation. He noted that no residential uses are permitted within the commercial center designation, which typically allows conventional commercial uses along primary corridors.

The applicant is considering filing for residential high-density zoning to allow approximately 100 single-family attached dwelling units (townhomes) with associated amenity spaces. Brown argued that several factors support residential use despite the commercial designation: the property doesn't front on a primary corridor, is surrounded by over 200 acres designated as a community center, and there's already a permitted retail development at the intersection. He emphasized that the property's shape (320 linear feet deep) is not conducive to a large shopping center, and its location across from the high school would provide walkability for students and teachers.

Commissioner Jenn Bernat expressed strong concerns about the proposal, stating her "knee-jerk reaction" was that carving out this one piece for townhomes wasn't what the town was looking for. She emphasized the need to use the remaining commercial land more effectively, noting that breaking up this site could, in theory, inhibit development of the larger 140-acre parcel to the north. Bernat highlighted that the area already has numerous residential subdivisions and stated she would not be in favor of 100 townhomes on this site, believing it should remain commercial as designated in the comprehensive plan.

Commissioner Michael Paul joined Bernat in expressing concern, noting that the town's residential tax base is 92%, while it is way behind on commercial development. He pointed to the horrendous traffic conditions that haven't even been impacted by approved residences along Rolesville Road, questioning why the town would add to the problem.

Property owner Ann Robertson spoke briefly, stating that the property "will not be sold for commercial ever. Not in my lifetime, not any lifetime." She referenced a letter she provided explaining why the property would not be commercial, relating to the former mayor of Rolesville, who owned the land where the high school now sits.

Robertson identified herself as the granddaughter of George Robertson, a name recognized by those present.

The Mayor noted that with two commissioners absent, the board should consider questions those members might ask. The discussion concluded with staff taking the feedback provided, with no formal action taken on this pre-application preview.

#### [4. The Farm Master Plan – ADW Architects and June Greene, Parks & Rec Director](#)

Parks & Recreation Director June Greene introduced Darren Walker from ADW Architects to present the updated master plan for the 106-acre farm park. Walker explained that their team was tasked with taking a fresh look at the farm park using historical data, previous work, and evolving it into the current proposal.

Walker described the site's existing conditions, including Perry Creek connector with two ponds and topography that starts high on Lewisburg Road and flows down to the waterway. He emphasized that his partner researched the property's history, reaching out to the family and visiting the site, and was struck by how the land had always been used as a family farm, with existing buildings, pecan trees, and ponds that they wanted to weave into the park design.

The revised master plan pulls the recreation center away from Lewisburg Road traffic and noise, positioning it in the center of the park and creating an orchard out front. Ballparks are positioned to the east and west, with specific activation areas throughout. Walker detailed the orchard memorial area using remnants of the existing house's stone foundations, incorporating a "front porch" theme with pergolas and swings throughout the park.

The multi-use activity center, located in the park's center, becomes a focal point connecting all areas. Walker showed interior renderings incorporating farm aesthetics, calling it "a beacon in the center of the park." An event lawn south of the activity center would flow from the building and accommodate weddings, gatherings, and outdoor movie events.

A playground is positioned north of the activity center, built into the landscape and designed to attract families while remaining close to the recreation center, event lawn, and baseball park. Baseball fields include one larger field on an island area that would create a "signature baseball field" over a ravine, plus a smaller field. Four soccer fields are planned: two larger and two smaller fields, all connected by active connectors.

Walker explained the active connector system, including areas for food trucks right off parking areas, picnic tables, fire pits, shipping containers for outdoor recreation equipment storage, and picnic shelters. A future event venue is planned across the Perry Creek connector in a quieter, more remote area with waterway access and views.

Town Manager Eric Marsh elaborated on the event venue concept, visioning it as a place where people who grew up in Rolesville could return to get married. He described it as potentially being an economic development driver for weddings and large events, filling a gap in the region where people currently rent venues or travel to places like barns in Wakefield. Marsh noted that while it wouldn't pay for itself, it could generate revenue while accounting for resident versus non-resident pricing.

Commissioner Michael Paul asked about earlier discussions regarding a soccer tournament partnership that seemed to require more fields than currently proposed. Marsh confirmed they have a meeting the next day with the organization, noting they wanted a minimum of five fields, but the current plan includes four (two large, two small), with the small ones potentially doubling as additional smaller fields for a total of six. They believed this would still work for tournament partnerships while maintaining the community aspect of the overall farm park experience.

Commissioner Jenn Bernat inquired about baseball field utilization, with Parks Director June Greene explaining that the smaller field (60–65-foot bases) would serve T-ball, softball, and little league up to age 12, while the larger field (90-foot bases, 330-foot fence) would serve 15-year-old age groups and function like high school baseball. Both fields could accommodate current recreation league needs while potentially generating tournament revenue on weekends.

The Mayor asked about Greenway connections to the planned underpass, with Walker showing how the beige-line Greenway system could serve as a cross-country trail while connecting to a future underpass location. Walker confirmed the connection point but noted it doesn't have to be implemented immediately.

Regarding changes from previous plans, the Mayor noted fewer baseball fields than originally proposed. Marsh confirmed there was one less soccer field and fewer baseball fields, allowing for more event lawn space, reflecting the direction they took with the revised plan.

Commissioner Bernat asked about pickleball facilities, which Walker explained would be accommodated in the activity center's two gymnasiums on multipurpose surfaces. The building would feature garage doors connecting inside and outside spaces, with a porch wrapping around the outside for bands and other activities.

Walker confirmed the building would have two full-size basketball courts in a single-story structure approximately 30 feet high, with potential expansion for a third court. He estimated about 50% of the 106 acres would be used for active recreation, with the activity center and surrounding area occupying about 5 acres and the upper portion totaling about 8 acres.

A dog park was planned in a wooded area that wouldn't require moving the already-built road, with parking and potential vendor/food truck space. Walker showed the property boundaries, explaining that significant areas remain undeveloped due to floodplain restrictions, stream buffer zones, and power line easements that limit development options.

Commissioner Paul inquired about using undeveloped farmland, but Walker explained that, while they tested various configurations, space constraints and the desire to maintain proper north-south orientation for athletic fields (most ideal for play) limited options in those areas.

Town Manager Marsh outlined the next steps, seeking board feedback and approval of the direction before moving into cost analysis and phasing. He explained that they would develop phases (1, 1A, 1B, 2, 3, 3A, 3B) to show the implementation strategy while accounting for different funding sources, including current partnerships, the \$3.8 million grant, and the NCFC relationship. The goal is strategic development while keeping the community informed and applying for additional grants for specific elements, such as the orchard and community kitchen partnerships.

Commissioner Paul suggested better use of the lower farmland section and emphasized pickleball's popularity, recommending that the town not miss the opportunity to build courts, as there's a shortage of places to play. Marsh agreed to explore pop-up pickleball options on walkway surfaces and noted that pickleball facilities could be implemented earlier since they don't require buildings.

Commissioner Bernat asked about community gardens in the lower area, but Walker explained that access challenges, due to the landlocked nature of the area, require bridge construction across the creek, making it less feasible for the early phases.

The Mayor expressed support for the concept while emphasizing the need to see the timeline and the details of the progression. Marsh confirmed they would return within 2-3 months with phasing details, current funding allocations, and unfunded phases requiring future consideration.

Commissioner April Sneed expressed enthusiasm for the plan, and the board generally supported the direction for staff to continue developing.

## 5. Town Code Section 92 – Chicken & Rabbits

Town Clerk Christy Ynclan-Frazier introduced the item, explaining that during the November 6, 2025, board meeting, residents had expressed interest in keeping chickens and rabbits on their property and inquired whether the code could be updated to allow this under certain conditions. The presentation would provide information on existing code, resident requests, and how surrounding municipalities address similar matters.

Planning Director Stephen Wensman detailed current Section 92 regulations. For chickens, requirements include residential zoning, 150 feet of separation from most adjacent development, closed-area containment, and a property of 2 acres or more. Rabbits are considered livestock under the definition and are prohibited within 150 feet of any dwelling.

Wensman noted that HOAs typically have codes stricter than town regulations and most often prohibit rabbits or chickens, though the applicant claimed their HOA favored the amendment. He mentioned attempts to poll HOAs but hadn't received responses yet.

The police department reported very few complaints about chickens or rabbits in recent years, indicating no current real issues. However, Wensman pointed out that if they allowed broader permissions throughout town, they would lack code-enforcement capacity. While the current system works because it generates no complaints, broader permissions could create enforcement challenges.

Research on other municipalities showed Wake Forest prohibits roosters with similar considerations but allows chickens in more residential districts. Garner also prohibits roosters with regulations allowing broader residential district use, though most of Garner's newer neighborhoods are HOA-controlled, likely preventing chickens anyway. Knightdale and Wendell have similar mixed district allowances with comparable codes.

Wensman noted several technical corrections needed in the current code: references to outdated UDO instead of current LDO, no rooster prohibition where

there probably should be, horses listed as both domestic animals and livestock, creating conflict, and the current requirement for the Board of Commissioners to decide permits rather than the typical administrative procedure.

The discussion revealed that while staff recommended technical cleanups, the 2-acre requirement effectively limits chicken keeping to very few properties in town - estimated at 400-500 people before HOA restrictions, making it perhaps only 4-5 households that could even request permits currently.

Commissioner Bernat expressed concern about chickens leading to roosters and resulting neighbor issues, but felt rabbits were "pretty quiet" and wouldn't oppose removing them from the livestock definition if feasible.

Commissioner Sneed asked about rabbit-specific issues in other municipalities, with Wensman noting that rabbits weren't typically the source of complaints - many rabbits would be problematic, but one would likely be considered a pet and not generate complaints.

Town Attorney Dave Neill explained that HOAs with animal restrictions would handle enforcement internally, but properties without HOA provisions would rely on the town code. He noted that most modern planned communities since 2000 include animal restrictions.

The Mayor clarified that the board was not necessarily looking to make changes but had instructed staff to investigate in response to citizen requests. The current system still prohibits most chicken keeping due to the 2-acre requirement, affecting perhaps 3 people waiting for the decision across different neighborhoods, including the village and Granite Falls.

Neill suggested the board could either proceed with technical corrections, including rooster prohibition, or potentially remove rabbits from the livestock definition to treat them like dogs and cats. He noted that cleaning up the code would create a better foundation for future boards to potentially adjust acreage requirements with appropriate safeguards.

The board provided direction to proceed with technical corrections and cleanup while maintaining current restrictions, with Wensman and the Town Clerk coordinating the necessary code amendments.

## [6. Continued Legislative Hearing – TA-25-11 - Land Development Ordinance Text Amendment \(Buffer Yards\)](#)

Planning Director Stephen Wensman explained that Text Amendment 25-11 was continued from the February 3<sup>rd</sup> Town Board meeting to allow time to update notes on perimeter buffers 2L and 3L, increase plant materials, and define opacity levels. The applicant is a private developer seeking to eliminate fences and walls in perimeter buffers between residential zoning districts.

This topic has been discussed in numerous board and joint work sessions, and staff already have it on their radar for future amendments. The developer's proposal aligns with staff interests.

The proposal allows landscape materials only (no required fences) in type 2 and type 3 buffers, with perimeter buffers having twice the typical landscape materials to

achieve a maximum 75% opacity from ground to 6 feet height. The enhanced buffer would include 4 evergreen trees per 100 feet, either shade or understory trees, with 50% of the plant material being evergreen.

Wensman showed current buffer types for illustration, emphasizing that graphics weren't part of the code amendment but demonstrated the general effect - adding coniferous trees and doubling plant material with evergreens to replace walls while achieving similar opacity.

Commissioner Michael Paul asked about the cost differences between the current and proposed systems. Wensman noted the objective was achieving the same buffering end rather than cost considerations, though cost was likely a big factor for applicants. Paul pointed out that walls provide impervious barriers that address safety and trespass issues, which foliage cannot match, suggesting that cost was probably the only reason for the change.

The Mayor provided context on a situation between Joel Fund and an adjacent house, where neither party wanted the required wall, but the current code mandates it with no waiver options. Town Attorney Dave Neill clarified that this text amendment applies only to residential-to-residential buffers, not to the commercial-to-residential situation in the Joel Fund case.

Neill explained the matrix showing where new "L options" would apply at lower buffer levels between residential districts. Commissioner Bernat expressed support for residential-to-residential applications, noting how current requirements can create "dead space" with no connectivity when adjacent developments each build walls. She supported the density and opacity requirements while maintaining commercial-to-residential wall requirements.

The discussion covered maintenance requirements, with both Wensman and Neill confirming that approved landscaping must be maintained like any other approved development feature, but the changes aren't retroactive - existing developments operate under their original approval laws.

Neill provided background on a variance case (Joel Fund) that went to the Board of Adjustment and was denied by a 4-to-1 vote, noting that it involved a general commercial-to-residential low-density use, which isn't covered by this text amendment.

Commissioner Bernat emphasized the connectivity and walkability benefits between residential spaces while maintaining appropriate commercial-to-residential barriers. The text amendment specifically addresses sections 6.6.02.01 of the LDO.

Applicant Gabe Cunningham from Lock 7 Development presented three updates to the proposed text amendment addressing feedback from commissioners and planning staff. Changes included increasing evergreen commitment from 35% to 50%, doubling overall planting commitments (trees, understory trees, and shrubs) from the previously proposed 25% to 100% of current requirements, and setting minimum 75% opacity requirements.

Cunningham showed examples from a Fuquay Varina project with 50% evergreen requirements, where they exceeded minimums using primarily evergreen materials except for trident maples. He displayed potential planting sections showing many more plantings than the currently implemented buffers.

Neill reminded the board that this creates a town ordinance applicable to everyone similarly situated, not specific applicant commitments, and the board isn't limited by the applicant's proposal in their decision-making.

Commissioner Bernat sought clarification about whether images represented what would be adopted in the LDO versus applicant commitments, with Neill requesting that staff display the actual proposed text amendment showing numerical standards matching the 75% opacity discussed.

Wensman confirmed consistency with the comprehensive plan, with planning board recommendation for approval, and staff recommendation based on plan consistency. The Mayor closed the legislative hearing and called for board action.

**Motion: Commissioner Michael Paul moved to approve Text Amendment TA-25-11 as presented. Commissioner Jenn Bernat seconded the motion. The motion passed unanimously.**

Neill noted that the board had now set a more flexible floor for development plans while retaining legislative discretion to require additional buffering or walls when circumstances warrant, rather than having a "one size fits all" approach - something the Mayor had previously mentioned.

## [7. Development Review Fees Discussion](#)

The Mayor introduced this item by explaining the town's efforts to promote commercial development, noting that commercial developers frequently cite high costs and lengthy processes as barriers to doing business in Rolesville. He emphasized the need to balance promoting commercial growth without driving potential developers away, particularly when they can choose between Rolesville, Wake Forest, or Raleigh for their projects.

Planning Director Stephen Wensman explained that fees were updated a couple of years ago during former Planning Director Meredith's review, keeping many fees lower because the town uses outside consultants for inspections, with fees passed through. He displayed a comparison showing how neighboring communities handle engineering reviews.

Wensman noted that planning staff conduct in-house planning reviews, but the town contracts with Bolton and Mink for TRC (Technical Review Committee) engineering reviews and as-built drawing reviews. Since the town lacks in-house engineering capacity (though they recently hired a town engineer), they pass consultant invoices directly to developers.

The comparison showed smaller towns like Knightdale, Wendell, and Garner typically pass engineering review fees directly to applicants, while larger municipalities like Wake Forest and Raleigh likely have in-house staff capacity and don't pass those fees through since they're incorporated into application fees and employee salaries.

Commissioner Michael Paul emphasized that Rolesville competes with Wake Forest rather than smaller towns, stressing the need to understand fee comparisons with Wake Forest since developers can choose between nearby municipalities.

Commissioner April Sneed asked how they could remain competitive without the community bearing the costs of plan reviews.

The Mayor explained the developer complaint pattern: most places like Raleigh and Wake Forest have upfront fees where developers "pay the fee, and they're done," knowing what costs to expect. In Rolesville, developers pay initial fees but then get "nickel-and-dimed all the way down the line" with additional fees appearing throughout the process.

Town Manager Eric Marsh noted that larger municipalities may have higher initial fees, but in Rolesville, bills are issued on Bolton and Mink letterhead rather than town letterhead, leading developers to believe they could achieve lower rates by hiring their own consultants. However, Marsh emphasized they can't surrender engineering oversight responsibility, as the town ultimately accepts streets, sidewalks, roads, and stormwater control elements.

Commissioner Bernat asked whether bringing engineering plan review in-house would be feasible and cost-effective rather than the current system of sending plans to outside consultants. She questioned whether hiring additional engineers for in-house review would be better for streamlining and cost control.

Marsh noted space constraints as a significant challenge - they're fighting for space and would need to lease additional space for current engineering and planning staff to collocate, let alone add more personnel. He pointed out they're competing with the commercial market for administrative space.

Wensman explained that developers do have some cost control - hiring thorough engineers who study town code and submit compliant plans typically go through one TRC review cycle, while less prepared engineers may require 2-3 reviews, increasing costs.

Commissioner Paul suggested negotiating flat fees per project with engineering consultants, having them absorb costs when developers don't do upfront work properly, and providing greater cost certainty to developers by rolling consultant fees into town fees so bills come from Rolesville rather than multiple consultants.

Commissioner Sneed proposed giving developers a comprehensive number covering all different services, with everything flowing through the town for payment and remittance to consultants, eliminating the appearance of paying multiple outside companies.

The discussion revealed administrative costs associated with tracking payments and ensuring accountability when developers don't pay consultant bills, requiring town intervention to withhold permits or plan approvals.

Town Attorney Dave Neill provided the perspective that development communities complain about fees in every Wake County community, noting recent legal requirements that fees be justified and linked to actual town costs. This led to more detailed fee documentation, which developers characterize as "nickel and diming."

Commissioner Paul noted that their current approach "apparently is not working" if they want to attract commercial development, suggesting they need to change the system. The discussion explored various options for modifying the fee structure.

Wensman noted potential fairness issues with single comprehensive fees - complex projects might pay less than actual costs, while simple projects could pay much more than warranted. Commissioner Paul suggested project-specific estimates from engineers held to quoted amounts, incorporated into town fees.

The Mayor shared a specific example of a Main Street business owner who "unloaded" on Rolesville's process compared to other municipalities, citing it as the longest and costliest place to do business, even more challenging than Raleigh. The owner specifically complained about 60-day review cycles for resubmissions after addressing red-line comments.

Wensman clarified that TRC reviews are monthly, so delays may stem from application timing and TRC review scheduling rather than actual 60-day consultant review periods.

Marsh noted that even with internal engineering capacity, external approvals from the city of Raleigh (water/sewer) and DOT (adjacent roads, including Main Street) would still create delays outside town control.

The board directed staff to research the issues further, including Wake Forest and Raleigh fee comparisons, a cost-benefit analysis of current pass-through fees, working with engineering firms to improve fee predictability, and exploring process improvements to provide greater transparency and upfront cost certainty for developers.

## [8. Fowler Road ROW Acquisition](#)

Town Manager Eric Marsh presented information on the Fowler Road extension right-of-way acquisition, referencing the community transportation plan, which highlights future roadways to promote connectedness and reduce traffic by providing alternative routes for residents.

The Fowler Road extension appears on the community transportation plan as a Greene line extending from the Merit property development. Marsh showed how this thoroughfare aligns with the Merit property project, highlighting on iMAP the areas where the road extension would affect the sections.

The Merit development, based on its rooftop count, only requires a 2-lane road. However, the community transportation plan calls for a 4-lane divided road with raised median, curb and gutter, bike lanes, and sidewalks for the future Fowler Road extension cross-section.

Marsh explained that requiring the full cross-section would necessitate a development agreement in which the town reimburses costs above the minimum (considered "betterment") through transportation, parks, and recreation, or fee credits. However, they're not pursuing this approach because the Capital Improvement Program needs as many fees as possible for ongoing projects.

Instead, Marsh requested board permission to work with the town attorney on a development agreement requiring additional right-of-way for the future full cross-section, to ensure they won't be built in that area, and to preserve space for future expansion. The developer has agreed to this approach after several meetings.

With this arrangement, they would install necessary infrastructure (streetlight conduits, curb cuts) with the future state in mind, making eventual expansion easier. The Fowler Road buildout would be pursued through CAMPO funding similar to the Main Street project.

Commissioner Michael Paul asked about timing and connection to the bypass. Marsh explained they don't currently have active projects developing the adjoining properties needed to complete the connection to Jonesville, so timing depends on the development of five other parcels. The vision extends from Jonesville to Rolesville Road, providing bypass alternatives for residents.

Paul noted this could be dormant for potentially 2-10 years, questioning priorities when Rolesville Road needs immediate expansion versus this long-term opportunity. Marsh acknowledged land costs are skyrocketing, making future right-of-way acquisition more expensive, and they're essentially purchasing through surrendered revenues via fee credits anyway.

Commissioner Bernat asked about the town's costs. Marsh provided an estimated cost of \$610,000 for approximately 5 acres at \$122,000 per acre. The funding would come from reduced development revenues through transportation fee credits.

The Mayor asked who they would buy from if they didn't acquire the right-of-way now. Marsh explained it would likely be an HOA, but without right-of-way acquisition, they might face negotiations with individual homeowners over front yards if houses fill the area, potentially requiring expensive eminent domain proceedings with 15-20+ homeowners instead of one developer.

Paul asked about bridge requirements over the creek, with confirmation that developers would build the required bridge infrastructure. Additional difficult terrain exists between the creek and Jonesville Road, potentially requiring future developer involvement.

Town Attorney Dave Neill provided background on the zoning case history, explaining that, when approved, LDO requirements mandated that buildings be built according to the comprehensive transportation plan. The town charter provides fee credits for building more than the law requires, creating potential charter conflicts.

The board previously adopted a policy allowing reimbursement for the same property as development (previously only for off-site improvements) when development costs far exceeded any traffic-impact justification. Neill explained that they had determined the full buildout cost and would provide reimbursement through transportation impact fees when they are determined.

Neill noted they now know the full buildout cost would consume a great portion of all impact fees the project would generate for "a road to nowhere." Since the zoning approval, the committed capital fund balance to immediate needs opened the door to not building everything immediately.

Rather than \$4 million in reimbursements, they're proposing \$600,000, while keeping over \$3 million available for future needs. Neill confirmed that the ordinance requires development in accordance with future plans, so developers are obligated to construct comprehensive transportation plan elements.

Commissioner Paul clarified that they could require the developer to build the entire thing now, but would have to pay them back, making this the cheapest approach for preserving future options.

Commissioner Bernat noted significant landlocked land that couldn't be developed off the bypass, suggesting this acquisition might incentivize developers to examine these previously inaccessible parcels.

Neill outlined three future options: mandate full construction with town reimbursement for the difference, use the compromise solution presented, or amend the comprehensive transportation plan to strike the Fowler Road obligation, making it essentially a 2-lane driveway to Rolesville Road.

Commissioner Paul concluded that buying right-of-way is the best approach to keeping their options open. Marsh emphasized that this states their intention for the area, potentially incentivizing development of neighboring parcels along the Fowler Road extension and creating a bypass for future traffic flow improvements.

The board directed Marsh to work with the town attorney to develop the agreement for future consent agenda consideration, including engineers' estimates and credit terms similar to those of other projects.

## 9. Main Street Project Update

Town Engineer Scott Miles provided updates on the South Main Street project. He reported that the contractor stated French drains would arrive on Friday, March 20th, though he requested proof of shipment, which hadn't been provided. Assuming on-time arrival, work would begin on Monday, March 23rd, and take approximately 2 weeks, weather permitting.

Public works had emptied the trash cans along the street and would monitor them, placing bags once they were bolted down. Miles noted that bags weren't currently placed because they become disgusting and infested with bugs when cans aren't secured. Commissioner Bernat questioned why bags couldn't be placed now, leading Miles to agree to direct public works to install bags immediately.

Benches and trash cans would be installed by the second week of April. The two disputed benches in front of Susanna's Antiques would be removed and relocated to other Greenway positions. The two benches closest to the street would be positioned according to plan, set back from the street rather than at their current locations.

Two benches near Allen Clark's building (The Lawns) had been moved further from the building, aligned with existing light poles to avoid impeding pedestrian traffic while maintaining proper alignment.

Commissioner Bernat questioned why materials weren't ordered simultaneously, expressing frustration with the piecemeal approach. Miles explained they were exploring design changes to eliminate drains altogether while the first set was ordered, but when that proved unfeasible, the second drain order was already delayed.

Marsh added that drains were coming from Canada, leading them to explore alternatives with DOT that ultimately wouldn't work. Bernat noted pavers had been available for months while drains remained outstanding.

Commissioner Bernat expressed strong frustration with Fred Smith Company's handling of the project, calling their performance "abhorrent" and questioning what recourse the town has for a project that should have taken less than a year but is now in its second and a half year. She demanded accountability from company ownership, not just field supervisors.

Marsh noted that when commissioners communicate these concerns publicly, company representatives watch the videos and attend subsequent meetings but emphasized that they hold them accountable as much as possible within contract constraints.

The discussion revealed ongoing payment and project management challenges, with Marsh noting that withholding payments could interfere with project completion ability, though progress is being made on larger items, while visible elements like drains lag significantly.

Commissioner Michael Paul supported Bernat's concerns, calling the 6-month wait for French drains inexcusable. The board discussed demanding proof of orders and shipments rather than just requesting information.

Bernat asked about bringing in the state attorney general for potential fraud issues, with the Mayor suggesting their attorney, Dave Neill, could investigate if directed. Neill advised having construction discussions in a closed session with construction counsel present rather than an open session.

The Mayor shared an example of a Main Street business owner who "unloaded" on Rolesville's process, which he described as the longest and costliest compared to other municipalities where he operates, including 60-day delays between resubmission reviews.

Miles continued his presentation, noting the final asphalt layer would begin Sunday, April 12th, with all work done in the evenings. High-visibility paint would be applied around valves and manholes until final paving is complete. Notification would be provided via social media when confirmed.

The final paving would take approximately 2 weeks, with striping following immediately, targeting completion by the end of April, weather permitting. Tree protection fencing and construction barriers could be removed at project completion, with some erosion control measures potentially remaining longer.

Commissioner Bernat requested immediate cleanup of displaced benches and shipping materials that had been sitting for weeks. The board discussed coordination for the upcoming Mingle on Main event on March 27th, with the goal of completing at least the area from businesses to drains by then.

The Mayor expressed frustration with contractors tearing up areas without having materials to complete repairs, calling it "amateur" and something that would upset any property owner. He emphasized the negative impact on commercial businesses downtown from poor decision-making throughout the project.

Town Attorney Neill announced that the April meeting consent agenda would include a proposed engagement letter from Womble Bond as outside bond counsel for Young Street Campus Projects, with John Mize heading the group to ensure proper alignments and expertise for the town's projects.

## 9. Adjourned

The Mayor adjourned the meeting without objection, thanking all participants for their attendance and participation in the work session.



# Memorandum

**To:** Mayor and Town Board  
**From:** Eric Marsh, Town Manager  
**Date:** April 7, 2026  
**Re:** 5.b - Fowler Road ROW Acquisition Developer Agreement

## Background

The **Rolesville Moves Community Transportation Plan (CTP)** is a community-driven effort that identifies transportation needs and recommendations for multimodal facilities. The plan provides the framework for creating a holistic transportation network and an accessible community for the Town of Rolesville. The development of the Rolesville Moves CTP began in the winter of 2020. CTP was completed in 2021.

The analysis of the existing conditions and development of CTP was initiated by understanding the existing and future travel conditions, identifying the current and future land uses, creating guiding statements, and reviewing previously completed plans and studies. The completed CTP made recommendations divided into the basic categories:

- Thoroughfare Recommendations
- Collector Recommendations
- Intersection Recommendations

As development progresses, the Town works with developers, builders, and community partners to advance the CTP's vision—planning for future growth in accordance with the overarching Town strategic plan.

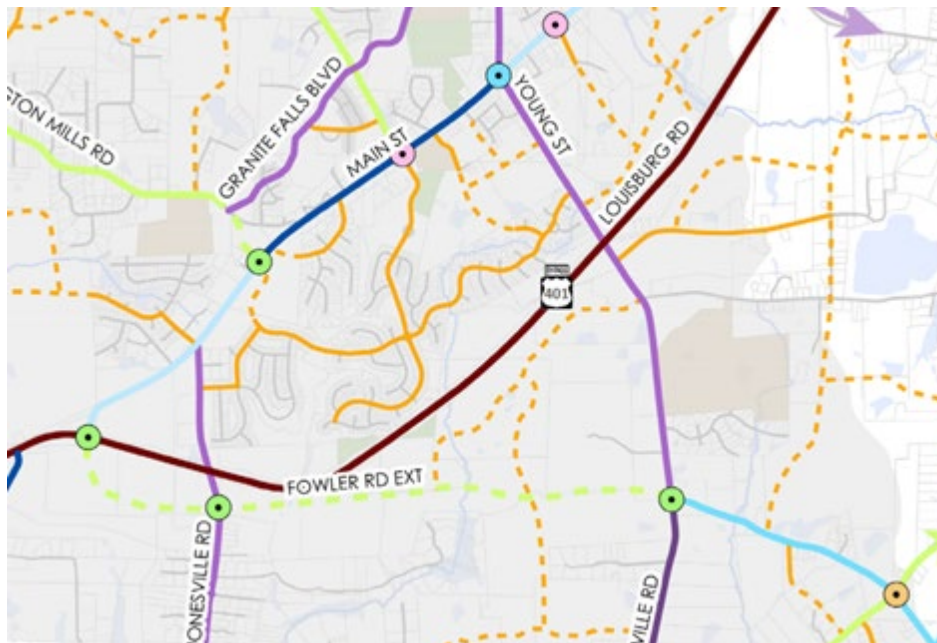
## Fowler Road ROW Acquisition

The Fowler Rd Ext is a thoroughfare established by the CTP. The future cross-section is a 4-lane divided thoroughfare with a raised median, curb & gutter, bike lanes, and sidewalks. Only two lanes of travel are required to meet Merrit Development's capacity. So, the acquired ROW would account for the median and the additional two lanes of travel to be built at a future date.

Below are two excerpts from the CTP that outline the Fowler Road Extension.

Facility Name	Extents	Status	Cross-Section Description
Fowler Rd Ext	US 401 BYP (Louisburg Rd)/US 401 BUS (Main St) to Rolesville Rd	New Location	4-Lane Divided (Raised Median) with Curb & Gutter, Bike Lanes, and Sidewalks

**Figure 1:1** – Community Transportation Plan (p. 79)



**Figure 1:2** – Proposed Network Map - p.12, Community Transportation Plan (CTP)

Merritt Property Development offers an opportunity to collaborate on acquiring the Right-of-Way (ROW) needed for the future expansion of the Fowler Road Extension.

At a prior public meeting (March 17, 2026 Work Session), staff presented that the estimated cost of the ROW to be **\$610,776** (4.99 ac x \$122,400). The cost will be paid via fee credits—more specifically, transportation fees. The ROW acreage and cost have been further assessed, resulting in the area of the ROW dedication. Therefore, the final cost will be slightly lower.

### **Recommended Action**

**Staff Recommendation:** The Board adopt the Resolution.

**Motion:** I move approval of RESOLUTION IN SUPPORT OF ROADWAY REIMBURSEMENT AGREEMENT FOR MERRITT RESERVE.

Attachments:

- **Exhibit A** – Shows the quantity breakdown of the 110' Fowler Road right of way into the required 60' right of way and the additional 50' right of way.
- **Exhibit B** – Shows the two-lane Fowler Road to be constructed by the developer.
- **Exhibit 1B** – Shows the cost estimate of the two-lane Fowler Road to be constructed by the developer.
- **Exhibit C** – Shows the summary of the design and right-of-way cost of Fowler Road.

- **Attachment A: Resolution No. 2026-04** – Resolution in Support of Roadway Reimbursement Agreement
- **Attachment B:** Draft Roadway Reimbursement Agreement

## EXHIBIT 1B

### **COST ESTIMATE**

Estimated Quantities & Preliminary Cost

### **2 Lane Fowler Road Extension**

Date: 9/30/24

Rev 11/21/25

Z:\Jobs\23-0004 Merrit Property BRD\Documents\Dev. Agreement

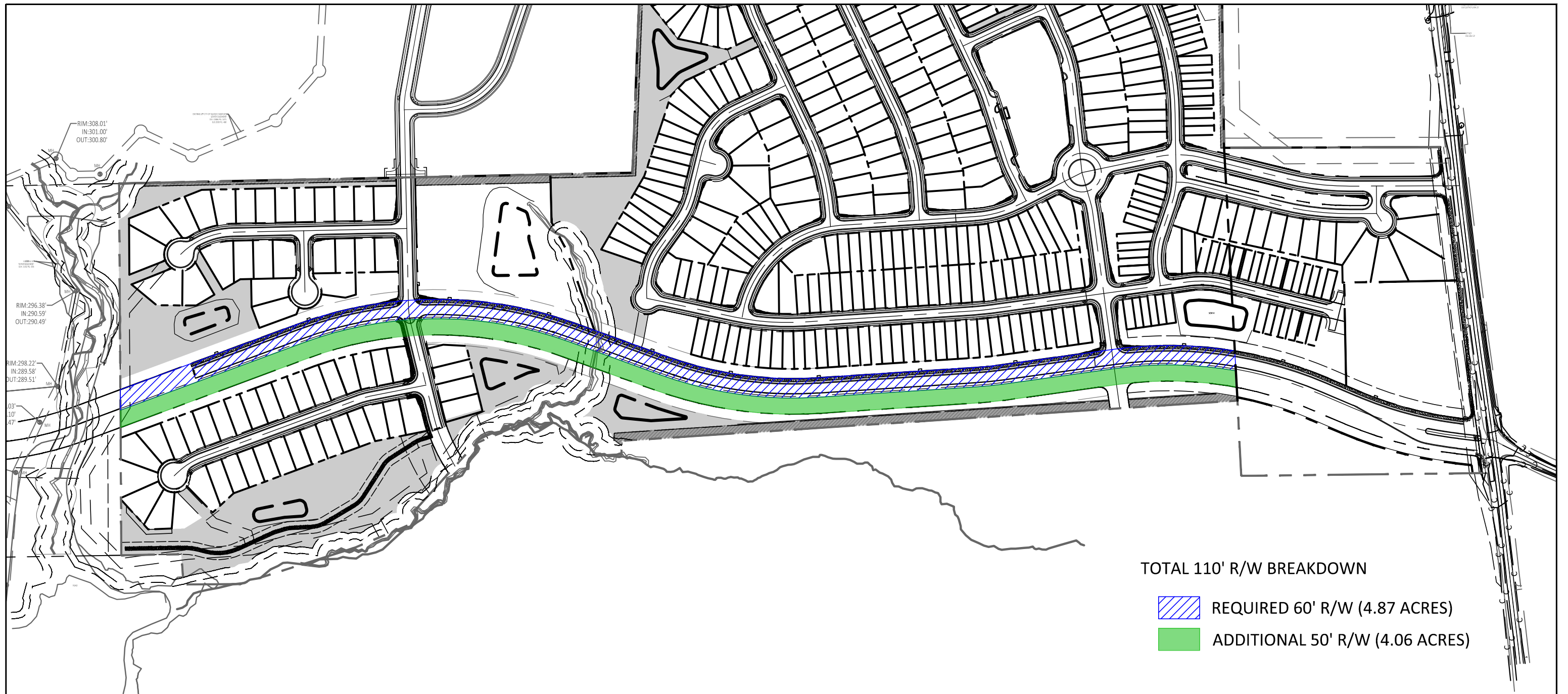
<b>QUANTITY</b>	<b>UNIT</b>	<b>DESCRIPTION</b>	<b>UNIT PRICE</b>	<b>TOTAL</b>
<b>Sec I Preliminary Erosion Control and Miscellaneous</b>				
0.85	LS	Mobilization	\$ 100,000.00	\$ 85,000.00
14.49	AC	Clear and Grub	\$ 10,750.00	\$ 155,767.50
10110	LF	Silt Fence	\$ 3.25	\$ 32,857.50
10110	LF	Tree Fence	\$ 3.25	\$ 32,857.50
109	EA	Silt Fence Outlets	\$ 125.00	\$ 13,625.00
36	EA	Inlet Protection	\$ 335.00	\$ 12,060.00
20	EA	Check Dams	\$ 75.00	\$ 1,500.00
14.49	AC	Temporary Seeding	\$ 2,100.00	\$ 30,429.00
2	EA	Construction Entrance	\$ 3,500.00	\$ 7,000.00
1	LS	Stream Crossings	\$ 61,000.00	\$ 61,000.00
3	EA	Sediment Basins / Wet Ponds	\$ 50,000.00	\$ 150,000.00
0.85	LS	Misc. Erosion Control Measures	\$ 35,000.00	\$ 29,750.00
			<b>Tot. Sec. I</b>	<b>\$ 611,846.50</b>
<b>Sec. II Storm Drainage</b>				
1180	LF	15" RCP	\$ 85.50	\$ 100,890.00
1180	LF	18" RCP	\$ 100.00	\$ 118,000.00
1440	LF	24" RCP	\$ 110.00	\$ 158,400.00
200	LF	30" RCP	\$ 135.00	\$ 27,000.00
140	LF	60" RCP	\$ 450.00	\$ 63,000.00
1	EA	18" Endwalls	\$ 2,400.00	\$ 2,400.00
1	EA	24" Endwalls	\$ 2,500.00	\$ 2,500.00
2	EA	30" Endwalls	\$ 3,000.00	\$ 6,000.00
2	EA	60" Endwalls	\$ 10,500.00	\$ 21,000.00
4635	LF	Flush Drainage	\$ 5.50	\$ 25,492.50
7	EA	Junction Boxes	\$ 10,500.00	\$ 73,500.00
26	EA	Catch Basins	\$ 8,500.00	\$ 221,000.00
			<b>Tot. Sec. II</b>	<b>\$ 819,182.50</b>
<b>Sec. III Earthwork Roadway</b>				
11835	CY	Strip Topsoil	\$ 4.50	\$ 53,257.50
145350	CY	Rock Cut	\$ 3.50	\$ 508,725.00
79150	CY	Cut to Fill	\$ 4.25	\$ 336,387.50
92500	CY	Borrow	\$ 22.00	\$ 2,035,000.00
0	CY	Excess Cut	\$ -	\$ -
0	CY	Haul Off Excess	\$ -	\$ -
0.5	LS	Retaining Walls	\$ 687,000.00	\$ 343,500.00
			<b>Tot. Sec. III</b>	<b>\$ 3,276,870.00</b>

COST ESTIMATE  
2 Lane Fowler Road Extension



Date: 30-Sep-24 Rev 11/21/25

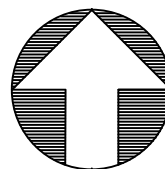
Z:\Jobs\23-0004 Merrit Property BRD\Documents\Dev. Agreement

QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
<b>Sec. IV Roadway</b>				
13600	SY	8" ABC	\$ 10.50	\$ 142,800.00
13600	SY	1.5" Asphalt, Type S9.5C	\$ 10.50	\$ 142,800.00
13600	SY	1.5" Asphalt, Type S9.5C	\$ 10.50	\$ 142,800.00
13600	SY	Fine Grade Pavement	\$ 4.00	\$ 54,400.00
4000	LF	30" Curb and Gutter	\$ 26.50	\$ 106,000.00
3650	LF	18" Curb and Gutter	\$ 21.50	\$ 78,475.00
0	LF	18" Median Curb	\$ 21.50	\$ -
7580	LF	ABC under Curb	\$ 3.00	\$ 22,740.00
7580	LF	Fine Grade Curb	\$ 4.00	\$ 30,320.00
39800	SF	5'x4" Sidewalk	\$ 5.50	\$ 218,900.00
4422	SY	Fine Grade Sidewalk	\$ 4.00	\$ 17,688.00
0.95	LS	Signage & Striping	\$ 40,000.00	\$ 38,000.00
<b>Tot. Sec. IV</b>				\$ 994,923.00
<b>Sec. V Water Mains</b>				
4400	LF	12" DIP	\$ 75.00	\$ 330,000.00
1	LS	Connect to Existing Water Main	\$ 25,000.00	\$ 25,000.00
11	EA	Water Main Valves	\$ 5,000.00	\$ 55,000.00
10	EA	Vetical Offsets	\$ 2,500.00	\$ 25,000.00
13	EA	Fire Hydrant	\$ 10,000.00	\$ 130,000.00
3	EA	12" Blowoff Valve	\$ 6,000.00	\$ 18,000.00
<b>Tot. Sec. V</b>				\$ 583,000.00
<b>Sec. VI Sanitary Sewer Mains</b>				
50	LF	8" PVC (SDR35)	\$ 60.00	\$ 3,000.00
270	LF	8" PVC (SDR26)	\$ 90.00	\$ 24,300.00
3	EA	4' Manhole	\$ 6,000.00	\$ 18,000.00
1	EA	5' Manhole	\$ 11,000.00	\$ 11,000.00
<b>Tot. Sec. VI</b>				\$ 56,300.00
<b>Tot. for Project</b>				\$ 6,342,122.00
20% Contingency				\$ 1,268,424.40
<b>Grand Total</b>				<b>\$ 7,610,546.40</b>



TOTAL 110' R/W BREAKDOWN

-  REQUIRED 60' R/W (4.87 ACRES)
-  ADDITIONAL 50' R/W (4.06 ACRES)

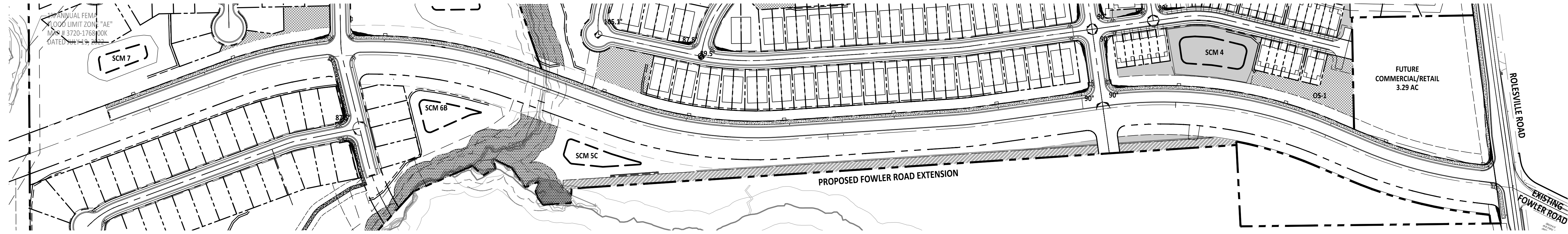


GRAPHIC SCALE

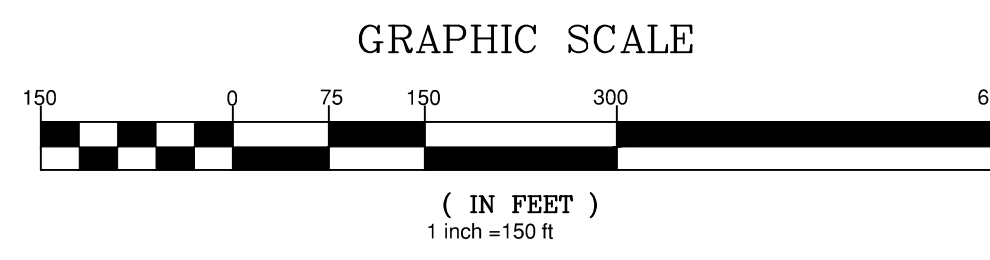


( IN FEET )  
1 inch = ft300

EXHIBIT A



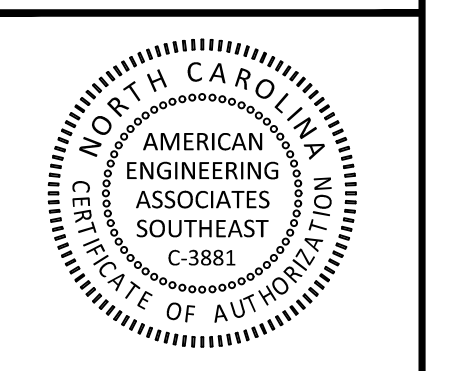
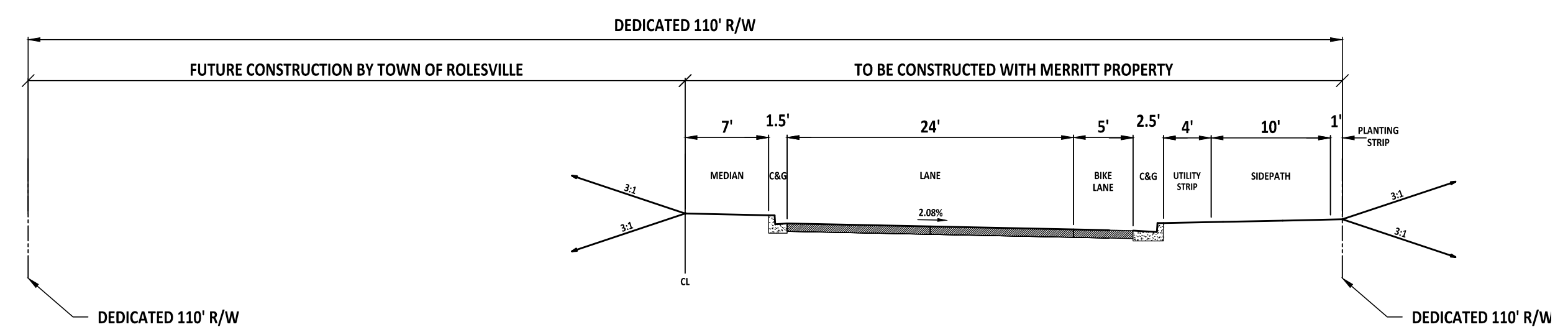
**2 LANE FOWLER ROAD TO BE CONSTRUCTED  
BY DEVELOPER (1B)**



**NOTES:**

1. FOWLER ROAD IS TO BE DESIGNED WITH 35 MPH REQUIREMENTS AND MEET THE TOWN OF ROLESVILLE STANDARDS.
2. ALL PERMITS WILL BE PUT IN THE TOWN OF ROLESVILLE NAME.

FOWLER ROAD - 33' B-B ON A 110' R/W  
HALF SECTION TO BE CONSTRUCTED & COMPARISON SECTION IN WEST AREA  
NOT TO SCALE



NO.	DATE	REVISION:

**STIPULATION FOR REUSE**  
THIS DRAWING WAS PREPARED FOR USE ON THE SPECIFIC SITE NAMED HEREON, CONTEMPORANEOUSLY WITH ITS ISSUE DATE AS LISTED, HEREON, AND IT IS NOT SUITABLE FOR USE ON A DIFFERENT PROJECT SITE OR AT A LATER TIME. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON ANOTHER PROJECT IS NOT AUTHORIZED AND MAY BE CONTRARY TO THE LAW.

**MERRITT RESERVE**  
ROLESVILLE RD  
WAKE COUNTY NC 27312

JOB NUMBER: 23-0004  
CHECKED BY: JK  
DRAWN BY: DH/MA/LL  
DATE: 12/12/2025

**FOWLER  
ROAD EXHIBIT**

SHEET NO.: EXHIBIT B



**EXHIBIT B**



**Exhibit C**

Project Design Cost

Engineering Design & Permitting	\$ 121,500.00
Prepare and Public Bid Project	\$ 25,000.00
Construction Management	\$ 45,000.00
Geotechnical	\$ 140,000.00
Surveying	<u>\$ 52,000.00</u>
Subtotal	\$ 383,500.00
Prorated Cost of 2B	<u>0.15</u>
Total	<b>\$ 57,525.00</b>
Right-of-Way Cost (4.06 ac. x \$ 122,400.00)	<b>\$ 496,944.00</b>

The total estimated project cost is **\$554,469.00**.

DRAFT

**STATE OF NORTH CAROLINA**

**COUNTY OF WAKE**

**ROADWAY REIMBURSEMENT AGREEMENT**

THIS ROADWAY REIMBURSEMENT AGREEMENT ("**Agreement**") is entered into and made effective this \_\_\_\_\_ day of \_\_\_\_\_, 2026 (the "**Effective Date**") by and between the **TOWN OF ROLESVILLE**, a North Carolina municipal corporation ("**Town**"), and **MERRITT LV1 OWNER, LLC**, a North Carolina limited liability company ("**Developer**"). The Town and Developer are sometimes referred to herein as a "party" individually and as the "parties" collectively.

**RECITALS:**

WHEREAS, the Developer has the following parcels of real property under contract to purchase, (collectively, the "**Property**") which are subject to this Agreement:

- (i) that certain tract of land containing approximately 12.996 acres, located in the corporate limits of the Town, and being a portion of current Wake County Real Estate ID 0105864 and PIN 1768328863;
- (ii) that certain tract of land containing approximately 98.166 acres, located in the corporate limits of the Town, and having a current Wake County Real Estate ID 0046995 and PIN 1768236815;
- (iii) that certain tract of land containing approximately 37.367 acres, located in the corporate limits of the Town, and being a portion of current Wake County Real Estate ID 0042125 and PIN 1758928330; and

WHEREAS, a legal description and map of the Property are shown on EXHIBIT A attached hereto; and

WHEREAS, the Developer wishes to develop the Property into a mixed-use community with up to 505 age restricted residential units and commercial uses (the "**Development**") as permitted by REZ-24-01, Merritt Property Rezoning, approved by the Town Board of Commissioners on November 7, 2024 (the "**Zoning**"); and

WHEREAS, Chapter 160A, Section 309 of the North Carolina General Statutes authorizes North Carolina cities to enter into intersection and roadway improvement agreements with a

developer or property owner for public intersection or roadway improvements that are adjacent or ancillary to a private land development project; and

WHEREAS, Chapter 52 of the Rolesville Town Code (the "**Code**") sets forth the authority and procedures and terms under which the Town Manager may negotiate and the Town may approve reimbursement agreements; and

WHEREAS, pursuant to Section 52.04 of the Code, reimbursements under roadway agreements may be provided in the form of fee credits against required transportation impact fees when a developer installs roadway improvements of a type that generally would be paid by the Town out of a capital reserve account funded by transportation impact fees (collectively "**Credits**").

WHEREAS, the Town has established certain impact fees for transportation due and payable upon building permit approval for residential dwellings on all residential lots within the Town to assist in the funding of new improvements to the Town transportation system, including roads (the "**Fees**"); and

WHEREAS, in accordance with the provisions of the Zoning, the Developer has agreed to design Fowler Road (SR 2308) across the Property as a two lane divided street with a sidewalk and side path as described on EXHIBIT B attached hereto, and incorporated herein, to make certain improvements to Fowler Road consistent with those designs, and to make an offer of dedication to the Town of excess right-of-way for the future complete construction of Fowler Road (collectively, the "**Improvements**"); designed and approved to ensure movement of traffic for the residences of the Development and for the movement of traffic for the benefit of adjacent parcels, and the general public (the "**Project**"); and

WHEREAS, the Project is a portion of the intersection and roadway improvements being made by Developer in furtherance of the Development; and

WHEREAS, the Project and its Improvements exceed the scope of what would otherwise be necessitated by the Development; and

WHEREAS, the Town desires the Project to be designed and constructed to serve the Development, adjacent properties, and the general public and Developer is capable of, and desires to design and construct the Project for such purpose in accordance with the Design and Construction Requirements (as defined below); and

WHEREAS, Developer agrees to fund the design and construction and any right of way and/or easement acquisition associated with the Project in accordance with the terms of the Code, Town of Rolesville standards, and this Agreement; and

WHEREAS, the Code and NC Gen. Stat. § 160A-309 require developers seeking total Credit reimbursements exceeding \$250,000 under a roadway improvements agreement to comply with the provisions of Article 8 of Chapter 143 of the North Carolina General Statutes ("**Approved Bidding Process**"); and

WHEREAS, the Town agrees to participate financially in the Project solely through fee reimbursement, as described in this Agreement, to further the goals and purposes of the Town; and

WHEREAS, the Town finds the Project serves a public purpose, that the public cost will not exceed the Estimated Costs (as defined below) of the Improvements, and that the coordination of public roadway improvements separately from the Developer's private land improvements would be impracticable; and

WHEREAS, the parties desire to enter into this Agreement in order to fully set forth the terms and conditions as to the Project to be required of the Developer and the cost participation agreed to by the Town.

NOW, THEREFORE in consideration of the mutual promises and covenants contained herein, the Town and Developer agree as follows:

1. **Recitals and Code Incorporated.** The recitals to this Agreement and references to the Code, as amended from time to time, are incorporated into this Agreement.
2. **Construction; Costs.** The engineering plans for the Project shall be in accordance with all Town and design and construction requirements of applicable governmental authorities (collectively "**Design and Construction Requirements**"). The Developer shall construct the Project in accordance with all Design and Construction Requirements and shall pay all costs incurred in connection with the design and construction of the Project. "**Reimbursable Costs**" shall mean all those direct Project costs and expenses of design, engineering, surveying, construction, required inspections and testing, right of way and easement acquisition costs, and professional fees attributable to those portions of the Project that are beyond what would otherwise be necessitated by the Development.
3. **Estimated Cost, Revisions, Rights of Way, Easements and Credits.**
  - 3.1 Estimated Costs and Automatic Revisions. The estimated total cost of the Project is \$\_\_\_\_\_ based upon the estimate letter from American Engineering dated September 30, 2024, and revised July 10, 2025 and attached as Exhibit C. The estimate of the Reimbursable Costs of the Project is \$\_\_\_\_\_ as described in more detail in that letter from American Engineering dated September 30, 2024, and revised July 10, 2025 and attached hereto as Exhibit C (the "**Estimated Costs**"). If, after the Approved Bidding Process (as described below in section 7), the Lowest Bid (as defined below in section 7) (a) decreases the Estimated Costs, or (b) increases the Estimated Costs but does not cause the Estimated Costs to exceed the Maximum Available Credit (as defined below), then such change shall be automatically approved ("**Automatic Approval**"). Developer shall send a notice of Automatic Approval to Town, but failure to send such a notice shall have no effect on the Automatic Approval. If the Lowest Bid increases the Estimated Costs above the Maximum Available Credit, or if in the course of the Project change orders or easement or right-of-way acquisition cost cause the total Reimbursable Costs to exceed the Maximum Available Credit, then Developer may elect to proceed under this Agreement and pay the overage or negotiate an amendment to this Agreement.

### 3.2 Reimbursement Credit.

3.2.1 Documentation. Within thirty (30) days of completion of construction of the Improvements, Developer shall submit the information described below. The Documentation shall be submitted in such form and detail as may be reasonably requested by the Town (collectively the "**Documentation**");

3.2.1.1 The certified statement of an engineer licensed in the State of North Carolina and selected by Developer, regarding the construction costs of the Project, with a break- down of unit and quantity costs, and such other expenses and descriptions of the Project as the Town may reasonably request.

3.2.1.2 A verified statement from an officer of the Developer identifying the individual(s) or firm(s) that performed the engineering, design, professional, and administrative work for the Project, the portions of the Project for which each was responsible, and the amounts paid to such individual(s) and/or firm(s).

3.2.1.3 For legal work, one or more signed statements from a responsible attorney with the firm(s) doing such work summarizing the costs paid by Developer for legal work performed after the Effective Date on those portions of the Project for which Reimbursable Costs may be incurred.

3.2.1.4 For property acquisition, including easement acquisition, (i) a verified statement from an officer of Developer of amounts paid in connection with acquisition of off-site real property interests; (ii) copies of the deeds and/or easements for such real property interests; (iii) a signed statement by a licensed North Carolina attorney on a list of approved attorneys for a title insurance company authorized to sell title insurance in North Carolina identifying the individuals having ownership interests in Developer and certifying that none of the identified individuals had any ownership interest in the acquired properties at the time of, or within five (5) years prior to, their acquisition.

3.2.1.5 Developer's final accounting for the Project's expenses, including the actual, documented Reimbursable Costs.

3.2.2 Retention of Documents Regarding Costs. Developer shall maintain all contracts associated with the design, engineering, construction, and administration of the Project, and legal work and property acquisition for the Project, and the payment records and invoices for the Project, for five

(5) years following completion of the Project and shall produce such records and any other information related to the work upon Town request.

3.2.3 Determination of Credits. Within thirty (30) days of receipt of the Documentation, the Town Manager shall either affirm Developer's final calculation of the total Reimbursable Costs and notify Developer of the total available credit (the "Final Credit Amount") or notify Developer in writing (the "Notice") of any additional required Documentation in which case Developer shall have thirty (30) days from receipt of the Notice to provide the additional Documentation in writing (the "Additional Documentation") in which case the Town Manager shall finalize the Final Credit Amount within ten (10) days of receipt of the Additional Documentation. Notwithstanding this Section 3 and any other provision of this Agreement to the contrary, under no circumstance shall the Final Credit Amount exceed the Maximum Available Credit.

3.3 Rights of Way and Easements. The Developer shall convey (with respect to the Property) and shall use commercially reasonable efforts to cause other property owners necessary for the Project to convey (with respect to real property owned by other property owners), all rights of way and easements necessary for the Project. Any right of way agreements and deeds of easement shall be subject to Town approval and thereafter submitted to the Town for review and approval as to form and content. Should the Developer be unable to obtain required easements after documented attempts to do so, the Town in its sole and absolute discretion may, but shall have no obligation to, utilize its eminent domain authority to obtain the necessary easements for the Project, with all costs to be borne by the Developer associated with this legal process, including all amounts paid for the acquisition. Developer's failure to obtain all rights of way and easements for the Project and/or Town's determination not to utilize its eminent domain authority for the Project shall not be a basis for default under this Agreement.

#### 3.4 Credits.

3.4.1 The maximum available Credits shall be \$ \_\_\_\_\_ (the "**Maximum Available Credit**") which represents the total estimated Transportation Impact fees for the Development. As of the Effective Date, transportation fees equal \$3,200.00 per unit for single and two-family dwellings and \$2,400.00 per unit for townhome dwellings. Developer plans 227 single-family units at \$3,200.00 per unit for a total of \$ \_\_\_\_\_ and 278 townhome units at \$2,400.00 per unit for a total of \$ \_\_\_\_\_. Developer and Town agree that any Credits for a residential unit in the Development shall equal the Fees due for such residential unit, as such Fees may be amended from time to time by the Town. Developer may utilize the available balance of the Final Credit Amount for any lot in any phase of the Development. Developer may utilize all of the Final Credit Amount prior to completion of all phases of the Development.

3.4.2 The Fees for a lot in the Development shall be due upon building permit approval and prior to the issuance of a building permit for a lot in the Development. Credits may be used only to offset the Fees accruing for lots in the Development. Town shall maintain an electronic record of the outstanding balance of the Final Credit Amount available to Developer (the "**Record**"), which shall be delivered to Developer upon written request. Developer shall be responsible for maintaining its own records of available Credits.

3.4.3 Developer may obtain building permit approval for lots prior to the completion of the Improvements and determination of the Final Credit Amount. So that the Developer can obtain building permits and start using Credits to offset Fees for lots prior to the completion of the Improvements and determination of the Final Credit Amount, the Developer has the option to post a bond for the benefit of the Town in the amount of the estimated cost of the Project set forth in Section 3.1 to ensure the completion of the Improvements ("**Bond**"). The Town agrees that the Developer may use Credits up to the Maximum Available Credit in Section 3.4.1 to offset Fees until the Town determines the Final Credit Amount. Once the Town determines the Final Credit Amount, if the Developer has obtained more Credits than the Final Credit Amount, the Developer agrees to reimburse the Town for any excess Credits received. Once the Credits received by the Developer versus the Final Credit Amount has been reconciled, the Town agrees to release the Bond.

3.4.4 To use Credits, Developer or Developer's designee must request the Credit at the time of application for a building permit directing that Credits be applied to the permit application or group of permit applications. Credits will only be accepted for an amount equal to the Fees due for the residential single- and two-family dwellings and/or townhome dwellings referenced in the permit application for the lots in the Development. The Credits may be utilized on a first come, first serve basis at the time of building permit issuance for the homes that are constructed within their respective portion of the Development. The Town has no obligation to remind Developer of the availability of Credits. The Town's only obligation under this section 3.5.3 shall be to apply the Credits to Fees for lots in the Development on a first come, first serve basis based on permit applications submitted to Town.

3.4.5 Developer shall not be entitled to any refund or cash payment for unused Credits or for Credits applied to subsequently expired building permits.

3.5 Eligible Cash Reimbursements. There are no eligible cash reimbursements for the Project.

4. **Review and Consent Required.** The Developer shall submit the engineering plans and drawings for the Project to the Town for review and receive approval of the same prior to advertising for public bids.

5. **Permits.** The Developer shall obtain all applicable permits for the Project prior to advertising the Project for public bids.
6. **Approved Bidding Process; Developer Responsibilities.** Solely to the extent applicable pursuant to § 160A-309, Developer shall do all of the following (collectively, "**Approved Bidding Process**"):
  - 6.1 Publicly bid the Project by complying with all applicable provisions of the North Carolina General Statutes regulating public contracts as amended from time to time. Primarily, this involves North Carolina General Statute 143-129 "Formal Bidding Procedure", as amended from time to time.
  - 6.2 Utilize licensed registered professional to prepare the bidding documents and manage the Approved Bidding Process;
  - 6.3 Obtain Town's prior approval for the bid opening date for the Project;
  - 6.4 Award the bid to the bidder or bidders that submitted the lowest responsible bid or bids ("**Lowest Bid**") taking into consideration quality, performance, and time specified in the bidding documents for the performance of the contract pursuant to the requirements of North Carolina General Statutes 143-129 and obtain prior consent of Town through the Town Manager.
  - 6.5 Award the construction contract or contracts for the Project, provided that Developer shall be fully responsible for all the terms of the contract or contracts for the Project and the Town shall not be a party to any contract or contracts for the Project between Developer and any third party.
7. **Required Protections for City in Developer's Contracts.** Developer shall ensure that all contracts for engineering, design, construction, or construction management for the Project include specific language that provides the following required protections: (i) the contract does not limit any warranties provided under operation of statute or common law concerning the engineering, design, construction, adequacy, or performance of the Improvements; (ii) the contract does not limit or shorten any statute of limitations provided by law regarding claims concerning the engineering, design, construction, adequacy, or performance of the Improvements; and (iii) the Town is named a third-party beneficiary of the contract for the purpose of making any claims regarding the engineering, design, construction, adequacy, or performance of the Improvements after their completion and acceptance by the Town; and (iv) all warranties available to the Developer under the contract are, in addition, available and assignable to the Town.
8. **Schedule.** The Developer shall submit a schedule to the Town Manager for the initiation and completion of the Project, including dates for other key events of the Project designated on the schedule ("**Schedule**").
9. **Inspection.** The Town may inspect Project construction as Town deems appropriate.

10. **Developer Representations and Warranties.** Developer represents and warrants that Developer shall design and construct Project in a good and workmanlike manner, and in strict conformance with the Design and Construction Requirements and all federal, state, and local laws, regulations, ordinances and other requirements. Developer shall commence construction of the Project in accordance with the Schedule and shall diligently pursue such construction to completion, subject to any delays or other force majeure events that are outside of Developer's control. Developer shall provide a one year warranty for the Improvements following Dedication of the Improvements as set forth in Section 11 below, provided the Project complies, in all material respects, with the version of the Design and Construction Requirements that was in effect at the time of plan approval.
11. **Maintenance.** Following completion of construction of the Improvements in accordance with the Design and Construction Requirements, Developer shall request, and the Town will accept, Dedication of the Improvements, which includes the obligation to maintain the Improvements.
12. **Default.** If Developer fails to comply in all material respects with the Approved Bidding Process, this Agreement shall terminate and Developer shall not be eligible for any Credits or other Reimbursement provided (i) Town delivers due notice, which notice shall clearly and concisely alert Developer as to the reason for the notice of default, and an opportunity for Developer to cure and (ii) Developer fails to cure the breach within fifteen (15) days after receipt of such notice. In the event Developer defaults in any other material respect in the performance of its obligations hereunder, and provided Town delivers due notice, which notice shall clearly and concisely alert Developer as to the reason for the notice of default, Town may immediately suspend the application of Credits and may terminate this Agreement upon thirty (30) days written notice to Developer and Developer's failure to cure the default unless such default cannot reasonably be cured within said thirty (30) day period, in which case Developer shall have an additional amount of time to cure said default, not to exceed sixty (60) days, provided that Developer initiates the cure during the initial thirty (30) day cure period and diligently pursues the cure thereafter. In the event of Developer's default beyond any applicable cure period, Town may pursue any remedy available to it at law or in equity subject to any defenses that may be asserted by Town. The failure of Town to enforce any provision of this Agreement will not be deemed a waiver or consent to a subsequent default or breach by Developer.
13. **Indemnification.** The Developer shall defend, indemnify, and hold harmless the Town from and against any and all claims, demands, liabilities, costs, damages, and causes of action of every kind and character made by third parties (collectively "**Claims**") for damage to property or injury to or death of persons arising out of the Developer's wrongful design, construction or maintenance of the Project, except to the extent any such Claims arise out of the negligence or willful misconduct of the Town or its agents, employees or contractors. This indemnification as to Claims arising out of Developer's maintenance of the Project shall expire upon Acceptance by Town as to Claims arising out of incidents that occur after the date of Dedication to the Town. The indemnification as to Claims arising out of Developer's wrongful design or construction arising prior to Acceptance

shall be effective as of the date of this Agreement and shall expire on the date that is one (1) year after Dedication to the Town.

14. **Termination.** This Agreement shall terminate at any time by mutual consent of both parties or upon the earlier of the date (i) of Developer's exhaustion of Credits and (ii) fifteen (15) years from the Effective Date.

15. **Notice.**

15.1 All notices, reports, and other communications ("**Notice**") under this Agreement shall be given to the following:

Merritt LV1 Owner, LLC

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---

Williams Mullen  
Thomas H. Johnson, Jr.  
301 Fayetteville Street, Suite 1700  
Raleigh, NC 27601

Town of Rolesville  
Attention: Town Manager  
502 Southtown Circle  
Rolesville, NC 27571

With a copy

to: Fox Rothschild LLP  
David J. Neill  
434 Fayetteville Street, Suite 2800  
Raleigh, NC 27601

15.2 Notice given pursuant to this Agreement shall be in writing and shall either be mailed by first class mail, postage prepaid, personal delivery or any method of service specified under Rule 4 of the NC Rules of Civil Procedure. Notice sent by mail shall be effective three days after the date of mailing. Notice given in any other maimer shall be effective upon actual receipt by the addressee.

15.3 Each party is responsible for notifying the other in writing in the event of an address change.

16. **General Provisions.**

16.1 Entire Agreement: Modification. This Agreement contains the entire agreement of the parties and there are no representations, inducements or other provisions other than those expressed in writing. This Agreement may be

modified or amended only by a written document executed by the parties with the same formalities required for the execution of this Agreement.

- 16.2 Counterparts. This Agreement may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.
- 16.3 Electronic Version of Agreement. Town may convert a signed original of the Agreement to an electronic record pursuant to a North Carolina Department of Natural and Cultural Resources approved procedure and process for converting paper records to electronic records for record retention purposes. Such electronic record of the Agreement shall be deemed for all purposes to be an original signed Agreement.
- 16.4 Authority. The individual signing Agreement on behalf of Developer has the right and power to do so and bind Developer to the obligations set forth herein and such individual does so represent and warrant that he has such authority. The Town represents and warrants that the North Carolina General Assembly has authorized the Town to execute this Agreement. Developer covenants that it will take no legal action against Town in which it is alleged that Town lacks authority to enter into any part of this Agreement.
- 16.5 Assignment. This Agreement may be assigned to NVR, Inc., a Virginia Corporation or one of its subsidiaries or related entities without the written consent of the Town but may not otherwise be assigned without the consent of the Town which consent may not be unreasonably withheld, conditioned or delayed. To obtain the Town's consent to an assignment, Developer shall provide a written Request for Approval of Assignment, specifying with particularity the person or entity to whom assignment is proposed and such other information as the Town deems pertinent. Assignee shall execute a document in form acceptable to Town pursuant to which Assignee agrees to assume all the duties of Developer under this Agreement, including indemnification of Town. If assigned, then this Agreement shall be binding on the assignee, and its heirs, successors and approved assigns. Notwithstanding the foregoing, Developer may permit any builders or other third-party purchaser (each, a "**Purchaser**") of any lot in the Development to use Credits against the Fees due from such Purchaser for any such lot at the time of building permit application by such Purchaser.
- 15.6 Severability. If any term of this Agreement is to any extent illegal, otherwise invalid or incapable of being enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms hereof shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term.

- 15.7 Applicable Law and Venue. This Agreement shall be construed in accordance with the laws of the State of North Carolina, and it shall be binding upon, and inure to the benefit of, the Town and Developer and their respective successors and assigns. Any and all suits or actions related to this Agreement shall be brought exclusively in Wake County, North Carolina.
- 15.8 Dates. If any date set forth in this Agreement shall fall on, or any time period set forth in this Agreement shall expire on, a day which is a Saturday, Sunday, federal or state holiday such date shall automatically be extended to, and the expiration of such time period shall automatically to be extended to, the next day which is not a Saturday, Sunday, federal or state holiday. The final day of any time period under this Agreement or any deadline under this Agreement shall be the specified day or date and shall include the period of time through and including such specified day or date.
- 15.9 Exhibits. Each and every exhibit referred to or otherwise mentioned in this Agreement is attached to this Agreement and is and shall be construed to be made a part of this Agreement by such reference or other mention at each point at which such reference or other mention occurs, in the same manner and with the same effect as if each exhibit were set forth in full and at length every time it is referred to or otherwise mentioned.
- 15.10 Counsel. Each party hereto warrants and represents that each party has been afforded the opportunity to be represented by counsel of its choice in connection with the execution of this Agreement and has had ample opportunity to read, review and understand the provisions of this Agreement.
- 15.11 No Construction against Preparer. No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by any court or other governmental or judicial authority by reason of such party's having or being deemed to have prepared or imposed such provision.

**REMAINDER OF PAGE INTENTIONALLY BLANK**

**SIGNATURE & EXHIBIT PAGES FOLLOW**

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date set forth above.

**“Town”:**

**TOWN OF ROLESVILLE**

By: \_\_\_\_\_

Name:

Title:

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

By: \_\_\_\_\_

**“Developer”:**

**MERRITT LV1 OWNER, LLC**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



## LIST OF EXHIBITS

EXHI	Map and Legal Description of Property
BIT A:	The Improvements
EXHI	Project Cost Breakdown
BIT B:	
EXHI	
BIT	
C:	

**EXHIBIT A**

**Map and Legal Description of Property**

**EXHIBIT B**

**The Improvements**

## **EXHIBIT C**

### **Project Cost Breakdown**



## RESOLUTION NO. 2026-04

### RESOLUTION IN SUPPORT OF ROADWAY REIMBURSEMENT AGREEMENT

**WHEREAS**, Merritt LVI Owner, LLC (the “**Developer**”) wishes to develop Property for residential purposes as part of a project known as “Merritt Reserve” (the “**Development**”) containing up to 227 single-family residences and 289 townhome residences in accordance with REZ-24-01 dated November 7, 2024 (the “**Zoning**”); and

**WHEREAS**, Chapter 160A, Section 309 of the North Carolina General Statutes authorizes North Carolina cities to enter into intersection and roadway improvement agreements with a developer or property owner for public intersection or roadway improvements that are adjacent or ancillary to a private land development project; and

**WHEREAS**, Chapter 52 of the Rolesville Town Code (the “**Code**”) sets forth the authority and procedures and terms under which the Town Manager may negotiate and the Town may approve reimbursement agreements; and

**WHEREAS**, pursuant to Section 52.04 of the Code, reimbursements under roadway agreements may be provided in the form of fee credits against required street impact fees when a developer installs roadway improvements of a type that generally would be paid by the Town out of a capital reserve account funded by street impact fees; and

**WHEREAS**, the Town has established certain impact fees for transportation due and payable upon building permit approval for residential dwellings on all residential lots within the Town to assist in the funding of new improvements to the Town transportation system, including roads; and

**WHEREAS**, in accordance with the provisions of the Zoning, the Developer has agreed to construct certain improvements on those portions of Fowler Road (SR 2308) described in that Roadway Reimbursement Agreement (“the **Agreement**”); designed to ensure the safe movement of traffic for the public (the “**Project**”); and

**WHEREAS**, the Project is a portion of the intersection and roadway improvements being made by Developer in furtherance of the Development; and

**WHEREAS**, the Project will include the design, engineering, and dedication of right-of-way for Fowler Road beyond what would otherwise be necessitated by the Development; and

**WHEREAS**, the Town desires the Project to be designed and constructed to serve the Development, adjacent properties, and the general public and Developer is capable of, and

desires to design and construct the Project for such purpose in accordance with the Design and Construction Requirements (as defined in the Agreement); and

**WHEREAS**, the Town agrees to participate financially in the Project solely through fee reimbursement, as described in the Agreement, to further the goals and purposes of the Town; and

**WHEREAS**, the Town finds the Project (i) serves a public purpose, (ii) that the public cost will not exceed the estimated cost of providing for such improvements through either eligible force account qualified labor or through a public contract let pursuant to Article 8 of Chapter 143 of the North Carolina General Statutes; and (iii) that the coordination of public roadway improvements separately from the Developer's private land improvements would be impracticable; and

**WHEREAS**, the parties desire to enter into the Agreement in order to fully set forth the terms and conditions as to the Project to be required of the Developer and the cost participation agreed to by the Town.

**NOW, THEREFORE**, in consideration of the mutual promises and covenants contained in the Agreement, the Town of Rolesville Board of Commissioners hereby approves the Roadway Reimbursement Agreement with Merritt LVI Owner, LLC, directs the Town Attorney to place the Agreement in final form consistent with this Resolution, and authorizes the Town Manager to execute the Agreement in the Town's name.

The preceding resolution, having been submitted to a vote, received the following vote and was duly adopted the 7<sup>th</sup> day of April 2026

Ayes: \_\_\_\_\_  
Noes: \_\_\_\_\_  
Absent or Excused: \_\_\_\_\_

\_\_\_\_\_  
Ronnie I. Currin, Mayor

ATTEST:

\_\_\_\_\_  
Christy Frazier, Town Clerk

[SEAL]

April 1, 2026

To: Mayor Currin and Town Board of Commissioners  
From: Planning Department Staff

RE: **Planning Department FYI**

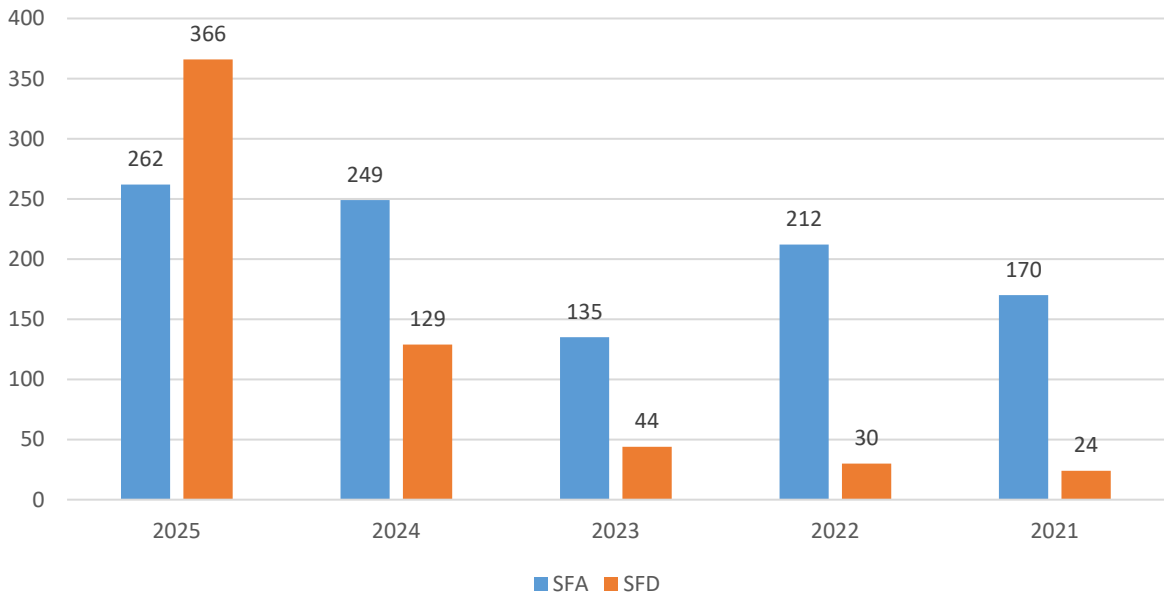


*Sharon Hope, Michael Elabarger, Rose Bower, Tanner Hayslette, Michele Raby, Stephen Wensman, and Meredith Gruber*

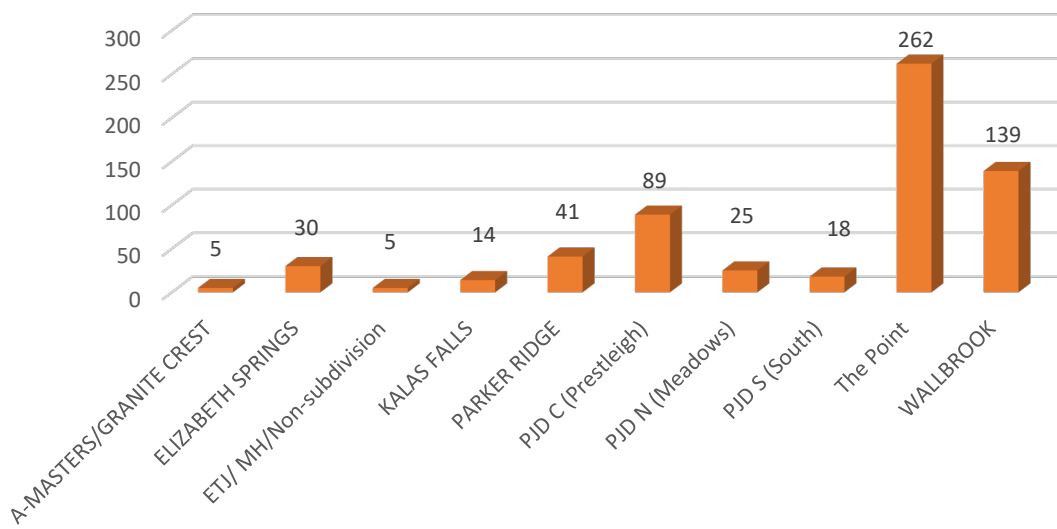
### **Residential Permitting Activity**

Between January and December of 2025, there were two hundred sixty-two (262) single-family attached (townhome) and three hundred sixty-six (366) single-family detached permits issued.

### Single-Family Attached vs Single-Family Detached Permits Issued Year Over Year

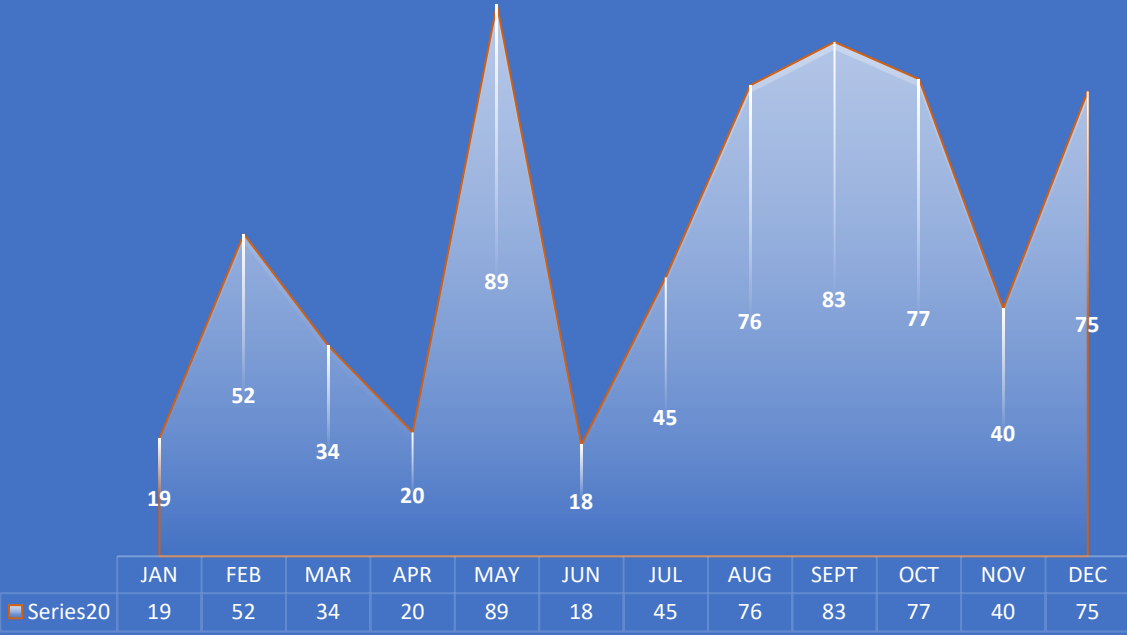


### 2025- 628 Single Family (Attached & Detached) Permits Issued by Subdivision



PJD = Preserve Jones Dairy

# 2025 MONTHLY RESIDENTIAL PERMITTING ACTIVITY



## Construction Infrastructure Drawings Approved in 2025

(Construction Infrastructure Drawings allow developers to fell trees, move dirt, lay infrastructure (water/sewer pipes), and cut in future roads on the property).

Project	Case	Approved	Pre-Infrastructure Meeting	Construction Start Date	Description
BROADMOOR-Rolesville Road	CID-24-08	June 9, 2025	June 27, 2025	June 28, 2025	-98 Single-Family Attach. -157 Single-Family Det.
KALAS FALLS Phase 3 Rolesville Road	CD-21-07	August 13, 2025	NA	NA	-145 Single-Family Det.
KALAS Falls Phase 5 Rolesville Road	CID-25-01	August 8, 2025	NA	NA	-95 Single-Family Attach.
MERRITT Rolesville Road	CID-25-02	December 3, 2025	February 19, 2026	February 20, 2026	-278 Single-Family Attach. -227 Single-Family Det.
PRESERVE AT MOODY FARM Rolesville Road	CID-24-09	October 13, 2025	Nov 13, 2025	November 14, 2025	-82 Single-Family Det.
ROLESVILLE CROSSING Rolesville Road	CD 21-08	September 20, 2025	February 19, 2026	February 20, 2026	-120 Single-Family Attach. -177 Single-Family Det.
WALLBROOK-HALL OF FAME CARWASH (lot 8) South Main Street	CID-24-03/ SDP-25-01	May 13, 2025	July 14, 2025	July 15, 2025	Commercial
WALLBROOK (lot 7) South Main Street	CID-24-02	April 18, 2025	July 21, 2025	July 22, 2025	Commercial
WALLBROOK VIRGINIA WATER DRIVE EXTENSION (LOTS 9,10,11) South Main Street	CID-23-04	June 9, 2025	July 21, 2025	July 22, 2025	Commercial

Final Site Plans Approved in 2025  
(Final Site Plans allow developers to sell lots to builders for commercial or residential uses.)

Project	Case	Approved	Pre-Construction	Construction Start	BM & PG	# of Lots
ELIZABETH SPRINGS P2 TH Averette Road	FSP-25-09	June 18, 2025	NA	NA	BM2025 PG01134 2025.08.18	51 Single-Family Att.
KALAS FALLS P1 Rolesville Road	FSP-24-07	February 24, 2025	NA	NA	BM2025 PG288-293 2025.02.24	129 Single-Family Att.
PARKER RIDGE P1A Redford Place/ School Street	FSP-24-20	June 25, 2025	July 28, 2025	July 29, 2025	BM2025 PG01193-01195 2025.05.31	55 Single-Family Att.
PARKER RIDGE P1A- CORRECTION Redford Place/ School Street	FSP-25-21	August 7, 2025	NA	NA	BM2025 PG01508-01510 2025.08.08	NA
PARKER RIDGE P1B Redford Place/ School Street	FSP-24-24	September 3, 2025	NA	NA	BM2025 PG01693-01695 2025.09.04	59 Single-Family Att. 19 Single-Family Det.
PARKER RIDGE P1B-SEC 2 Redford Place/ School Street	FSP-25-16	October 29, 2025	Oct 29, 2025	NA	BM2025 PG02056-02057 2025.10.29	21 Single-Family Det.
PARKER RIDGE P1B-SEC 3 Redford Place/ School Street	FSP-25-17	Nov 14, 2025	Nov 14, 2025	NA	BM2025 PG2185-2186 2025.11.17	43 Single-Family Det.
PARKER RIDGE P2 Redford Place/ School Street	FSP-25-20	December 12, 2025	NA	NA	<b>*WAITING RECORDATION</b>	78 Single-Family Det.
THE POINT South P2,3,6,9 Young Street	FSP-24-23	June 18, 2025	NA	June 19, 2025	BM2025 PG01140-01144 2025.06.18	130 Single-Family Det.
THE POINT South P3 Young Street	FSP-25-02	August 5, 2025	NA	NA	BM2025 PG01482 2025.08.05	108 Single-Family Att. 6 Single-Family Det.
THE POINT South P4 Young Street	FSP-25-04	December 11, 2025	NA	NA	BM2025 PG02453-04257 2025.12.19	30 Single-Family Att. 32 Single-Family Det.
THE POINT South P7 Young Street	FSP-25-03	August 21, 2025	NA	NA	BM2025 PG01593-01597 2025.08.21	70 Single-Family Det.
THE POINT South P10 Young Street	FSP-25-01	July 25, 2025	NA	NA	BM2025 PG01425-01429 2025.07.28	68 Single-Family Att.
WALLBROOK TRACT B LOTS 1A,1B,1C,2 South Main Street	FSP-24-22	March 27, 2025	NA	NA	BM2025 PG527-534 2025.03.28	Commercial
WALLBROOK LOTS 5A-B-C South Main Street	FSP-24-13	July 3, 2025	NA	NA	BM2025 PG1254-1255 2025.07.03	Commercial
WALLBROOK TH P1 LOT 6 S Main Street	FSP-24-16	February 5, 2025	March 6, 2025	March 7, 2025	BM2025 PG198-204 2025.02.05	116 Single-Family Att.
WALLBROOK TH P2 LOT 6 South Main Street	FSP-25-10	August 8, 2025	NA	NA	BM2025 PG1526-1529 2025.08.08	24 Single-Family Att.
WALLBROOK MWB- LOTS 12-13-14 South Main Street	FSP-25-06	May 28, 2025	NA	NA	BM2025 PG984-985 2025.05.28	Commercial

**Site Development Plans Approved in 2025**  
 (Non-Residential development of a lot for its ultimate land development, such as an amenity center, office building, restaurant, etc.).

Project	Case	Approved	Pre-Construction	Construction Start	Type
6000 ROGERS	SDP-23-02	JAN 27, 2025	April 28, 2025	April 29, 2025	Commercial
BROADMOOR Amenity Center Fowler/Mitchell Mill	SDP-25-02	August 13, 2025	*FSP's not approved	NA	Amenity Center
GLO on MAIN 414 S MAIN	SDP-24-05	February 25, 2025	March 11, 2025	March 12, 2025	Commercial
PARKER RIDGE Amenity Center Redford Place/ School Street	SDP-24-10	May 17, 2025	Nov 13, 2025	NA	Amenity Center
ROLESVILLE CROSSING Amenity Center Rolesville Road	SDP-24-08	April 18, 2025	January 6, 2026	January 7, 2026	Amenity Center
THE LEARNING CENTER 302 S Main	SDP-23-08	January 21, 2025	February 11, 2025	February 12, 2025	Commercial
TIDAL WAVE South Main	SDP-23-08	March 7, 2025	March 5, 2026	March 6, 2026	Commercial
WALLBROOK LOT 3- FIFTH THIRD BANK South Main	SDP-24-07	April 29, 2025	June 24, 2025	June 25, 2025	Commercial
WALLBROOK LOT 5B (CHIPOTLE) South Main	SDP-25-03	December 4, 2025	December 17, 2025	December 18, 2025	Commercial
WALLBROOK-HALL OF FAME CARWASH (lot 8) South Main	CID-24-03/ SDP-25-01	May 13, 2025	July 14, 2025	July 15, 2025	Commercial
WALLBROOK- 7-ELEVEN LOT 11 South Main	SDP-23-04	June 12, 2025	July 21, 2025	July 22, 2025	Commercial

**Text Amendments in Review**

Currently, there are four active Text Amendment (TA) applications and one pending application:

***TA-26-0002 Required Perimeter Buffer Correction***

- The purpose of the TA is to remove a subjective statement about the required perimeter buffers
- Town-initiated
- Board of Commissioners' Legislative Hearing: May 5, 2026 (tentative)

**TA-26-0003 Minor Subdivision Correction**

- The purpose of the TA is to correct an error about minor subdivisions
- Town-initiated
- Board of Commissioners’ Legislative Hearing: May 5, 2026 (tentative)

**TA-26-0004 Residential Fence Height**

- The purpose of the TA is to address residents’ concerns about allowing an eight-foot fence in some residential applications
- Town-initiated
- Board of Commissioners’ Legislative Hearing: May 5, 2026 (tentative)

**TA-26-0005 Omnibus Text Amendment Package**

- The purpose of the TA package is to facilitate campus style development as well as address miscellaneous corrections
- Town-initiated
- Planning Board Meeting – April 27, 2026, and Board of Commissioners’ Legislative Hearing: TBD

**TA-26-TBD Downtown Overlay District – Pending / Under Development**

- Purpose of TA is to create a Downtown Overlay District
- Town-initiated
- Planning Board Meeting and Board of Commissioners’ Legislative Hearing: TBD

**Rezoning Applications in Review**

There are five Rezoning (REZ) applications currently in review:

**REZ-24-05 – Atticus Woods – Wait Avenue - R&PUD / RL to Neighborhood Center Conditional (NC-CZ)**

- Webpage: <https://www.rolesvillenc.gov/project/wait-avenue-2028-2200-2206-2216-2232>
- Applicant: Paul C. Schmidt, Ardent Building, LLC
- Proposed Uses: Single Family Attached and Detached Dwellings, Commercial Development
- Board of Commissioners’ Continued Legislative Hearing: April 7, 2026

**REZ-25-04 – Opal at Main (W. Young & N. Main) – from RL to Residential High Conditional (RH-CZ)**

- Webpage: <https://www.rolesvillenc.gov/project/opal-main>
- Applicant: Robert J. Hayes, Grand Communities, LLC
- Proposed Uses: Single Family Attached (70) and Detached (2) Dwellings
- Planning Board Meeting and Board of Commissioners’ Legislative Hearing: TBD

**REZ-25-06 – WakeMed 5036 Walls Cove** - Hospital, RL to Commercial Highway Conditional (CH-CZ)

- Webpage: <https://www.rolesvillenc.gov/project/wakemed>
- Applicant: Thomas Cavender, WakeMed
- Proposed Use: Hospital
- Planning Board Meeting and Board of Commissioners' Legislative Hearing: TBD

**REZ-26-0002 – 1101 Averette Road** – from RM-CZ to Residential High Conditional and General Commercial Conditional (RH-CZ and GC-CZ)

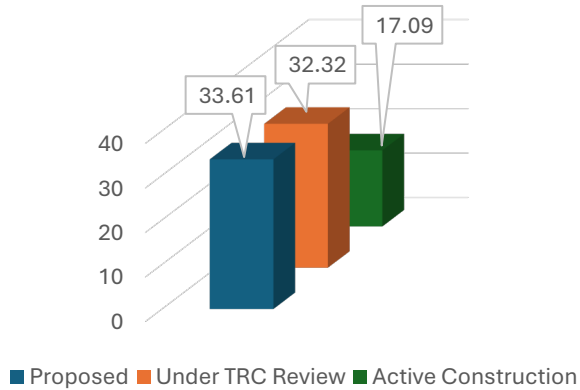
- Webpage pending
- Applicant: Lock7 Development
- Proposed Uses: Single Family Attached (76) and Commercial
- Planning Board Meeting and Board of Commissioners' Legislative Hearing: TBD

**REZ-26-0003 – 408 E. Young Street** – from RL to Business, Industrial, and Technology (BT)

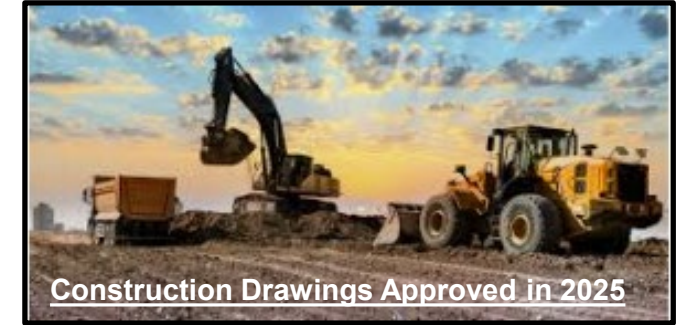
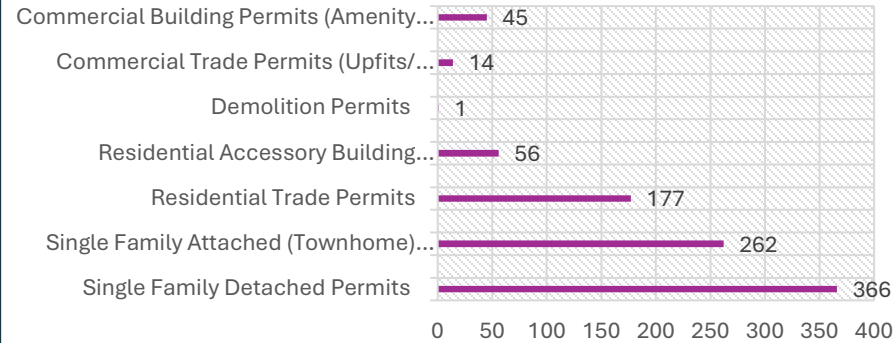
- Webpage pending
- Applicant: Town of Rolesville
- Proposed Use: Government Services
- Planning Board Meeting and Board of Commissioners' Legislative Hearing: TBD

# Development Dashboard

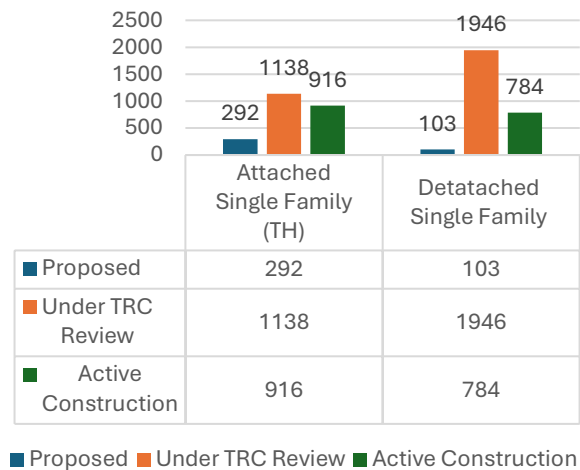
## Non-Residential (Commercial) Project Status in acreage.



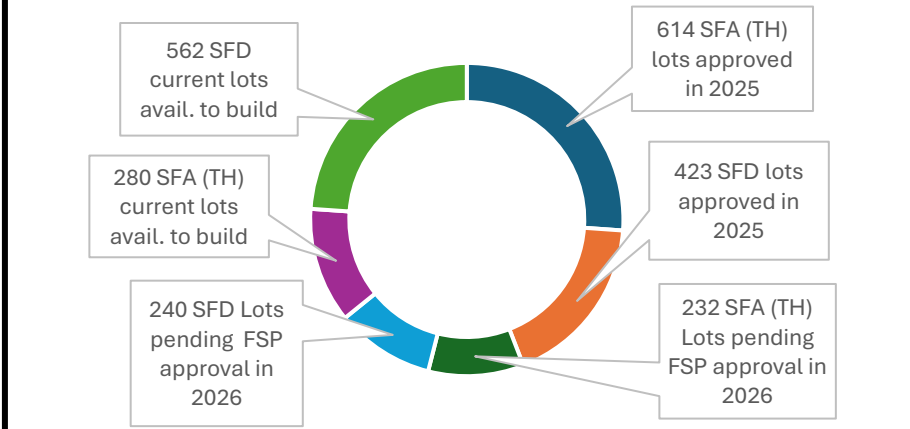
## Building Permits Issued by Type in 2025



## Residential Project Status



## Single-Family Lot Inventory & Projections 1126 SFA & 1225 SFD





# Memo

**To:** Mayor Currin and Rolesville Town Board  
**From:** Mical McFarland, Economic Development Manager  
**Date:** April 7, 2026  
**Re:** Agenda Item 8.b Economic Development Staff Report

---

## Economic Development - Staff Report

Enclosed please find the following materials:

1. Marketing brochure for 6000 Rogers Road
2. A list of the Top Taxpayers in Rolesville in 2025

# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

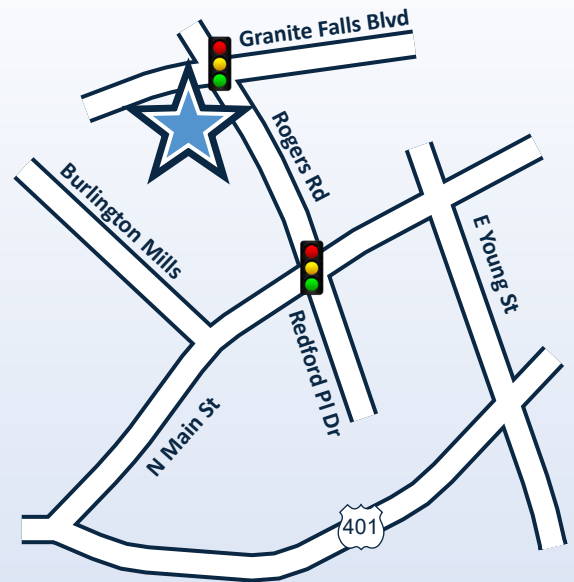
FOR LEASE



## Preleasing Restaurant/Retail/Medical Space in Rolesville, NC

### HIGHLIGHTS

- 3,034 SF Available
- 10,702 SF development with retail, restaurant, and office suites available for prelease
- Restaurant End cap w/ stacking drive-thru and outdoor patio seating
- Attractive tenant improvement allowance for creditworthy tenants
- Located in one of Wake County's fastest-growing communities, with over
- 2,000 rooftops projected within a two-mile radius
- Just 15 miles from downtown Raleigh, conveniently accessible via US 401 to I-540 and I-440.
- Only a 30-minute drive to RDU International Airport and Research Triangle Park.
- **Lease Rate: \$33-\$35 / SF NNN**



**Gregg Marks**

919.971.2066

[gmarks@mcg-cre.com](mailto:gmarks@mcg-cre.com)

**Laura Saleh**

919.368.0594

[lsaleh@mcg-cre.com](mailto:lsaleh@mcg-cre.com)



# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

FOR LEASE

## PROPERTY INFORMATION

Development Size: 10,207 SF

Land Size: 2.09 Acres

Available: 3,034 SF

Zoned: GC (General Commercial)

Parking: 85 Total Parking Spaces

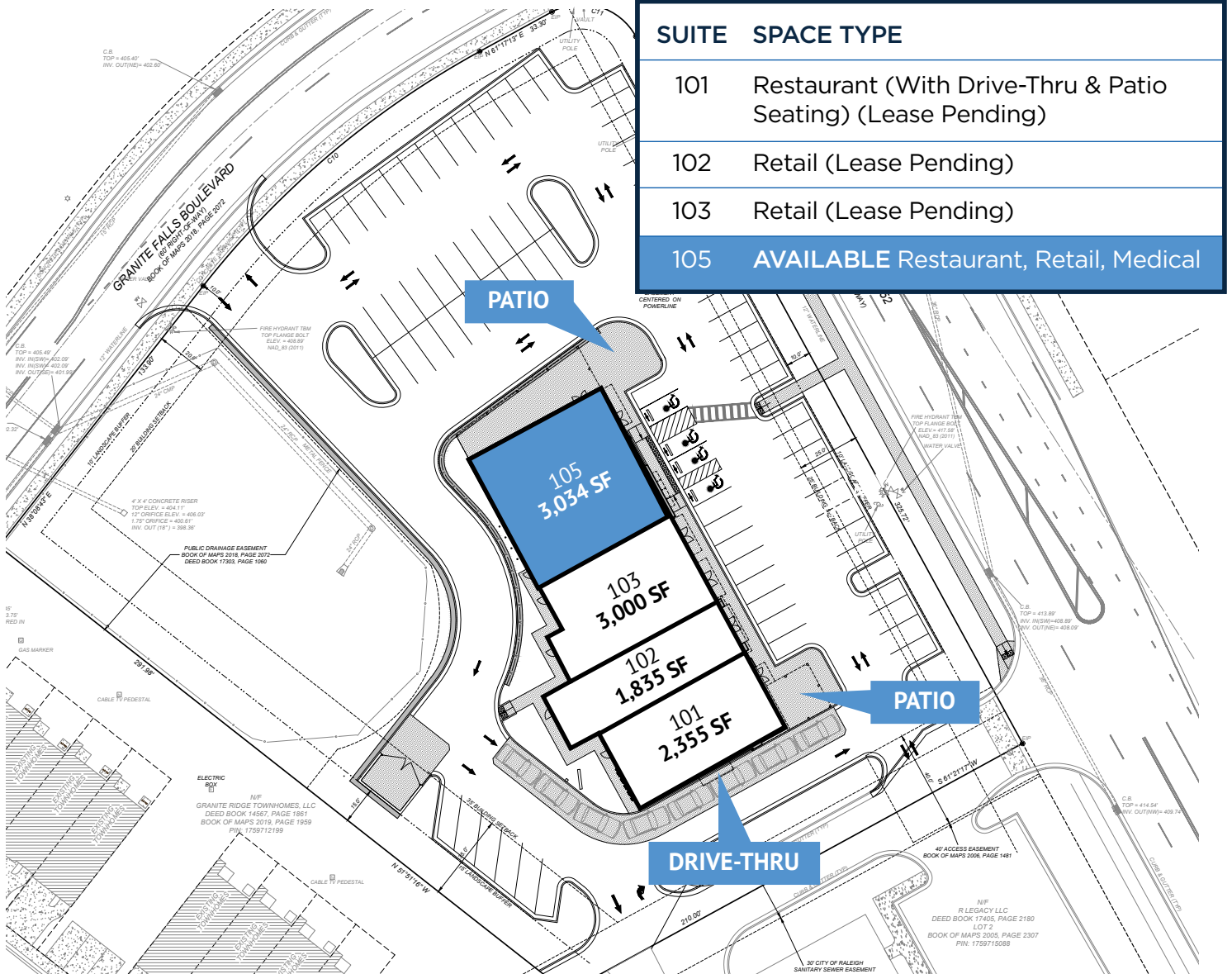
Other Parking: 1 Loading Space, 2 Bike Racks

Rental Rate: \$33-\$35 / SF NNN

TICAM: TBD

### SUITE SPACE TYPE

101	Restaurant (With Drive-Thru & Patio Seating) (Lease Pending)
102	Retail (Lease Pending)
103	Retail (Lease Pending)
105	<b>AVAILABLE</b> Restaurant, Retail, Medical



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# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

FOR LEASE

## PROPERTY RENDERINGS



**Gregg Marks**

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# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

FOR LEASE

## PROPERTY RENDERINGS



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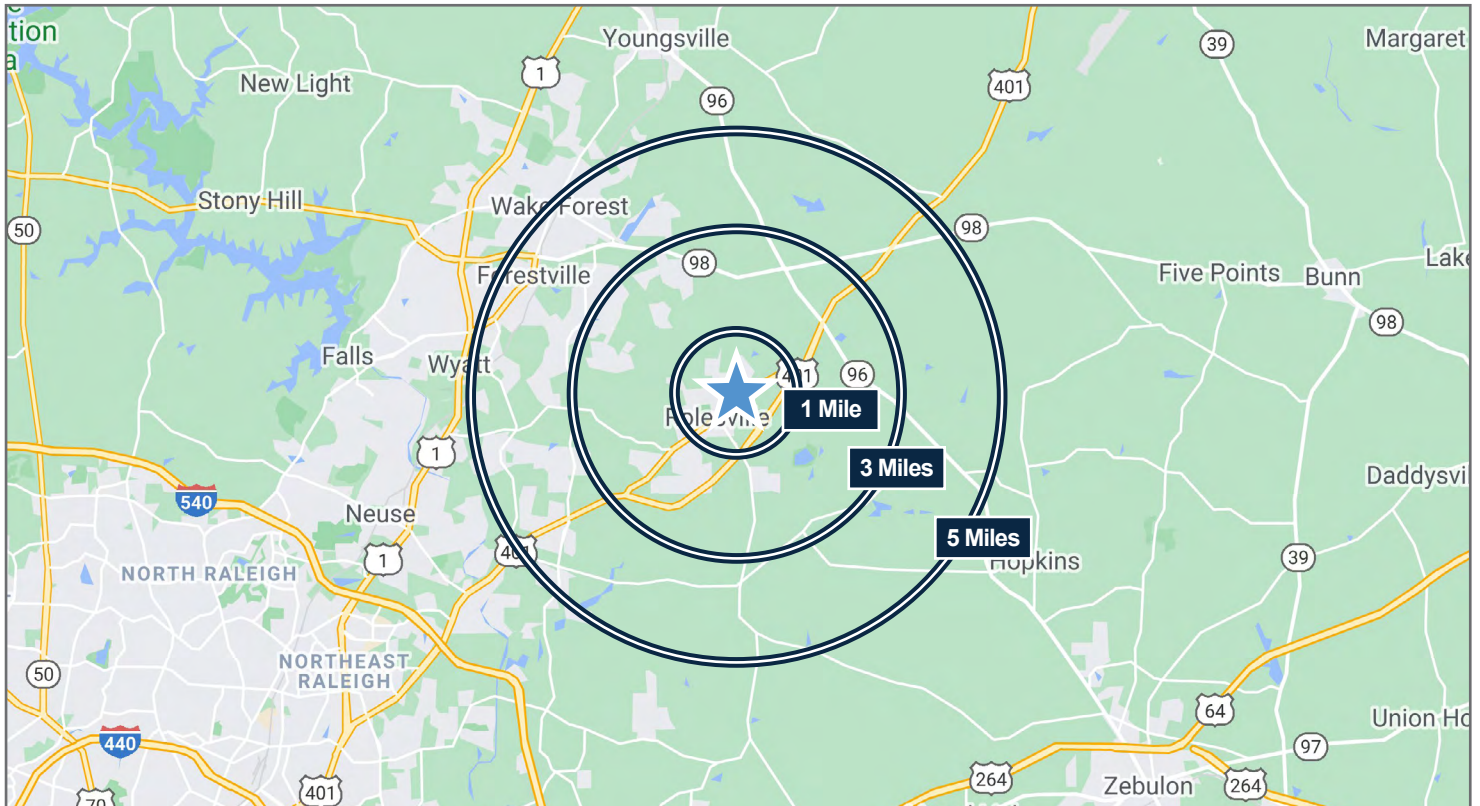
# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

FOR LEASE

## DEMOGRAPHICS

	<u>1 MILE</u>	<u>3 MILES</u>	<u>5 MILES</u>
2020 Population	3,175	3,175	74,314
2025 Population	3,544	3,544	83,198
Annual Pop Growth	2.22%	2.22%	2.28%
2020 Households	1,173	1,173	26,116
2025 Households	1,298	1,298	29,249
Avg HH Size	2.71	2.71	2.84
2020 Median Age	37.7	37.7	36.6
2020 Average HH Income	\$111,801	\$111,801	\$110,128
2020 Median HH Income	\$90,172	\$90,172	\$88,584



**Gregg Marks**

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**Laura Saleh**

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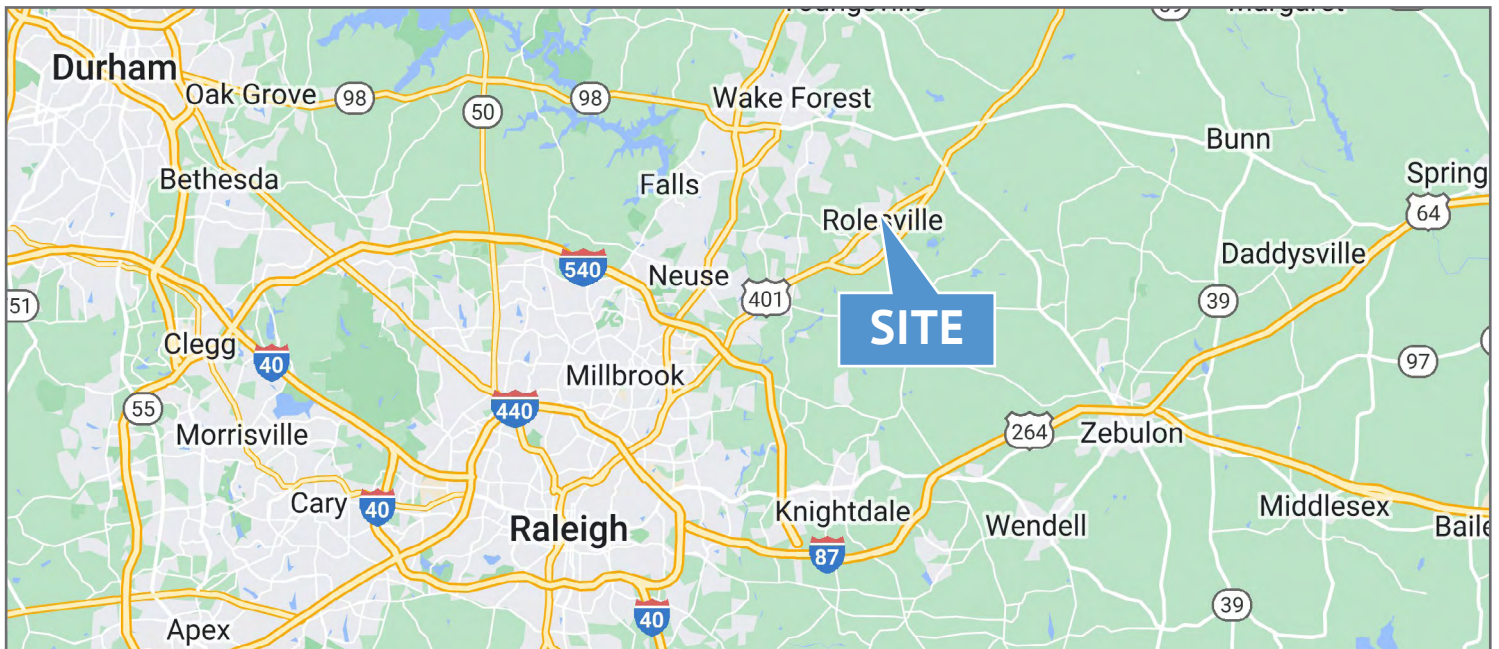
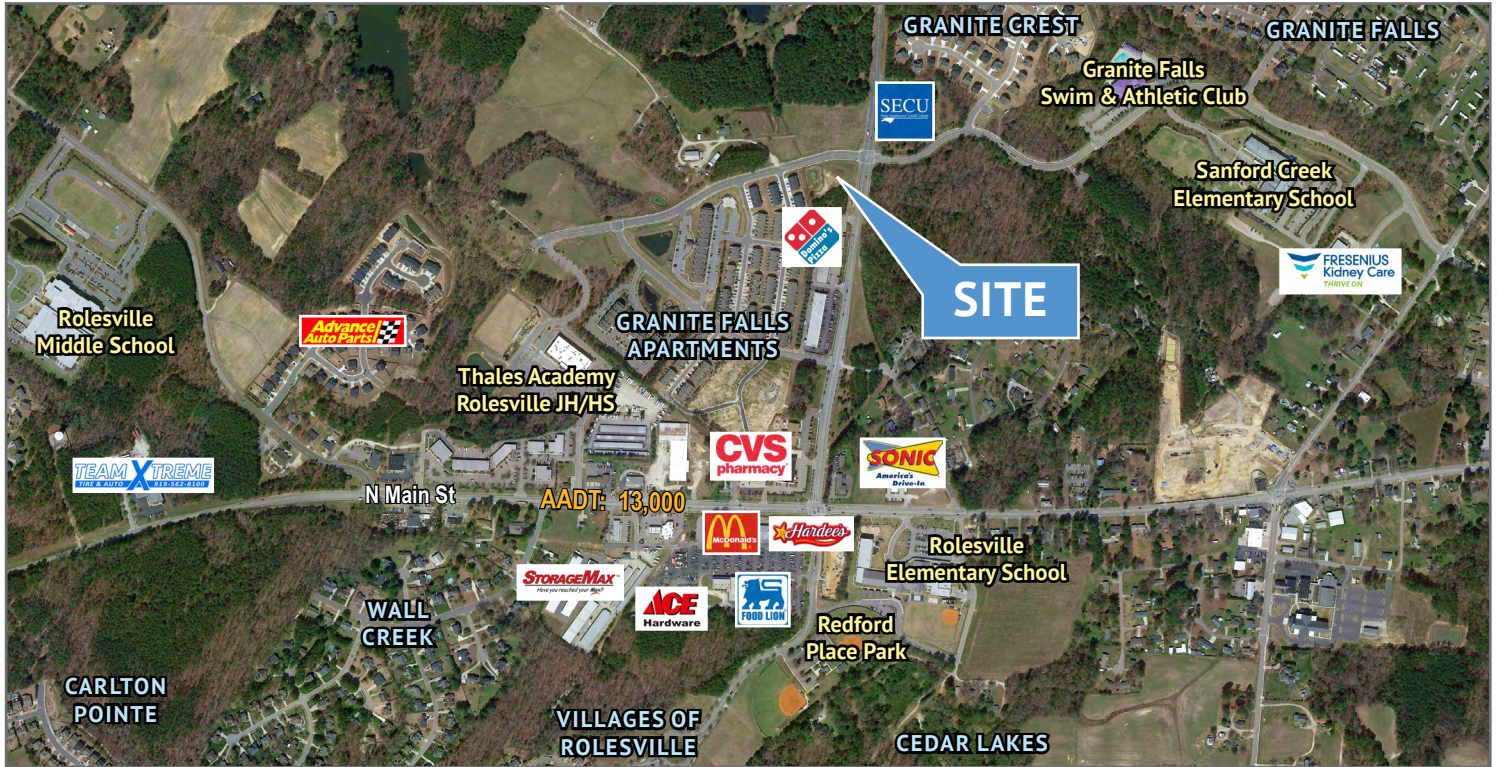


# 6000 ROGERS ROAD

Rolesville, North Carolina 27571

FOR LEASE

## LOCATION OVERVIEW



**Gregg Marks**

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**Laura Saleh**

919.368.0594

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**ROLESVILLE TOP 50 TAXPAYERS - 2025**

<b>#</b>	<b>Name</b>	<b>Assessed Value</b>	<b>Tax Due</b>
1	COBBLESTONE CROSSING SPE LLC	\$42,874,230	\$171,496.92
2	STORAGE MAX	\$15,441,560	\$61,766.24
3	WALLBROOK PLX LLC	\$12,450,009	\$49,800.04
4	D R HORTON INC	\$11,180,276	\$44,721.11
5	ASHTON RALEIGH RESIDENTIAL LLC	\$9,905,090	\$39,620.36
6	REDFORD PLAZA LLC	\$8,478,745	\$33,914.98
7	LLOYDS OF ROLESVILLE LLC	\$7,816,114	\$31,264.46
8	AMH NC PROPERTIES LP	\$7,670,049	\$30,680.18
9	GRANITE FALLS SWIM & ATHLETIC CLUB	\$6,574,446	\$26,297.79
10	THE GRANDE AT GRANITE FALLS LLC	\$6,483,607	\$25,934.43
11	WALLBROOK LANDCO LLC	\$6,457,352	\$25,829.40
12	EDDINS FAMILY LLC	\$6,333,395	\$25,333.56
13	DOITAL INVESTMENTS LLC	\$5,527,876	\$22,111.50
14	CRP/C4 WALLBROOK VILLAGE OWNER LLC	\$5,497,446	\$21,989.78
15	GRANITE FALLS NC LP	\$5,462,971	\$21,851.88
16	REDFORD 101 LLC	\$5,410,960	\$21,643.84
17	WAKE EMC	\$5,321,448	\$21,285.79
18	STATE EMPLOYEES CREDIT UNION	\$5,148,322	\$20,593.29
19	GRANITE ACRES MHC LLC	\$4,858,370	\$19,433.48
20	THE DREES COMPANY	\$4,476,879	\$17,907.52
21	DUKE ENERGY PROGRESS INC	\$4,417,489	\$17,669.96
22	PGP ROLESVILLE 1 LLC	\$4,319,891	\$17,279.56
23	KENNETH INVESTMENT LLC	\$5,457,617	\$16,990.02
24	BROOKFIELD HOLDINGS (THE POINTE)	\$4,237,500	\$16,950.00
25	GRAND PARK PROPERTIES LLC	\$3,869,781	\$15,479.12
26	HAMPTON POINTE ASSOCIATES LLC	\$3,768,316	\$15,073.26
27	ALL PURPOSE DRIVEN LLC	\$3,640,923	\$14,563.69
28	BIG BEAR PROPERTIES LLC	\$3,640,815	\$14,563.26
29	MITCHELL MILL ROAD INVESTORS LLC	\$3,536,260	\$14,145.04
30	SUBURBAN PROPANE LP	\$3,444,720	\$13,778.88
31	PROGRESS RESIDENTIAL BORROWER	\$3,350,481	\$13,401.91
32	INVESTMENT CHOICES IV LLC	\$3,104,908	\$12,419.63
33	HC ROLESVILLE INVESTMENTS LLC	\$3,078,985	\$12,315.94
34	ELLIS LAND INVESTMENT COMPANY LLC	\$3,414,717	\$12,030.19
35	AMH BORROWER LLC	\$2,907,437	\$11,629.76
36	ICG HOMES LLC	\$2,874,900	\$11,499.60
37	KB HOME RALEIGH-DURHAM INC	\$2,647,087	\$10,588.35
38	V2 VRIDHI LLC	\$2,609,683	\$10,438.73
39	MCDONALDS REAL ESTATE CO	\$2,497,071	\$9,988.28
40	STARLIGHT HOMES NORTH CAROLINA LLC	\$2,400,000	\$9,600.00
41	TRI ARC FOOD SYSTEMS INC	\$2,394,042	\$9,576.17
42	THALES ACADEMY	\$2,393,975	\$9,575.89
43	BOWLING, RICHARD K	\$2,359,307	\$9,437.24
44	SB-HS LOT OPTION POOL 02 LP	\$2,221,605	\$8,886.42
45	TRENTON HOLDINGS LLC	\$2,214,252	\$8,857.03
46	BRANDYWINE HOMES INC	\$2,187,862	\$8,751.46
47	PUBLIC SERVICE CO OF NC INC	\$2,128,931	\$8,515.72
48	OPTIMAL GLO LLC	\$2,079,869	\$8,319.48
49	WMG EXCHANGE 2 LLC	\$2,074,281	\$8,297.12
50	WATKINS, ALAN	\$3,662,011	\$8,167.24



## Memorandum

**To:** Mayor and Town Board  
**From:** Shannon Guaracino, Finance Admin Specialist  
Amy Stevens, Finance Director  
**Date:** April 1, 2026  
**Re:** Resolution Adopting Artificial Intelligence Guidelines for Boards and Commissions,  
Agenda Item #9.a

### Background

Artificial intelligence is here and it's a constantly evolving field. We know that people are using it, and we know that staff are using it. It has become apparent, however, that there are issues involved with using this new technology in local government. These issues include data security, transparency and ethics, accuracy, and public records maintenance.

As such, the Town Manager has approved a policy for Town staff that details key guidelines such as human accountability, data protection, public record integrity, proper usage, and disclosure.

Staff are proposing that the Town Board consider adopting an AI policy for itself and its advisory boards. This proposal is based upon broader concepts related to AI usage. Since AI is such a rapidly changing field, our hope is that this high-level policy will remain relevant even as the AI environment continues to change.

### Board Options

- Approve the proposed Resolution
- Make amendments to the proposed Resolution and adopt a revised version at a later meeting
- Take the topic under advisement and defer action at this time

### Recommended Action

Make a motion to approve the Resolution Adopting Artificial Intelligence Guidelines for Boards and Commissions

### Attachments:

- Resolution Adopting Artificial Intelligence Guidelines for Boards and Commissions
- Artificial Intelligence Policy for Advisory Boards and Commissions

**RESOLUTION ADOPTING ARTIFICIAL INTELLIGENCE GUIDELINES FOR  
BOARDS AND COMMISSIONERS**

**WHEREAS**, the Town of Rolesville recognizes the potential of artificial intelligence (AI) and generative AI tools to improve efficiency, research, and communication for municipal operations; and

**WHEREAS**, the Town recognizes that the use of AI poses risks regarding data privacy, security, misinformation, and ethical considerations; and

**WHEREAS**, it is the desire of the Board of Commissioners to ensure that all elected officials and Town-appointed advisory boards, commissions, and committees act with transparency, accountability, and in the best interest of the public; and

**WHEREAS**, a uniform policy is necessary to guide the responsible use of AI by all personnel acting on behalf of the Town;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Commissioners of the Town of Rolesville that the following Artificial Intelligence Policy for Advisory Boards and Commissions is hereby adopted.

This Policy is effective upon its adoption.

Adopted this 7<sup>th</sup> day of April 2026.

[SEAL]

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Ronnie I. Currin  
Mayor

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Christina Frazier  
Town Clerk

# Artificial Intelligence Policy for Advisory Boards and Commissions

## ARTICLE 1: PURPOSE

The Town of Rolesville recognizes that Artificial Intelligence (AI) and Generative AI (GenAI) offer significant opportunities for operational efficiency. To ensure these tools are used safely and responsibly, the Town has established a formal AI Governance Policy, aligning with the North Carolina Department of Information Technology (NCDIT) standards to protect public trust and municipal data.

By adopting this framework, the Town of Rolesville positions itself as a leader in responsible innovation, empowering our workforce to reduce administrative burdens while rigorously protecting the privacy and rights of our residents.

## ARTICLE 2: CORE GUIDELINES

The policy establishes strict boundaries to mitigate associated legal and ethical risks:

**Human Accountability:** AI is a "co-pilot" for brainstorming, not a "pilot." All outputs and sources must be verified by the user to prevent the use of fictitious or misleading information. A human must always be "in the loop".

**Data Protection:** Entering Town proprietary information, financial information, PII (Social Security numbers, tax IDs, or personnel records) into AI tools is strictly prohibited.

**Public Record Integrity:** AI-generated content is treated as public record; Officials must use Town email addresses for AI accounts to ensure all "prompts" and "outputs" are preserved per North Carolina retention laws.

## ARTICLE 3: TRANSPARENCY & ETHICS

To maintain transparency with Rolesville residents, the framework mandates:

**Public Disclosure:** Officials must disclose the use of GenAI for significant tasks, such as ones that impact public decisions or have legal implications.

**Bias Mitigation:** Constant review is required to ensure AI outputs do not contain unintended bias or discriminatory material, upholding the Town's commitment to fairness.

**Original Sourcing:** AI cannot be cited as a source. Staff must verify and cite the *original* data source to ensure factual accuracy.

## ARTICLE 4: ENFORCEMENT & ACCOUNTABILITY

Violation of these guidelines is grounds for removal of the violator from his or her advisory board position but is not grounds for vacating or otherwise calling into question or doubt any advisory or other decision that has been made.

*The Town of Rolesville Board of Commissioners acknowledges and appreciates the freedom of speech rights to which all elected officials and board members are entitled. Officials and Board members acknowledge the importance of adopting these guidelines, which allows boards to effectively oversee the implementation of AI tools in public administration, ensuring they are used for legitimate, efficient purposes.*

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Board Member Signature and Date

---

Board Member Printed Name

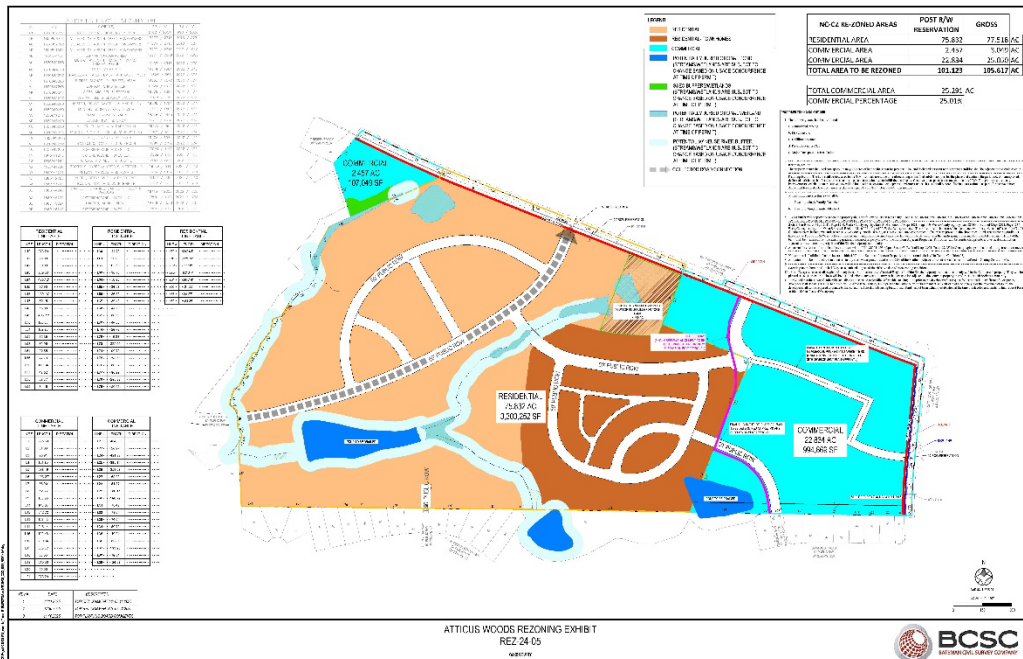
# Memo

**To:** Mayor Currin & Town Board of Commissioners  
**From:** Stephen Wensman, Planning Director; Michael Elabarger, Assistant Planning Director; & Meredith Gruber, Senior Planner  
**Date:** Meeting Held April 7, 2026 (*Continued from March 3, 2026*)  
**Re:** REZ-24-05 Atticus Woods – Wait Avenue

*The legislative hearing for REZ-24-05, Atticus Woods – Wait Avenue, was continued from March 3, 2026 to April 7, 2026 to allow the applicant time to update the Conditions, Concept Site Plan, and Development Agreement to address the Board’s concerns.*

## 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. The Concept Site Plan is shown below.



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

<b>Site Data Table</b>	
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:

1. **(Updated)** Prohibiting Commercial Parking, Flex Industrial, Fulfillment Center uses, Private Lodge or Club, and Major Transportation Installation.
2. Self Storage Use will only be a viable use in the +/- 2.4 acre commercial portion at the northwestern corner of the subject property.
3. Parkland dedication of approximately 2.5 acres.
4. **(Updated)** Maximum of 250 dwelling units (maximum of 140 attached units).
5. A 50’ Perimeter Buffer will be provided where commercial use abuts Elizabeth Springs residential lots.
6. **(New)** A reasonable effort will be made to leave all trees in Open Space #5; if any are disturbed, they will be replanted with an equal amount of gross caliber.
7. No commercial buildings shall be located within 100’ of the Elizabeth Springs residential lots.
8. A fountain shall be installed and maintained in any stormwater pond located within 300’ of the Elizabeth Springs residential lots.
9. There will be no vehicular access from commercial property to Classical Way.
10. **(New)** Six-foot evergreen trees shall be planted along the east/northeast side of Classical Way. Trees will be installed prior to any vertical commercial construction adjacent to the common property line adjacent to Elizabeth Springs.
11. **(Updated/New)** Provided the Town establishes an affordable housing fund, developer shall donate \$200,000 to the fund prior to the issuance of the first residential Certificate of Occupancy.

### ***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 single-family detached homes shall be reduced to five feet (5').
  - The maximum single-use/building size (excluding residential only structures) shall be 100,000 square feet.

### **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 Meetings**

The applicant held a neighborhood meeting at the Rolesville Community Center on May 20, 2025. A second neighborhood meeting was held on November 20, 2025. Meeting reports are 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***

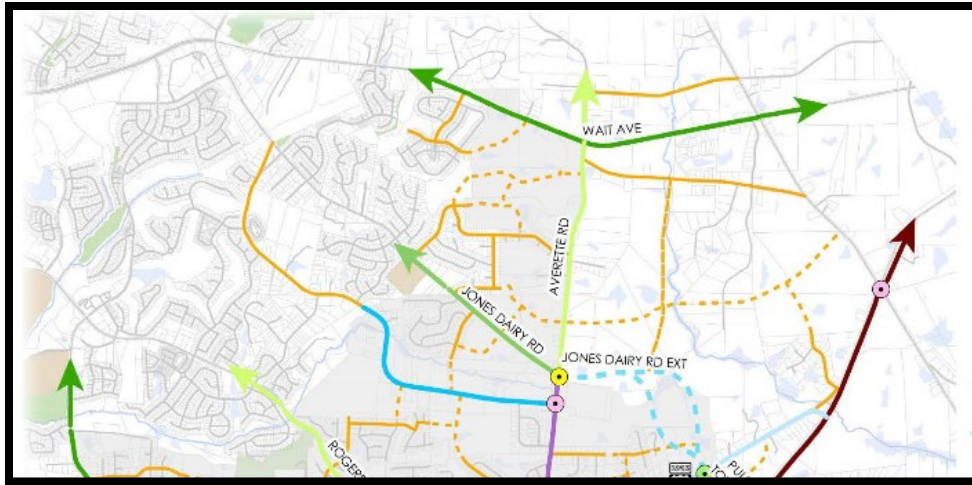
The Town of Rolesville's CTP includes recommendations for Thoroughfares, Collectors, and intersections. Thoroughfare and Collector recommendations apply to REZ-24-05, Atticus Woods – Wait Avenue.

##### **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 ½ 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 ½ 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.



*Proposed Network Map, Northern Rolesville (Thoroughfares are Green and Collectors are 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.

### **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.

<b>TIA Summary - Trip Generation</b>	<b>Entering</b>	<b>Exiting</b>	<b>Total</b>
<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>			<b>14,353</b>

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.

<b>TIA Summary – Recommendations</b>	
<i>Wait Avenue and Averette Road</i>	<ul style="list-style-type: none"> <li>• Construct a westbound right-turn lane on Wait Avenue with 100 feet of storage and appropriate taper.</li> <li>• Construct a northbound left-turn Lane on Averette Road with 300 feet of storage and appropriate taper</li> </ul>
<i>Wait Avenue and Carrie May Lane/Access B</i>	<ul style="list-style-type: none"> <li>• Construct Site Access B (northbound approach) with one ingress and one egress lane.</li> <li>• Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.</li> <li>• Construct a westbound Wait Avenue left turn lane with 125 feet of storage and appropriate taper length. (Under Scenario-1).</li> <li>• Construct a westbound Wait Avenue left turn lane with 350 feet of storage and appropriate taper length. (Under Scenario-2).</li> <li>• Install a traffic signal.</li> </ul>
<i>Averette Road and Old Pearce Road/Access E</i>	<ul style="list-style-type: none"> <li>• Construct Site Access E (westbound approach) as a with one ingress and one egress lane.</li> <li>• Construct a northbound Averette Road left turn lane with 100 feet of storage and appropriate taper length.</li> <li>• Construct a southbound Averette Road right turn lane with 75 feet of storage and appropriate taper length.</li> <li>• Provide stop control for the westbound approach.</li> </ul>
<i>Wait Avenue and Access C</i>	<ul style="list-style-type: none"> <li>• Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.</li> <li>• Construct a westbound Wait Avenue left turn lane with 175 feet of storage and appropriate taper length (Under Scenario-1).</li> </ul>
<i>Wait Avenue and Access D</i>	<ul style="list-style-type: none"> <li>• Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.</li> </ul>

### **Development Review**

The Technical Review Committee (TRC) reviewed six (6) submittals of the Rezoning application and attachments, with all comments being resolved.

### **Planning Board Recommendation**

Rezoning application REZ-24-05, Atticus Woods – Wait Avenue, was first presented by Planning staff to the Planning Board on October 27, 2025. The rezoning request and associated Development Agreement were both denied by the board. The applicant volunteered to return to the Planning Board, at their special meeting on December 15, 2025, with the following revised attachments: Proposed Conditions of Approval, Development Agreement, and Concept Site Plan.

At their December 15, 2025 meeting, the Planning Board unanimously recommended approval of REZ-24-05 with the proposal of an additional condition to include a Type 4 Perimeter Buffer between the proposed commercial development and the existing Elizabeth Springs neighborhood. The Planning Board also suggested the Town Board of Commissioners consider an amendment to the Community Transportation Plan to limit thoroughfare access to Classical Way. Since the Planning Board meeting in December, the applicant submitted an updated Concept Site Plan and updated Proposed Conditions of Approval.

### **Staff Recommendation**

Staff recommends approval of REZ-24-05, Atticus Woods – Wait Avenue, based on consistency with the Comprehensive Plan as noted above in the *Comprehensive Plan* section of this report.

### **Consistency and Reasonableness**

As noted above in both the *Comprehensive Plan* and *Staff Recommendation* sections of this memo, rezoning request REZ-24-05, Atticus Woods – Wait Avenue, is consistent with Rolesville's Comprehensive Plan and is therefore reasonable.

### **Proposed Motions**

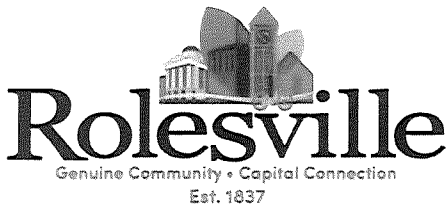
- Motion to (*approve or deny*) rezoning request REZ-24-05 Atticus Woods – Wait Avenue based on (*consistency or inconsistency*) with Rolesville's Comprehensive Plan. (*Please include examples of consistency or inconsistency.*)
- (*If approved*) Motion to adopt a Statement of Consistency and Reasonableness as REZ-24-05 is consistent with Rolesville's Comprehensive Plan—as per the Mixed Residential Future Land Use Category, the Community Transportation Plan Network, and the Bike and Greenway Plans Network—and is therefore reasonable.
- (*If approved*) Motion to (*approve or deny*) the Atticus Woods Development Agreement.

Or

- Motion to continue REZ-24-05, Atticus Woods – Wait Avenue, to a future Town Board of Commissioners' meeting (*provide date certain*).

**Attachments**

1	Application
2	Conditions of Approval – March 31, 2026
3	Applicant Justification Statement - September 27, 2025
4	Development Agreement – March 27, 2025
5	Concept Site Plan – March 31, 2026
6	Neighborhood Meeting Minutes - May 20, 2025 and November 20, 2025
7	Traffic Impact Analysis (TIA) Report - August 7, 2025
8	NCDOT Final Letter - October 1, 2025
9	Rezoning Ordinance 2026-ORD-XX



Case No. REZ-24-05

Date \_\_\_\_\_

# Map Amendment Application

## Contact Information

Property Owner <sup>WRIN, LLC</sup> \_\_\_\_\_

Address <sup>4641 PARAGON PARK RD STE 104</sup> \_\_\_\_\_ 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

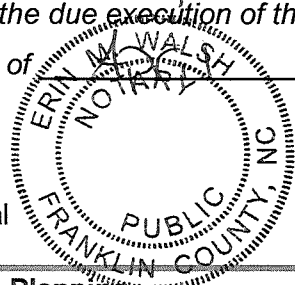
COUNTY OF Wake

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 11<sup>th</sup> 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









Case No. REZ-24-05

Date \_\_\_\_\_

# Map Amendment Application

## Contact Information

Property Owner THALES ACADEMY

Address 4641 PARAGON PARK RD 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 2206 WAIT AVE / 2200 WAIT AVE / 2216 WAIT AVE / 2232 WAIT AVE

Wake County PIN(s) 1860045778 / 1860056400 / 1860151206 / 1860143789

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

Total 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

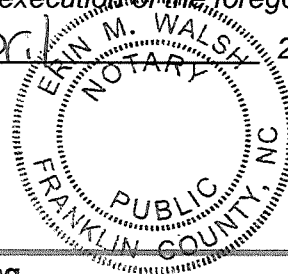
COUNTY OF Wake

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 11<sup>th</sup> 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











**ZONING CONDITIONS**  
**REZ-24-05**  
**ATTICUS WOODS (2028, 2200, 2206, 2216, 2232 WAIT AVE)**  
**SUBMITTED 03-31-26**

1. The following uses shall be prohibited:
  - a. Commercial Parking
  - b. Flex Industrial
  - c. Fulfillment Center
  - d. Private Lodge or Club
  - e. Major Transportation Installation
2. The Self Storage, Enclosed use shall only be permitted in the area at the northwest corner of the property labeled “COMMERCIAL 2.457 AC 107,049 SF” on the Atticus Woods Rezoning Exhibit.
3. The property owner shall dedicate approximately 2.5 acres of land to the Town for park use. The land dedicated pursuant to this zoning condition shall be adjacent to the Wait Avenue right-of-way in the approximate location of the area labeled “PROPOSED LAND DEDICATION TO TOWN OF ROLESVILLE FOR TOWN PARK +/-2.5 AC” on the Atticus Woods Rezoning Exhibit. The land shall be dedicated to the Town for park use at the time of recording of the final subdivision 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 Board of Commissioners.
4. The area labeled “RESIDENTIAL 75.832 AC 3,303,252 SF” on the Atticus Woods Rezoning Exhibit shall have a maximum of 250 dwelling units (maximum 140 Attached units). The only permitted uses in this area shall be:
  - a. Dwelling, Single Family, Detached
  - b. Dwelling, Single Family, Attached
5. A 50' buffer will be provided where the property abuts the following lots on Kavanaugh Road: PINs 1860145294, 1860145225, 1860144245, 1860143265, 1860142285, 1860142205, 1860141226, 1860049264, 1860048290, 1860048119, 1860047147, 1860046167, 1860045197, where commercial property abuts 1860041295 (the “Southern Adjacent Properties”) (Lots 1-4 in Book of Maps 2021, Page 1210, Wake County registry; Lots 5-10 in Book of Maps 2021, Page 119, Wake County registry; Lots 88-90 in Book of Maps 2022, Page 1237, Wake County registry, and Open Space #5, Book of Maps 2021, Page 122, Wake County registry). The buffer is to be landscaped in accordance with the enclosed buffer exhibit (Exhibit 1), unless stream buffers, wetlands or other Wake County, North Carolina, or USACE regulated environmental features are present in the above-mentioned area restricting grading or landscaping. Part of the SCM as well as the access and maintenance easement may overlap with the buffer as long as the landscaping requirements in Exhibit 1 are met. Height of the berm shall be measured from the existing grade at the shared property line with the Southern Adjacent Properties. This buffer will be constructed prior to any vertical construction adjacent to the common property line of the Elizabeth Springs community.
6. A reasonable effort will be made to leave all trees within PIN 1860041295 (Open Space #5, Book of Maps 2021, Page 122, Wake County registry) undisturbed, if any trees are removed by neighboring construction activity, they will be replanted with an equal amount of gross caliper (e.g. if (1) 24” caliper tree is removed, it can be replaced with (12) 2” caliper trees.)

7. No commercial buildings shall be located within 100' of the Southern Adjacent Properties (as that term is defined in Zoning Condition #5).
8. A fountain shall be installed and maintained in any stormwater pond located within 300' of the Southern Adjacent Properties (as that term is defined in Zoning Condition #5).
9. There shall be no vehicular access from property located in the area labeled "COMMERCIAL 22.834 AC 996,669 SF" in the Atticus Woods Rezoning Exhibit to the public right of way extending north from the Classical Way street stub existing as of the effective date of these zoning conditions.
10. 6' tall Evergreen trees shall be planted along the east/northeast side of Classical Way north of the Elizabeth Springs connection and only within the Commercial property. They will be planted at 16 trees per 100'. These will be installed prior to any vertical commercial construction adjacent to the common property line of the Elizabeth Springs community.
11. Provided that the Town of Rolesville actually establishes the Rolesville Affordable Housing Fund prior to the developer's first request for a residential Certificate of Occupancy, developer shall donate \$200,000 to the Rolesville Affordable Housing Fund prior to the issuance of the first residential Certificate of Occupancy. For the avoidance of doubt, the developer shall not be required to donate to the Rolesville Affordable Housing Fund if such fund has not been actually established at the time the developer submits its first request for a residential Certificate of Occupancy.

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

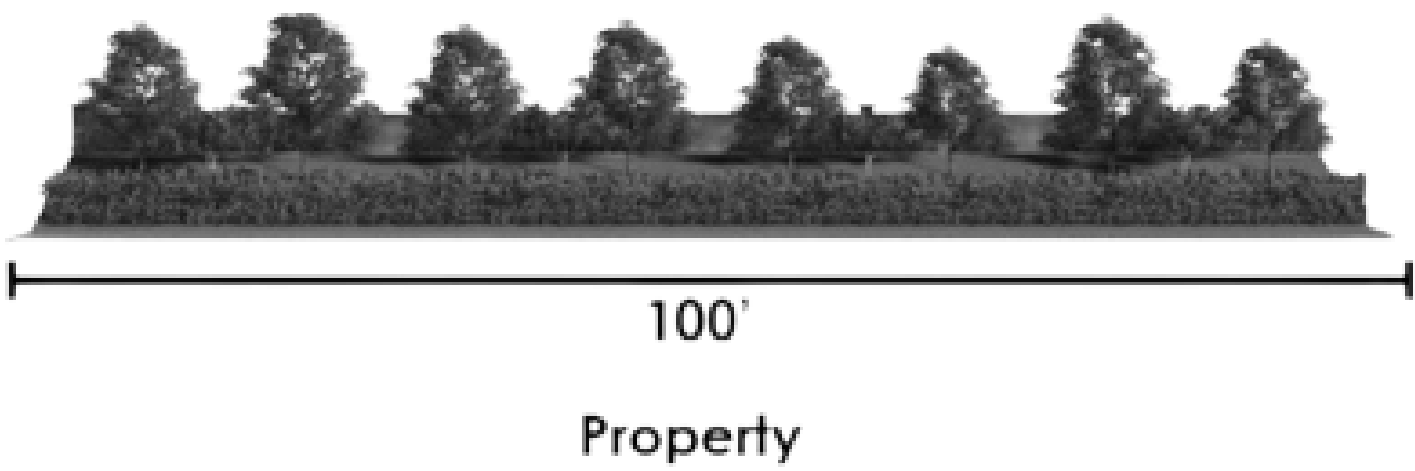
Signature: \_\_\_\_\_

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

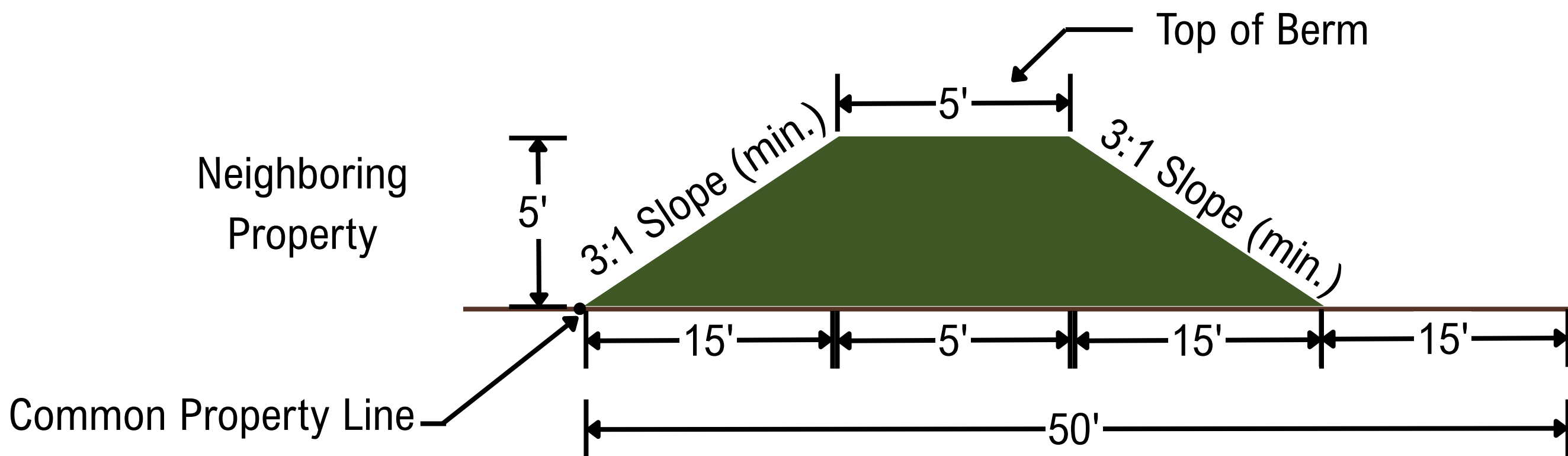
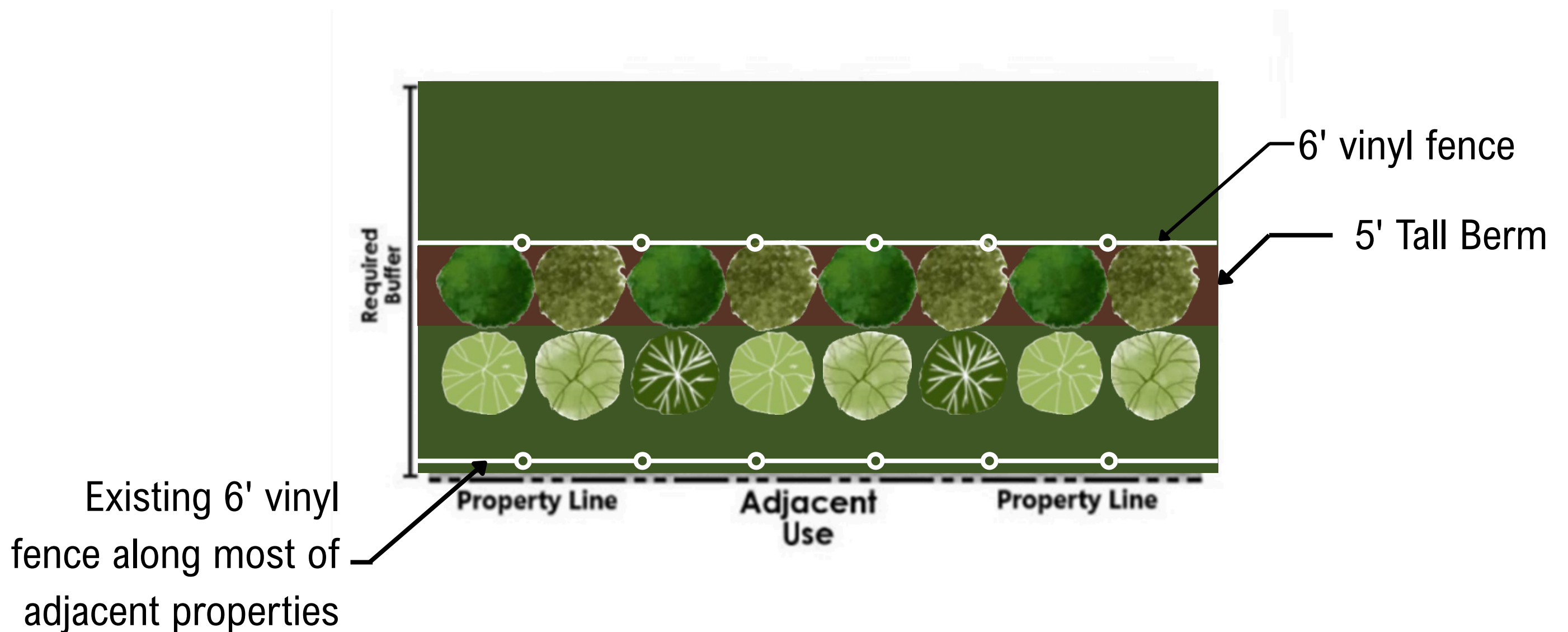
Signature: \_\_\_\_\_

# Exhibit 1:

## Proposed 50' Buffer for Commercial Property on East Side of Site

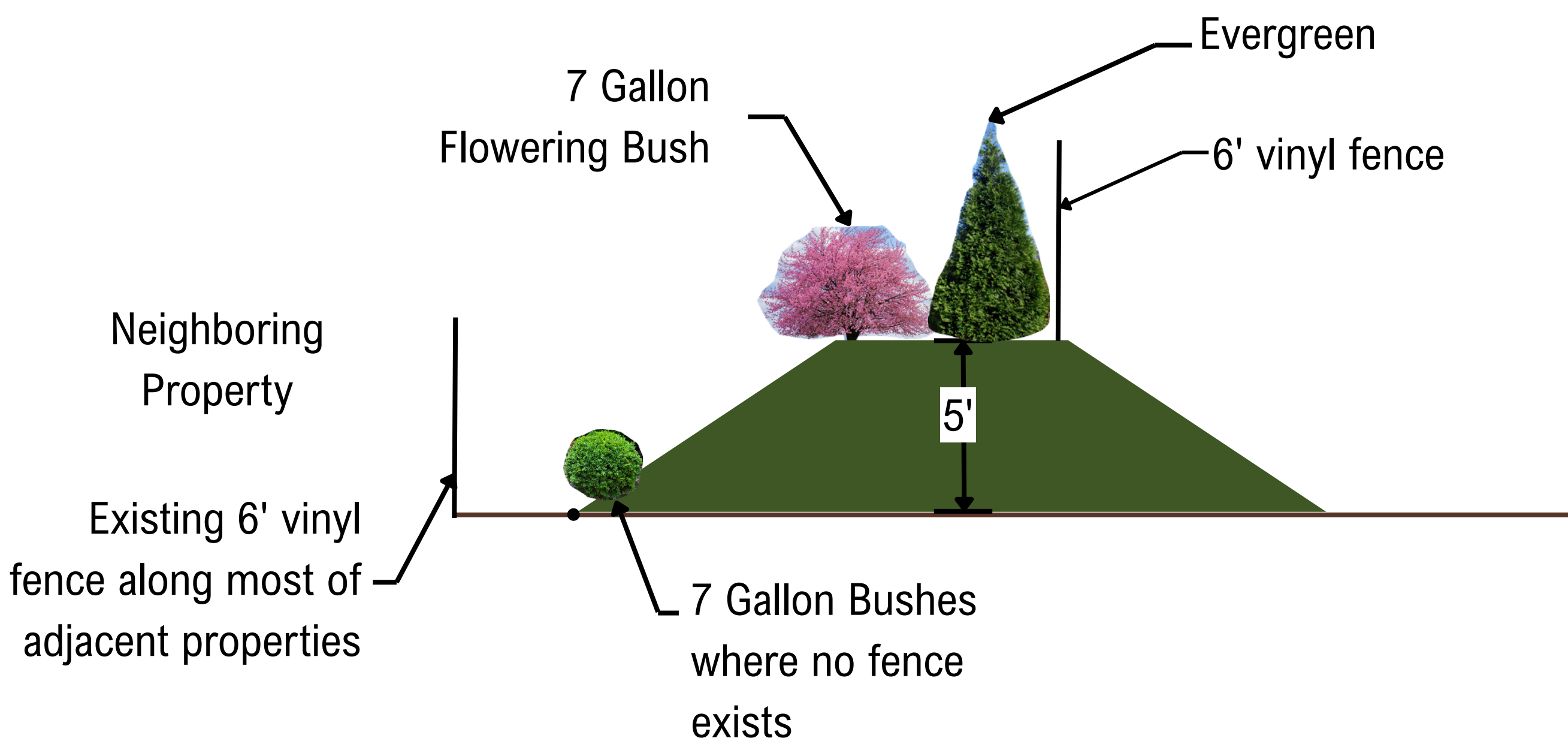


- 16 - 6' High Evergreen Trees per 100'
- 16- 7 Gallon Evergreen Flowering Bushes per 100'
- 16 - 7 Gallon Bushes per 100' where no fence exists
- 5' High Berm with Tall Evergreen Trees & Shrubs
- 6' Vinyl Fence



Atticus Woods  
Commercial Property

\*Stormwater devices may encroach into the buffer on the commercial side as long as landscaping shown is maintained



Atticus Woods  
Commercial Property

## 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.

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**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 for self-storage, enclosed use, shall be 100,000 square feet.

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:*

\_\_\_\_\_  
Christina 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]

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, HELLMAN 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	MCNEAL, 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 / 982	2022 / 574
AR	1850944298	WINFREE, CRYSTAL ROSE & ANDREW CLAY	19425 / 429	2022 / 574
AS	1850945275	ORTALS, EDWARD J & EILEEN	19328 / 1625	2022 / 574
AT	1850946232	BAVISOtto, 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	19198 / 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

**LEGEND:**

- RESIDENTIAL
- RESIDENTIAL - TOWNHOMES
- COMMERCIAL
- POTENTIALLY JURISDICTIONAL POND (STREAMS/WETLANDS ARE SUBJECT TO CHANGE BASED ON USACE CONCURRENCE AT TIME OF PERMIT)
- S&C BUFFERS/WETLANDS (STREAMS/WETLANDS ARE SUBJECT TO CHANGE BASED ON USACE CONCURRENCE AT TIME OF PERMIT)
- POTENTIALLY JURISDICTIONAL WETLAND (STREAMS/WETLANDS ARE SUBJECT TO CHANGE BASED ON USACE CONCURRENCE AT TIME OF PERMIT)
- POTENTIAL 50' NEUSE RIVER BUFFER (STREAMS/WETLANDS ARE SUBJECT TO CHANGE BASED ON USACE CONCURRENCE AT TIME OF PERMIT)
- COLLECTOR ROAD CONNECTION

NC-CZ RE-ZONED AREAS	POST R/W RESERVATION	GROSS
RESIDENTIAL AREA	75.832	77.518 AC
COMMERCIAL AREA	2.457	3.049 AC
COMMERCIAL AREA	22.834	25.050 AC
<b>TOTAL AREA TO BE REZONED</b>	<b>101.123</b>	<b>105.617 AC</b>

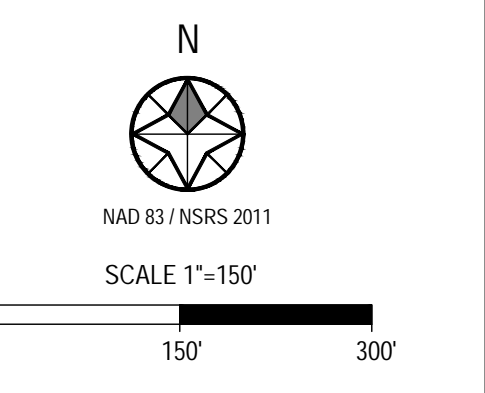
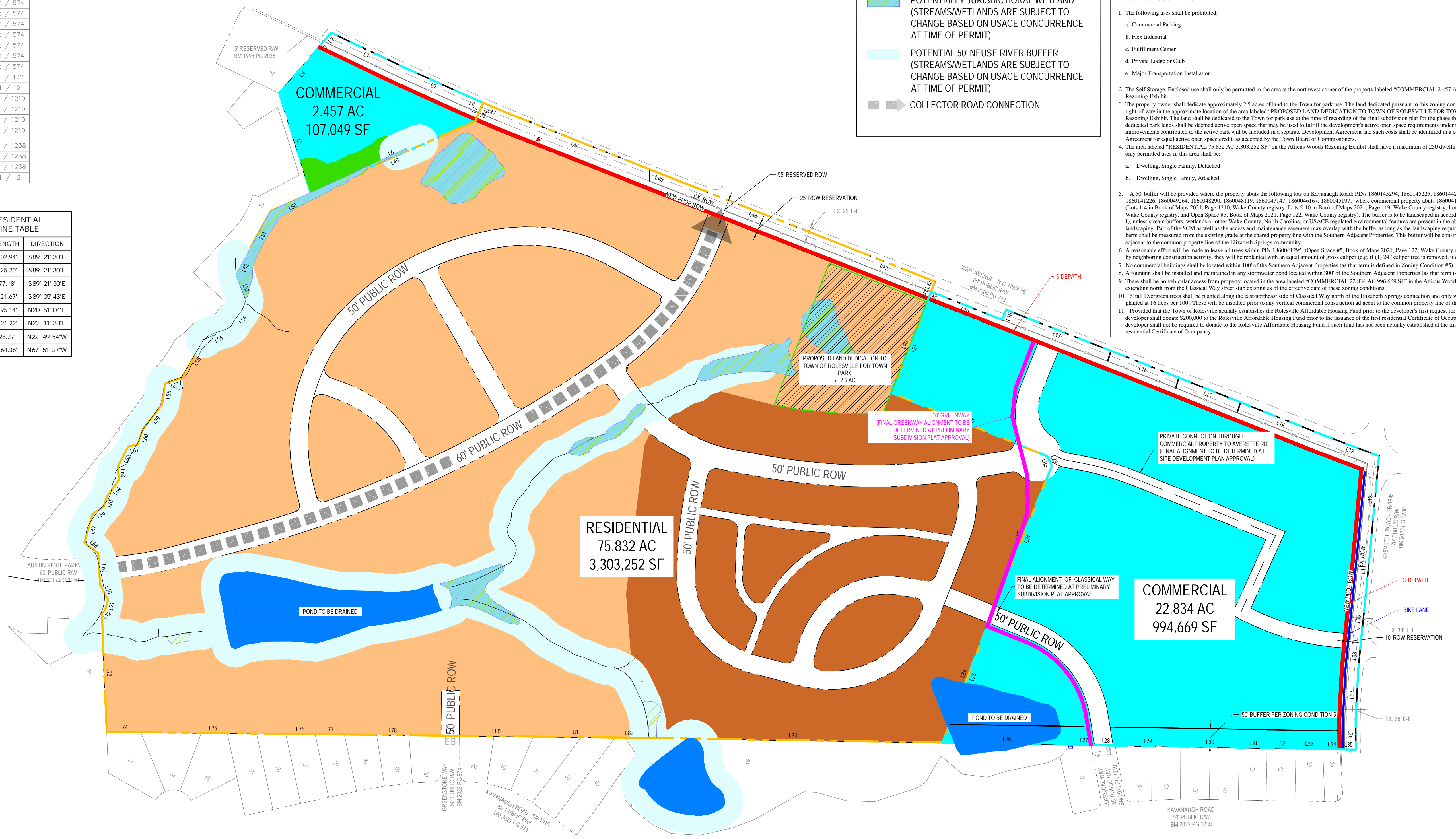
TOTAL COMMERCIAL AREA	25.291 AC
COMMERCIAL PERCENTAGE	25.01%

- PROPOSED ZONING CONDITIONS**
- The following uses shall be prohibited:
    - a. Commercial Parking
    - b. Flex Industrial
    - c. Fulfillment Center
    - d. Private Lodge or Club
    - e. Major Transportation Installation
  - The Self Storage, Enclosed use shall only be permitted in the area at the northwest corner of the property labeled "COMMERCIAL 2.457 AC 107,049 SF" on the Atticus Woods Rezoning Exhibit.
  - The property owner shall dedicate approximately 2.5 acres of land to the Town for park use. The land dedicated pursuant to this zoning condition shall be adjacent to the Wait Avenue right-of-way in the approximate location of the area labeled "PROPOSED LAND DEDICATION TO TOWN OF ROLESVILLE FOR TOWN PARK +/-2.5 AC" on the Atticus Woods Rezoning Exhibit. The land shall be dedicated to the Town for park use at the time of recording of the final subdivision 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 developer's active open space requirements under the L90. 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 Board of Commissioners.
  - The area labeled "RESIDENTIAL 75.832 AC 3,303,252 SF" on the Atticus Woods Rezoning Exhibit shall have a maximum of 250 dwelling units (maximum 140 Attached units). The only permitted uses in this area shall be:
    - a. Detaching, Single Family, Detached
    - b. Dwelling, Single Family, Attached
  - A 50' buffer will be provided where the property abuts the following lots on Kavanaugh Road: PINs 1860145294, 1860145225, 1860144245, 1860143265, 1860142285, 1860142205, 1860141226, 1860049264, 1860045290, 1860041191, 1860041747, 1860045197, where commercial property abuts 1860041295 (the "Southern Adjacent Properties") (Lots 1-4 in Book of Maps 2021, Page 1210; Wake County registry; Lots 5-10 in Book of Maps 2021, Page 119; Wake County registry; Lots 88-90 in Book of Maps 2022, Page 1237; Wake County registry, and Open Space #5, Book of Maps 2021, Page 122; Wake County registry). The buffer is to be landscaped in accordance with the enclosed buffer exhibit (Exhibit 1), unless stream buffers, wetlands or other Wake County, North Carolina, or USACE regulated environmental features are present in the above-mentioned area restricting grading or landscaping. Part of the S&C as well as the access and maintenance easement may overlap with the buffer as long as the landscaping requirements in Exhibit 1 are met. Height of the berm shall be measured from the existing grade at the shared property line with the Southern Adjacent Properties. This buffer will be constructed prior to any vertical construction adjacent to the common property line of the Elizabeth Springs community.
  - A reasonable effort will be made to leave all trees within PIN 1860041295 (Open Space #5, Book of Maps 2021, Page 122; Wake County registry) undisturbed. If any trees are removed by neighboring construction activity, they will be replaced with an equal amount of gross caliper (e.g. if (11) 2" caliper tree is removed, it can be replaced with (12) 2" caliper trees).
  - No commercial buildings shall be located within 100' of the Southern Adjacent Properties (as that term is defined in Zoning Condition #5).
  - A fountain shall be installed and maintained in any stormwater pond located within 300' of the Southern Adjacent Properties (as that term is defined in Zoning Condition #5).
  - There shall be no vehicular access from property located in the area labeled "COMMERCIAL 22.834 AC 994,669 SF" in the Atticus Woods Rezoning Exhibit to the public right of way extending north from the Classical Way street stub existing as of the effective date of these zoning conditions.
  - 6' tall Evergreen trees shall be planted along the east/northeast side of Classical Way north of the Elizabeth Springs connection and only within the Commercial property. They will be planted at 16 trees per 100'. These will be installed prior to any vertical commercial construction adjacent to the common property line of the Elizabeth Springs community.
  - Provided that the Town of Rolesville actually establishes the Rolesville Affordable Housing Fund prior to the developer's first request for a residential Certificate of Occupancy, the developer shall donate \$200,000 to the Rolesville Affordable Housing Fund prior to the issuance of the first residential Certificate of Occupancy. For the avoidance of doubt, the developer shall not be required to donate to the Rolesville Affordable Housing Fund if such fund has not been actually established at the time the developer submits its first request for a residential Certificate of Occupancy.

LINE #	LENGTH	DIRECTION
L40	273.29'	N21° 35' 45"E
L41	25.00'	N21° 33' 17"E
L42	30.00'	N21° 35' 33"E
L43	289.03'	N68° 25' 12"W
L44	485.12'	N68° 36' 29"W
L45	67.90'	N68° 29' 21"W
L46	430.18'	N68° 23' 19"W
L47	62.15'	N66° 45' 05"W
L48	55.00'	S23° 14' 55"W
L49	493.27'	S66° 17' 31"W
L50	120.37'	S66° 17' 31"W
L51	139.83'	S29° 02' 26"W
L52	62.39'	S27° 04' 26"W
L53	85.05'	S22° 30' 36"E
L54	82.65'	S35° 17' 49"W
L55	77.79'	S66° 41' 13"W
L56	119.64'	S30° 41' 32"W
L57	48.52'	S70° 24' 48"W
L58	58.77'	S07° 59' 45"W
L59	84.46'	S38° 16' 44"W

LINE #	LENGTH	DIRECTION
L1	225.89'	N64° 34' 13"W
L2	31.09'	S40° 39' 22"W
L3	25.91'	S40° 39' 22"W
L4	161.80'	S40° 39' 22"W
L5	288.49'	S17° 27' 54"E
L6	493.27'	N66° 17' 31"E
L7	55.00'	N23° 14' 55"E
L8	52.86'	N66° 45' 05"W
L9	180.85'	N65° 41' 26"W
L11	145.63'	N05° 35' 13"E
L12	242.72'	N05° 20' 11"E
L13	159.43'	N69° 23' 18"W
L14	248.14'	N68° 22' 23"W
L15	182.46'	N68° 12' 44"W
L16	200.54'	N68° 31' 07"W
L17	308.77'	N68° 30' 12"W
L18	30.00'	S21° 35' 33"W
L19	210.00'	N68° 26' 43"W
L20	25.00'	S21° 33' 17"W
L21	273.29'	S21° 35' 45"W

REV #	DATE	DESCRIPTION
1	04.11.2025	TOR REZ COMMENTS 2: 03.11.2025
2	07.30.2025	TOR REZ COMMENTS 3: 06.22.2025
3	11.10.2025	TOR PLANNING BOARD COMMENTS



**ATTICUS WOODS REZONING EXHIBIT**  
**REZ-24-05**  
 WAKE COUNTY



P:\2024\Projects\24081\Map\_Avenues\_Titles-EL-ENC\GIS\Shapefiles\24081\_CZ05\_SITE\_REZONING.dwg



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 Kavanagaugh 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 Harley	1400 Carrie May Lane WF	ehenley@uc-rr.com
George Wrenn	1408 CARRIE MAY LANE <sup>WF</sup>	
MAN LEETE	109 KAVANAUGH RD	SOLD@MANLEETE.COM
Christian Ouderka	6561 Winter Spring Dr	chrond001@gmail.com
	<u>Virtual Attendees</u>	
Will Apps	108 Kavanaugh rd	
Cara & Chuck Dequaine	1300 Rose Finch circle	
Ortals	128 Kavanaugh	
Hi	no info provided	
Kim	no info provided	



**Bateman Civil Survey Company, PC**  
2524 Reliance Avenue  
Apex, North Carolina 27539

Phone: 919.577.1080  
Fax: 919.577.1081  
[info@batemancivilsurvey.com](mailto:info@batemancivilsurvey.com)

To: Resident(s) and property owner(s)

From: Bateman Civil Survey Company

Date: November 6, 2025

Re: Notice of meeting to discuss potential rezoning for Atticus Woods (FKA Wait Subdivision) located at Wait Avenue and Averette Rd; having Wake County Property Identification Numbers 1860045778, 1860056400, 1860151206, 1860143789, 1850950449 (the "Property").

The applicant, Ardent Building LLC, is holding a second neighborhood meeting to discuss the rezoning of the properties having PINs listed above. The Property is outlined in red on the context map included with this mailing. The other parcels highlighted on the context map indicate to the property owners that the applicant is required to notify about this proposal.

The Property is currently zoned R&PUD AND RL. The applicant is submitting an application to rezone to NC-CZ.

The applicant will hold an in person and virtual neighborhood meeting on November 20, 2025, from 6pm to 7pm on Microsoft Teams and at the Rolesville Community Center (514 Southtown Circle). The purpose of this neighborhood meeting is to ensure that nearby property owners are made aware of the proposed project and to get a better understanding of how this project could impact you. Instructions for joining the virtual meeting are enclosed.

Please do not hesitate to contact Tim Grissinger at Bateman Civil Survey Company.

Also, for more information about Planning cases, you may want to visit [rolesvillenc.gov](http://rolesvillenc.gov), email [planning@rolesville.nc.gov](mailto:planning@rolesville.nc.gov), or contact the Rolesville Planning Department via phone at (919) 554-6517.

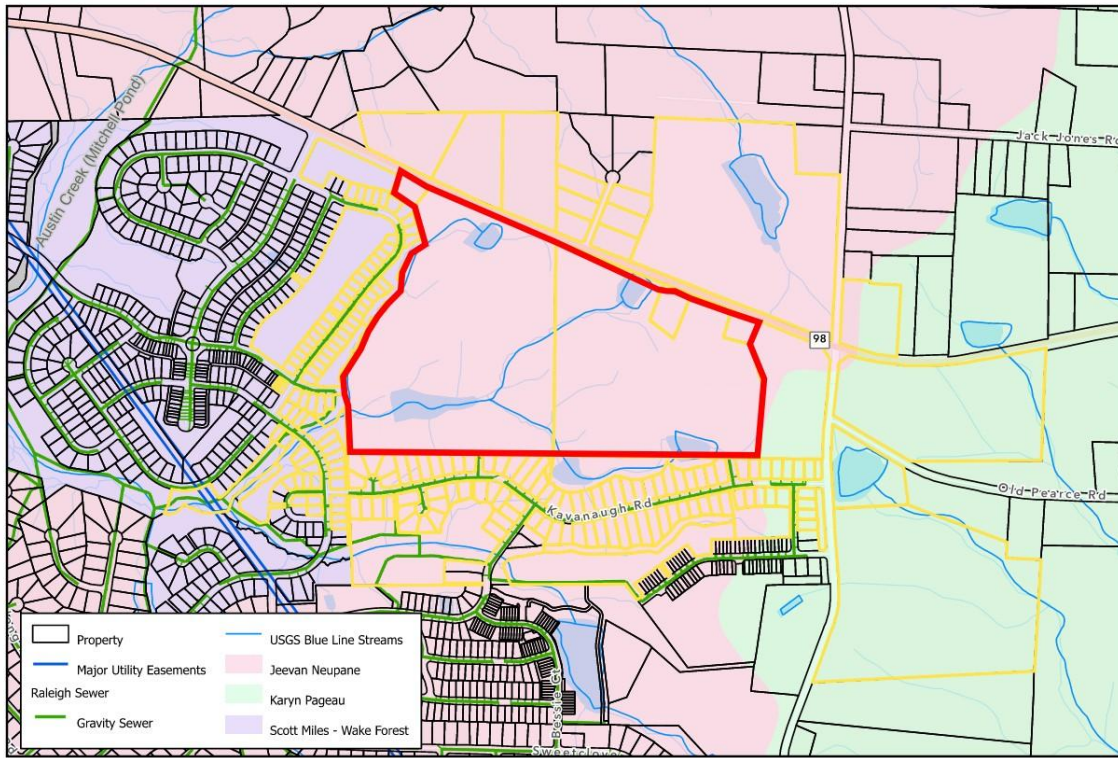
The final decision to approve or deny this rezoning request rests with the Planning Board (for property within Towns' jurisdiction). Any interested party may speak at the public hearing. Please be advised that substantial changes to the proposed rezoning may be made during and following a public hearing, prior to the governing bodies final decision.



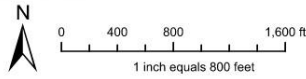
**BCSC**  
BATEMAN CIVIL SURVEY COMPANY

**Bateman Civil Survey Company, PC**  
2524 Reliance Avenue  
Apex, North Carolina 27539

Phone: 919.577.1080  
Fax: 919.577.1081  
info@batemancivilsurvey.com



**Neighborhood Meeting Notice**



**Disclaimer**  
Maps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.



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2524 Reliance Avenue  
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Phone: 919.577.1080  
Fax: 919.577.1081  
info@batemancivilsurvey.com

November 6, 2025

**RE: Virtual Neighborhood Meeting – Instructions**

Dear Neighboring Property Owner,

We will be hosting a virtual neighborhood meeting via Microsoft Teams. The meeting will be held on November 20th, and run from 6pm to 7pm, (Organizaremos una reunión vecinal virtual a través de Microsoft Teams. La reunión se llevará a cabo el 20 de Noviembre y se llevará a cabo a partir de las 6pm hasta las 7pm)

> To attend the meeting via computer, mobile device, or iPad, type in the following link in your internet browser (Para asistir a la reunión a través de una computadora, dispositivo móvil o iPad, escriba el siguiente enlace en su navegador de Internet): <https://www.microsoft.com/en-us/microsoft-teams/join-a-meeting>

**Microsoft Teams meeting**

**Join on your computer, mobile app or room device**

Meeting ID: 241 360 053 344 3

Passcode: rH9VZ7nC

> To attend the meeting via phone, you may dial in by (Para asistir a la reunión por teléfono, puede marcar por:

**Or call in (audio only)**

**Dial in by phone**

[+1 469-294-3292](tel:+14692943292),167176092# United States, Frisco

Phone conference ID: 167 176 092#

Sincerely,

Tim Grissinger

Address	Owner	REID	PIN
412 KAVANAUGH RD	MOULTON, ALAN MOULTON, BRYNN	494444	1850849227
2001 WAIT AVE	STEELMAN, MAX H STEELMAN, JANE	195488	1850867665
120 KAVANAUGH RD	AUTRY, BETSY SMITH AUTRY, DAVID E/	485975	1860142285
2108 LONGMONT DR	AMH 2014-3 BORROWER LLC	376674	1850850275
201 PLOTT HOUND LN	AMH ROMAN TWO NC LLC	351109	1850862121
2037 LONGMONT DR	GREENE-SIMPSON, SHARONDA MONI	376692	1850853470
232 KAVANAUGH RD	REED, DARLENE MARY	481689	1860044151
1401 CARRIE MAY LN	DALEY, JAMES E DALEY, MICHELLE S	171727	1850958998
2029 LONGMONT DR	BUENVIAJE, ERIC M	376694	1850854540
2113 LONGMONT DR	KEHN, RYAN LAWRENCE KEHN, LAURI	376686	1850851182
209 KAVANAUGH RD	BREAKIRON, CHARLIE BREAKIRON, LI	481719	1860039929
1968 AUSTIN RIDGE PKWY	MICHAEL, ANTO THOMAS, SOLY	446566	1850747940
0 KAVANAUGH RD	ELIZABETH SPRINGS PROPERTY OWNI	494482	1850947236
1213 MARSH HAWK WAY	ELIZABETH SPRINGS PROPERTY OWNI	481722	1860132857
6545 WINTER SPRING DR	ELIZABETH SPRINGS PROPERTY OWNI	494480	1850838619
0 KAVANAUGH RD	ELIZABETH SPRINGS PROPERTY OWNI	2813	1860041295
0 KAVANAUGH RD	ELIZABETH SPRINGS PROPERTY OWNI	481723	1860033678
1201 AVERETTE RD	ELIZABETH SPRINGS PROPERTY OWNI	481725	1860136879
1221 AVERETTE RD	ELIZABETH SPRINGS PROPERTY OWNI	481726	1860146265
2012 LONGMONT DR	LYNAM, ANDREW M LYNAM, CATALIN/	376664	1850854784
2004 WAIT AVE	WAKE ELECTRIC MEMBERSHIP CORP	245700	1850867237
1408 CARRIE MAY LN	WRENN, GEORGE B WRENN, DAWN C	171735	1860062063
1413 CARRIE MAY LN	KIRCHHOFF, STEVEN C KIRCHHOFF, M	171730	1850968585
277 KAVANAUGH RD	MISKO, PATRICK S MISKO, LINDSEY J	481701	1850936839
248 KAVANAUGH RD	BOLOMEY, ANDREW BOLOMEY, AMAN	481693	1860041056
2020 LONGMONT DR	RIDGES, NATIA C.	376666	1850854606
240 KAVANAUGH RD	ROBINSON, JULIE W. ROBINSON, CUF	481691	1860043009
225 KAVANAUGH RD	JAMES, MICHAEL JAMES, VERONICA H	481715	1860036923
2028 LONGMONT DR	BARRINGTON, STEPHEN R BARRINGT	376668	1850853526
2004 LONGMONT DR	VIDAL, BERNARDO C JR VIDAL, SHARC	376662	1850855863
2008 LONGMONT DR	AMH 2014-2 BORROWER LLC	376663	1850855729
244 KAVANAUGH RD	DELSERONE, DALE WILLIAM DELSERC	481692	1860042029
2021 LONGMONT DR	BASS, DEBORAH P BASS, NEWBERRY .	376696	1850855537
2005 LONGMONT DR	DOMACK, TIMOTHY PHILLIP DOMACK,	376699	1850867012
2040 LONGMONT DR	ETENI, LONGONDO	376671	1850852412
2112 LONGMONT DR	NR SN NC A LLC	376675	1850850240
213 KAVANAUGH RD	HANIFY, JENNIFER MICHELLE	481718	1860038949
252 KAVANAUGH RD	COHEN, JORDAN MICHAEL COHEN, K	481694	1860040084
2028 WAIT AVE	WFINV, LLC	10865	1850950449
1969 LONGMONT DR	MADIMBA, DJO UZIMA BASHILA, MIMIE	437964	1850863233
2132 LONGMONT DR	AMH NC PROPERTIES LP	376680	1850748968
260 KAVANAUGH RD	BANGLE, LARRY BANGLE, DINA	481696	1850949030
437 KAVANAUGH RD	IHANDER, FREDERICK PAUL III IHANDI	494455	1850835917
2001 BIRDHOUSE LN	LUSTER, BRENT LUSTER, SARA	446578	1850748658
2012 AUSTIN RIDGE PKWY	STOGRAN, CHRISTOPHER A STOGRAN	446575	1850841700
2000 AUSTIN RIDGE PKWY	CASTRO, DAVID CORREA, GLORIA ANI	446572	1850749727

1205 GOLDEN ASTER TRL	REDMOND, KELVIN DUANE REDMON,	494458	1850837914
1985 LONGMONT DR	DIMMITT, JEREMY DIMMITT, CARMEN	437968	1850865158
1929 BIRDHOUSE LN	PATEL, HARDIK PATEL, VIRAL	446580	1850747708
2000 BIRDHOUSE LN	RAMNARAIN, VISHWANAUTH DIAZ, JO	446584	1850747544
2120 LONGMONT DR	RODRIGUEZ, EVELIA	376677	1850759172
2109 LONGMONT DR	ATKINSON, KELLEY	376687	1850852117
2005 BIRDHOUSE LN	WATERS, JAMES ALAN WATERS, KATAF	446577	1850749614
2008 AUSTIN RIDGE PKWY	GOODWIN, WILLIAM BRENT GOODWII	446574	1850840742
2004 AUSTIN RIDGE PKWY	UGWUANYI, GODFREY CHUMA OZIOK	446573	1850749784
229 KAVANAUGH RD	NEVLUD, THOMAS V NEVLUD, CAROL	481714	1860035858
128 KAVANAUGH RD	BOORADY, ANDRE J ORTALS, MEREDI	485977	1860141226
1933 BIRDHOUSE LN	DANEHY, BRITNEY ZACZKOWSKI, DO	446579	1850747754
405 KAVANAUGH RD	WILLIAMS, ANTHONY L	494465	1850941130
2016 BIRDHOUSE LN	GOWDA, BHANUPRAKASH BHEEME G.	512221	1850749366
228 KAVANAUGH RD	RICKLE, BRYAN DONALD RUDDY, TAYI	481688	1860045123
6549 WINTER SPRING DR	HALES, BRANDON MARK HALES, MEG.	494475	1850933851
1984 AUSTIN RIDGE PKWY	COLEMAN, ALIA N	446570	1850748815
2121 LONGMONT DR	COLETTA, DOMINIQUE SR COLETTA, M	376684	1850851004
2021 BIRDHOUSE LN	BALLIGATA, SUNANDA	512248	1850841480
2206 WAIT AVE	THALES ACADEMY	2811	1860045778
2200 WAIT AVE	THALES ACADEMY	270812	1860056400
2216 WAIT AVE	THALES ACADEMY	89828	1860151206
2232 WAIT AVE LOT 1	THALES ACADEMY	343815	1860143789
0 LONGMONT DR	VILLAGES OF AUSTIN CREEK HOMEOV	447711	1850742003
1964 AUSTIN RIDGE PKWY	VILLAGES OF AUSTIN CREEK HOMEOV	446587	1850746993
2020 AUSTIN RIDGE PKWY	VILLAGES OF AUSTIN CREEK HOMEOV	446589	1850841696
0 AUSTIN RIDGE PKWY	VILLAGES OF AUSTIN CREEK HOMEOV	446594	1850850499
0 LONGMONT DR	VILLAGES OF AUSTIN CREEK HOMEOV	376702	1850856710
0 LONGMONT DR	VILLAGES OF AUSTIN CREEK HOMEOV	376700	1850851388
0 AUSTIN RIDGE PKWY	VILLAGES OF AUSTIN CREEK HOMEOV	376701	1850852022
2000 LONGMONT DR	VILLAGES OF AUSTIN CREEK HOMEOV	376661	1850855899
0 LONGMONT DR	VILLAGES OF AUSTIN CREEK HOMEOV	437969	1850863308
2116 LONGMONT DR	CAVALET, VIRGINIA L	376676	1850850106
2045 LONGMONT DR	2018-4 IH BORROWER LP	376690	1850853310
2129 LONGMONT DR	HONG, ROBERT S HONG, BRUNA M	376682	1850840935
116 KAVANAUGH RD	RODICO, PAMELA RODICO, JOHN RAI	485974	1860143265
6557 WINTER SPRING DR	PEACH, KEVIN D PEACH, EMILY BOWE	494473	1850934953
308 KAVANAUGH RD	ORTALS, EDWARD J ORTALS, EILEEN	494437	1850945275
400 KAVANAUGH RD	FAYAD, AKRAM FAYAD, RANIA	494441	1850941279
2032 LONGMONT DR	BURKE, JAMES PHILLIP BURKE, CERIS	376669	1850852582
220 KAVANAUGH RD	ENGARD, KRISTIN	481686	1860046167
237 KAVANAUGH RD	MAYNARD, REID W MAYNARD, MAVIS	481712	1860034813
2008 BIRDHOUSE LN	VILLAGES OF AUSTIN CREEK HOMEOV	446592	1850748456
2125 LONGMONT DR	SHIELDS, HEATHER	376683	1850840979
2105 LONGMONT DR	WOODCOCK, DONALD AARON WINEC	376688	1850852241
2025 LONGMONT DR	PARRISH, GARY RUSSELL TRUSTEE PA	376695	1850854593
2037 BIRDHOUSE LN	OSTEEN, WILLIAM WALTER	512256	1850842125

2105 BIRDHOUSE LN	VENKATA DURGA, PRASADA RAO SATY	512258	1850832936
525 KAVANAUGH RD	MANCHIKANTI, SANTHOSH KUMAR PC	512264	1850739956
2113 BIRDHOUSE LN	THOTAKURI, SAI BHARGAV KONDABO	512260	1850832835
512 KAVANAUGH RD	PERINA, CHARLES PERINA, TRACY	512237	1850748175
508 KAVANAUGH RD	DUARTE, ERIK LOPEZ MUNOZ, SANDR	512236	1850749146
264 SHINGLE OAK RD	ELIZABETH SPRINGS PROPERTY OWNI	481668	1860031589
1980 AUSTIN RIDGE PKWY	WEAVER, BRYAN WEAVER, JENNIFER	446569	1850747896
276 KAVANAUGH RD	YODER, JOEL DAN	481700	1850947017
6556 WINTER SPRING DR	GAY MULHEARN, KATE HETHERINGTO	494477	1850936717
1976 AUSTIN RIDGE PKWY	PETERSON, AMANDA NICOLE PETERS	446568	1850747878
1981 LONGMONT DR	DUNN, ANTHONY CRAIG DUNN, CARL	437967	1850865109
204 KAVANAUGH RD	GIVENS, MICHAEL R GIVENS, JODY L	481682	1860049264
320 KAVANAUGH RD	JENSEN, KENT JENSEN, LINDA	494440	1850943209
516 KAVANAUGH RD	VANSIA, JAYPALSINH HITENDRASINH I	512238	1850748111
1213 GOLDEN ASTER TRL	VASUDEVAN, SINDHU NICHOLAS, BRI	494457	1850847024
104 KAVANAUGH RD	THIGPEN, APRIL LINDSAY	497433	1860145294
409 KAVANAUGH RD	PEDEN, TERRY GREGORY BARLOW, TF	494464	1850940047
2016 AUSTIN RIDGE PKWY	SOODAN, DEVON TRUSTEE SOODAN,	446576	1850841763
2020 BIRDHOUSE LN	ELIAN, EDGARD EL, DIB MELISSA	512222	1850749391
2100 BIRDHOUSE LN	GADRE, SARVESH AVINASH KULKARN	512266	1850840052
504 KAVANAUGH RD	HINES, LESLIE DARRELL III	512235	1850840106
1212 GOLDEN ASTER TRL	YORK, ELLIOTT TYLER YORK, ASHLEY	494463	1850849028
2133 LONGMONT DR	LEYVA, JOSEPH MICHAEL SALCEDO, S	376681	1850749990
2100 LONGMONT DR	LIHVARCIK, JULIE A GRAY, JEREMY M	376672	1850851354
2129 WAIT AVE	THALES ACADEMY	2792	1860161023
272 KAVANAUGH RD	JACKSON, ANTHONY JAMES JACKSON	481699	1850947072
109 KAVANAUGH RD	LEETE, HARRY M JR LEETE, DIANA S	497434	1860144005
445 KAVANAUGH RD	HOLMES, ROBERT WINFIELD	494453	1850833957
1308 ROSE FINCH CIR	TRIPP, MICHELE L	494450	1850844370
257 KAVANAUGH RD	HUNTER, JESSE ROBERT HUNTER, KIM	481707	1860030738
212 KAVANAUGH RD	GILBERT, LINDA	481684	1860048119
129 KAVANAUGH RD	LABARBERA, AMANDA LABARBERA, D/	485978	1860141075
124 KAVANAUGH RD	PETWAY, MARCUS M PETWAY, KENA G	485976	1860142205
2013 LONGMONT DR	HINMAN, PHILIP J HINMAN, ELISABETH	376697	1850857839
273 KAVANAUGH RD	APONTE, YOVAN ANTONIO APONTE, J	481702	1850937803
269 KAVANAUGH RD	BALFOUR, MICHAEL DUAN II	481703	1850937778
217 KAVANAUGH RD	MEYER, KARL MEYER, EMMA	481717	1860037977
441 KAVANAUGH RD	REISER, RAYMOND A REISER, LINDA M	494454	1850834937
300 KAVANAUGH RD	SELTZER, JO ANN KAY	494435	1850946163
312 KAVANAUGH RD	WINFREE, CRYSTAL ROSE WINFREE, A	494438	1850944298
2041 LONGMONT DR	PLOTNER, DANIEL A STEWART-PLOTN	376691	1850853345
2009 BIRDHOUSE LN	LENNAR CAROLINAS LLC	512220	1850749651
6553 WINTER SPRING DR	POINDEXTER, BRETT N POINDEXTER, F	494474	1850933898
1304 ROSE FINCH CIR	BRATLEE-WHITAKER, EMILY WHITAKEI	494449	1850845277
261 KAVANAUGH RD	SMITH, MATTHEW G SMITH, ASHLEY	481705	1850939758
316 KAVANAUGH RD	MILLER, THOMAS W MILLER, BARBARA	494439	1850943299
1973 LONGMONT DR	FLETCHER, JEFFREY S FLETCHER, REB	437965	1850863292

249 KAVANAUGH RD	BROWN, RYAN CHRISTOPHER BROWN	481709	1860031880
245 KAVANAUGH RD	EARNHART, MICHELLE EARNHART, ST	481710	1860032860
2033 LONGMONT DR	BURELA, VISWESWARA BURELA, SUBH	376693	1850854414
317 KAVANAUGH RD	RICE, GARRY STEPHEN RICE, SUSAN C	494467	1850943039
2004 BIRDHOUSE LN	CHITRE, NILESH TRUSTEE CHITRE, AN	446585	1850747590
201 KAVANAUGH RD	FAIN, SHANNON FAIN, HAYWARD	481721	1860140094
205 KAVANAUGH RD	BILYJ, KEVIN A BILYJ, LISA L	481720	1860140000
404 KAVANAUGH RD	MCNEAL, BERLONDRIKA JERTORIA	494442	1850940289
420 KAVANAUGH RD	BURGOA, CHRISTOPHER	494446	1850847266
208 KAVANAUGH RD	HURST, KERRY J HURST, MOLLY E	481683	1860048290
2117 LONGMONT DR	SUTARIYA, NILESH M SUTARIYA, JAGRI	376685	1850851048
1977 LONGMONT DR	MALIK, AUSTIN TAYLOR	437966	1850864240
216 KAVANAUGH RD	ENGARD, HEATHER LYNN	481685	1860047147
265 KAVANAUGH RD	MANSSOUR, REMON GRACE, DALIA	481704	1850938768
2012 BIRDHOUSE LN	LENNAR CAROLINAS LLC	512270	1850747142
2013 BIRDHOUSE LN	LENNAR CAROLINAS LLC	512271	1850841551
0 KAVANAUGH RD	LENNAR CAROLINAS LLC	512272	1850833808
408 KAVANAUGH RD	HOISETH, BRUCE CAVERLY HOISETH,	494443	1850940208
433 KAVANAUGH RD	NALAWADE, VINIT VILAS MUNDHE, PR	494456	1850835997
2029 BIRDHOUSE LN	LUCKETT, LINDSAY DANAE LUCKETT, J	512252	1850842218
309 KAVANAUGH RD	GUPTA, NICHOLAS ALEXANDER GUPT.	494468	1850943094
6561 WINTER SPRING DR	ONDERKA, CHRISTIAN ONDERKA, JOE	494472	1850945000
500 KAVANAUGH RD	MCCABE WILSON, ELYSE SUSANNE W	512234	1850840176
1988 AUSTIN RIDGE PKWY	TIONGCO, EUGENE TRUSTEE TIONGCO	446571	1850748833
1201 GOLDEN ASTER TRL	LABE, CAROLINE RUB, MATTHEW	494459	1850837845
2017 BIRDHOUSE LN	WITZKE, CHARLES RYAN WITZKE, BRIT	512247	1850841456
2005 WAIT AVE	TABI LLC	203215	1850962688
416 KAVANAUGH RD	GIBBS, MICHAEL GIBBS, STEFANI	494445	1850848247
2024 LONGMONT DR	CAIN, DEBERA	376667	1850853661
241 KAVANAUGH RD	WEI, JOSHUA LI CASEY, KRYSTAL CHE	481711	1860033832
0 BIRDHOUSE LN	TOWN OF WAKE FOREST	512267	1850746155
108 KAVANAUGH RD	APPS, WILLIAM APPS, BRITTNEY	497432	1860145225
1300 ROSE FINCH CIR	DEQUAINE, CHARLES G DEQUAINE, C	494448	1850846107
1216 MARSH HAWK WAY	NEUMANN, SCOTT MICHAEL NEUMAN	497436	1860145070
1301 ROSE FINCH CIR	MCLEES, JOHN JR ZIMMER, DENA	494452	1850843157
304 KAVANAUGH RD	BAVISOTTO, DANIELLE M BAVISOTTO,	494436	1850946232
2024 BIRDHOUSE LN	STRICKER, SARAH SCHWENK, ANDRE	512223	1850840225
521 KAVANAUGH RD	SARABU, SRIKANTH SARABU, HIMA VA	512265	1850749052
1208 GOLDEN ASTER TRL	AUSTIN, BEKIM FEHMIU AUSTIN, XIOM	494462	1850839959
2009 LONGMONT DR	SMITH, FREDERICK ROYCE SMITH, THI	376698	1850857936
2016 LONGMONT DR	MORIN, JACQUELINE M	376665	1850854740
2128 LONGMONT DR	TALBOT, CHRISTOPHER MARK TALBOT	376679	1850759003
125 KAVANAUGH RD	PATEL, PRAKASH B PATEL, SHOBHAN/	485979	1860142045
1972 AUSTIN RIDGE PKWY	JUDD, PRINCESS VLANDAMIR	446567	1850747859
2104 BIRDHOUSE LN	OSLE, HERBERT OSLE, ZILMA	512263	1850830965
1220 MARSH HAWK WAY	LAWRENCE, REGINA E	497435	1860145077
2104 LONGMONT DR	AMH 2014-3 BORROWER LLC	376673	1850851219

2036 LONGMONT DR	VON, CANON JON T VON, CANON JEN	376670	1850852457
1400 CARRIE MAY LN	HENLEY, FRANK A HENLEY, ELIZABETH	171736	1860052808
264 KAVANAUGH RD	BOWMAN, ANDREW CRAIG BOWMAN,	481698	1850938959
424 KAVANAUGH RD	BIZIEFF, MICHAEL P BIZIEFF, VESAL	494447	1850846285
1200 GOLDEN ASTER TRL	WILKINS, JESSICA A WILKINS, MICHAEL	494460	1850838854
1405 CARRIE MAY LN	COOPER, ALLAN R	171728	1850968185
1409 CARRIE MAY LN	TATE, CHRISTOPHER	171729	1850968390
1204 GOLDEN ASTER TRL	YARBOROUGH, KELVIN ANTONIO YAR	494461	1850839829
1965 LONGMONT DR	LORA, YAHAIRA	437963	1850862275
121 KAVANAUGH RD	MCGAHA, PAUL H MCGAHA, FRANCES	485980	1860143015
112 KAVANAUGH RD	BARTLETT, BRIANNE BARTLETT, SALLY	497431	1860144245
236 KAVANAUGH RD	SMITH, JAMES S SMITH, MELISSA C	481690	1860043170
2109 BIRDHOUSE LN	RANI, BHARKAVI NAIDU, DEEPAK NEEI	512259	1850832930
221 KAVANAUGH RD	THOMAS, KAITLIN BURTON THOMAS, J	481716	1860036996
1412 CARRIE MAY LN	NG, ALEXANDER S NG, GLENNIE M	171734	1860063117
1305 ROSE FINCH CIR	MUNOZ, WELLMAN FRANKLIN MUNOZ	494451	1850843268
1212 MARSH HAWK WAY	JARAMILLO, YOHELVYS ANTONIO FERI	497437	1860135982
2025 BIRDHOUSE LN	LENNON, RYAN LENNON, JENNIFER	512249	1850842314
224 KAVANAUGH RD	KUMAR, ABHISHEK TRUSTEE KUMAR, T	481687	1860045197
321 KAVANAUGH RD	BANGLE, LARRY BANGLE, DINA	494466	1850942049
2101 BIRDHOUSE LN	LAYNE, HEATHER	512257	1850842032
233 KAVANAUGH RD	CARRENO, ERICA BUSTAMANTE CARR	481713	1860034884
2033 WAIT AVE	TABI LLC	195486	1850965586
2101 LONGMONT DR	SAVINON, JASON SAVINON, KATERINE	376689	1850852285
2124 LONGMONT DR	HABIBNIA, JAFAR ROUZBAHANI, MARZ	376678	1850759037
253 KAVANAUGH RD	ROBINSON, TYLER MCLEAN ROBINSON	481708	1860031719
256 KAVANAUGH RD	POLLOCK, MARY LOUISE	481695	1860040012
2033 BIRDHOUSE LN	ZHAO, ANYI TRUSTEE NIEDERMAN, RC	512253	1850842222



2524 Reliance Avenue  
Apex, North Carolina 27539

Phone: 919.577.1080  
info@batemancivilsurvey.com

**DATE:** November 24, 2025

**RE:** *Wait Ave Rezoning Neighborhood Meeting 11/20/25– 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 November 20, 2025 at 6pm.
  - Each Member on behalf of Ardent Building were introduced, which included: Paul (Corey) Schmidt, (Ardent Building/ExperienceOne Homes), Eva King (Bateman Civil Survey Company), Shelby Daniel (Bateman Civil Survey Company).
  - There were 21 in person attendees and 20 virtual attendees.
  - The development team discussed the changes to the concept plan and zoning conditions since the last rezoning. Including that the plan now shows connections from Classical Way, Gemstone, and a private connection to Averette. The development team also discussed the zoning conditions in regard to the placement of the self-storage enclosed to be only permitted on the NW commercial parcel.
  - The development team then hit on some questions that had been submitted by neighbors prior to the meeting.
    - Why does commercial area need to be so close to residential? The development team discusses the desirability of proximity to the streets, and that the location of commercial aligns with the current land use plan.
    - The development team discusses landscape buffer requirements between commercial and residential.
  - Many Elizabeth Springs residents discussed displeasure with the pond draining. The development team discussed that the intention behind draining the pond closest to Elizabeth Springs is to potentially use this area as a Stormwater Control Measure, and that the development team is pursuing the required permits to breach the ponds. The process for determining new buffers, draining of the ponds, and why the development team was draining the ponds was discussed at length.
    - The concerns of residents include:
      - Destroying existing vegetation/wildlife within the pond and buffers
      - SCM Maintenance and Aesthetics
      - A portion of the water surface being on Elizabeth Springs property
  - Elizabeth Springs residents discussed displeasure with the new Classical Way Connection shown on the plan. There were concerns regarding traffic, safety, and deliveries to the commercial property. The development team explained that the original intention with the plan was to not include this connection, but that the planning board recommended disapproval because the original plan did not match the current CTP plan. The development team explained that the neighbors could bring their concerns with the CTP plan up to the local commissioners.
-

- Concerns about the Landscape buffers between the existing Elizabeth Springs Subdivision and the Commercial portion of the property were proposed by neighboring residents. The development team stated that they would do what is required by the Town of Rolesville, but that the buffers haven't been designed yet so the exact species of trees is conceptual, but that size and opacity of the buffer requirements will be followed. The neighboring residents noted that they would prefer a large buffer if possible or a fence.
  - Traffic concerns were raised by residents; the development team referred the residents to the TIA on Town of Rolesville residents. Questions on the exact number of trips were raised. The development team again referred the residents to the TIA and mentioned that they would abide by the requirements.
  - Questions were raised by a resident about the pond closest to Austin Creek that is shown to be drained. The development team mentioned that they don't currently know what the buffers will look like following the draining of this pond, but that it is likely with the current drainage pattern to still have some buffer.
  - A neighbor raised a question in regard to the Gemstone connection. The development team explained that the current concept is to just have two cul-de-sacs on a T road.
  - A neighbor raised concerns about the pond on Elizabeth Springs property flooding. The development team stated they were unaware of the flooding that was mentioned.
  - A neighbor raised concerns about traffic and is hoping for a light at Carrie May Lane. The development team states that the light is included in the TIA. The development team then discussed current plans for adding a turn lane on Averette. Another neighbor questions whether Averette will have more lanes added, the development team mentions that they believe the future plan calls for Averette being a median divided road.
  - Neighbors from Carrie May express concerns on why not all the neighbors on the road received notification letters. The development team explained that there is a specific proximity to the site required to be notified.
  - Neighbors again discuss the dangerous driving in the proximity and are asking about what all was included within the Tia, the development team explained that it is for the project specifically.
  - Neighbors expressed interest in what the commercial portion will look like in regard to neighboring shopping centers (Lowe's/Wegmans). The development team highlights Sweetwater in Apex as an example.
  - Neighbors ask questions about split of acreage, The development team mentions that it is a little more than 25 acres commercial and approx 75 residential.
  - Neighbors raise questions about why a grocery store would be included in the commercial portion of the property. The development team says the plan is conceptual but that the grocery would help bring in other commercial properties.
  - Neighbors raise concerns about delivery trucks on Classical. The development team refers to the earlier conversation in regard to having residents talk to their commissioners about the connection but that the CTP plan requires it.
  - The neighboring Thales project is brought up, The Development team mentions that at the time of the meeting, they believe it's happening but that it is an unrelated project.
  - The concept for the commercial is brought up by neighbors, The development team discusses the timeline for commercial to be brought in is roughly 2/3 years, and that it could maybe include a convenience store/gas station and grocery store. The local residents discuss their desire to have something unique and different in this area that has more work/life feel. That the current plan is not as integrated as they would like to see.
-

- The neighbors question the split of single-family/townhomes/ apartments. The development team says that there will not be any apartments and that there will be no more than 300 units split between single/family and townhomes.
  - Neighbors bring up concerns over what commercial businesses will be included, and would like to petition some different options to come in. The development team says it is hard to know this far out, and that it would depend on what companies are interested in the property.
  - The pond draining is discussed again by the neighbors adjacent to it with concerns for the trees, and the Classical Way connection. The developer discusses that the intention for the SCM to be where the pond is.
  - The buffers are discussed again, the development team references their answer from earlier in the discussion.
  - Neighbors express interest in the greenway and park dedication. The development team explains that the location was agreed upon by Parks and Recreation and that the land will be dedicated to the Town for the Town to build on at a later date.
  - The residents question what kinds of trees will be in the landscape buffer. The development team mentions that it could be something similar to a green arborvitae.
  - Residents again bring concerns about the Classical Way connection.
  - Neighbors discuss that the next planning board meeting hasn't been published at time of meeting.
  - Neighbors near the NW commercial portion bring concerns over buffers from potential self-storage and environmental disturbance. The development team mentions that minimal disturbance to the buffers and wetlands is the plan and that the landscape buffer requirements will be met.
  - Neighbors raise concerns over density, and the Development team states that per the zoning conditions they cannot exceed 4 units per acre.
  - Neighbors show concern over potential convenience store like uses and bring up concerns about delivery times and lighting. The development team mentions that a photometric study will be done to hopefully mitigate lighting concerns.
  - Neighbors bring concerns about building heights, building height max is discussed.
  - The residents bring concerns about road widths; The development team explains that the numbers on the plan are right-of-way widths and not pavements widths.
  - A neighbor questions next steps, the development team discusses that the next steps are planning board and eventually board of commissioners.
  - A neighbor asks if a crosswalk will be provided at Carrie May, the development team mentions that they aren't sure and will check the TIA.
  - Neighbors ask if it's possible to move the town park to include the pond to be drained or the commercial area in the NW parcel. The development team mentions that Parks and Rec picked the proposed location.
  - Residents want to know why storage use is being proposed, they mention they don't feel it is necessary in the area. The development team takes note.
  - Neighbors again bring concerns with the connections in the transportation plan, and question if there are any other options to arrange the roads. The development team discusses the movements around the site and the required connections. Neighbors would prefer other options to slow down traffic and not cut through from Wait Ave to Elizabeth Springs.
  - Residents ask for a full concept, The development team says that the current plan is conceptual and that it is subject to change.
  - The development team again discuss the next steps in the rezoning process.
  - Neighbors bring up concerns over Thales property traffic.
  - Residents bring up traffic concerns again, and The development team points them to the TIA.
-

- Elizabeth Springs residents bring up sound concerns and question when the landscaping buffers would be required to be put in place. The development team mentions that it would be done prior to vertical construction.
  - A resident asks about development of the residential portion, who will be doing it, size, price etc. The development team says that right now the plan is for them to develop it, and that price point is hard to narrow down at this point. Single Family 2200-3000 sf and townhomes 1500-2200 sf. The development teams says this could all change depending on the market. The resident asks about ranch/single story houses. The development team plans to include ranch homes.
  - The development team offers their contact information for any more concerns. [cschmidt@e1homes.com](mailto:cschmidt@e1homes.com)
  - The residents again bring up concerns with the classical way connection traffic, and propose some other options. The development team again lets the residents know to discuss with their commissioners.
-



2524 Reliance Avenue  
Apex, North Carolina 27539

Phone: 919.577.1080  
info@batemancivilsurvey.com

DATE: November 20, 2025

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

Meeting Purpose: Neighborhood Meeting

Name	Address	Email or Phone
Kim Cohen	252 Kavanaugh	Kmacnold@gmail.com
Larry Bangle	260 KAVANAUGH	LBangle25@gmail.com
MIKE GIVENS	204 KAVANAUGH	GIVENS.MIKE@GMAIL.COM
Heather Engard	216 Kavanaugh	hEngard@gmail.com
K Engard	220 Kavanaugh	KEKSHV523@gmail.com
Autry	120 Kavanaugh	theautry5@yahoo.com
Jim & Kim Hagenbush	901 Averette Road	ncpianist63@aol.com
RANDAL COOPER	1405 CARRIE MAY LN	
George Wrenn	1405 CARRIE MAY LN	
Luis Andre Camero	233 Kavanaugh RD	LuisAndreCarre5089@gmail.com
TOM NEVILL	229 KAVANAUGH RD	czechmysoccer@hotmail.ca
Ed Lyter Artas	308 Kavanaugh	eartas@verizon.net
Elisabeth Tilton	7000 Daniel Rd	EDLISD2016@gmail.com

<del>Josh</del> Name	Address	Email or Phone
Noah Hurst	208 Kavanaugh Rd	984 920 7862
Josh Hurst	208 Kavanaugh Rd	919-265-7956
Molly Hurst	208 Kavanaugh Rd	919-802-2239
Andre Boorady	128 Kavanaugh Rd.	716-572-5875
Margaret	407 Bezmellen Ct	919-426-3850 WFSag21@gmail.com
Elisabeth Hinman	2013 Longmont Dr	252-213-2822

# Teams Attendance

Name	Address	Email or Phone
Meredith		Mbortals@gmail.com
Phil Hinman	2013 Longmont Dr	
Liz Hinman	" "	
Brynn Molton	412 Kavanaugh	
Steven Kirchhoff	1413 Carrie May Lane	
Marian Kirchhoff	" "	
Brianne Bartlett (Sally & Doug Bartlett)	112 Kavanaugh	
Christopher Tate	1409 Carrie May Lane	
Charlie Breakiron		
Guest (unverified)		
Michael		
Max		
Jay		
Lisa Bilyj		
Amanda LaBarbera		
919 812 7437		
516 870 6006		
919 741 9188		



# 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

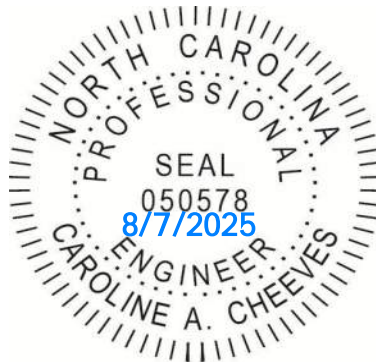
DRMP Project No. 2500158

Prepared By: LK

Reviewed By: CC



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



*Caroling 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, 11.1<sup>th</sup> 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
<b>Total Trips</b>		<b>14,353</b>	<b>383</b>	<b>411</b>	<b>794</b>	<b>689</b>	<b>647</b>	<b>1,336</b>
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
<b>Total External Trips</b>			<b>355</b>	<b>383</b>	<b>738</b>	<b>620</b>	<b>582</b>	<b>1,202</b>
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
<b>Primary Trips</b>			<b>212</b>	<b>240</b>	<b>452</b>	<b>400</b>	<b>362</b>	<b>762</b>

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

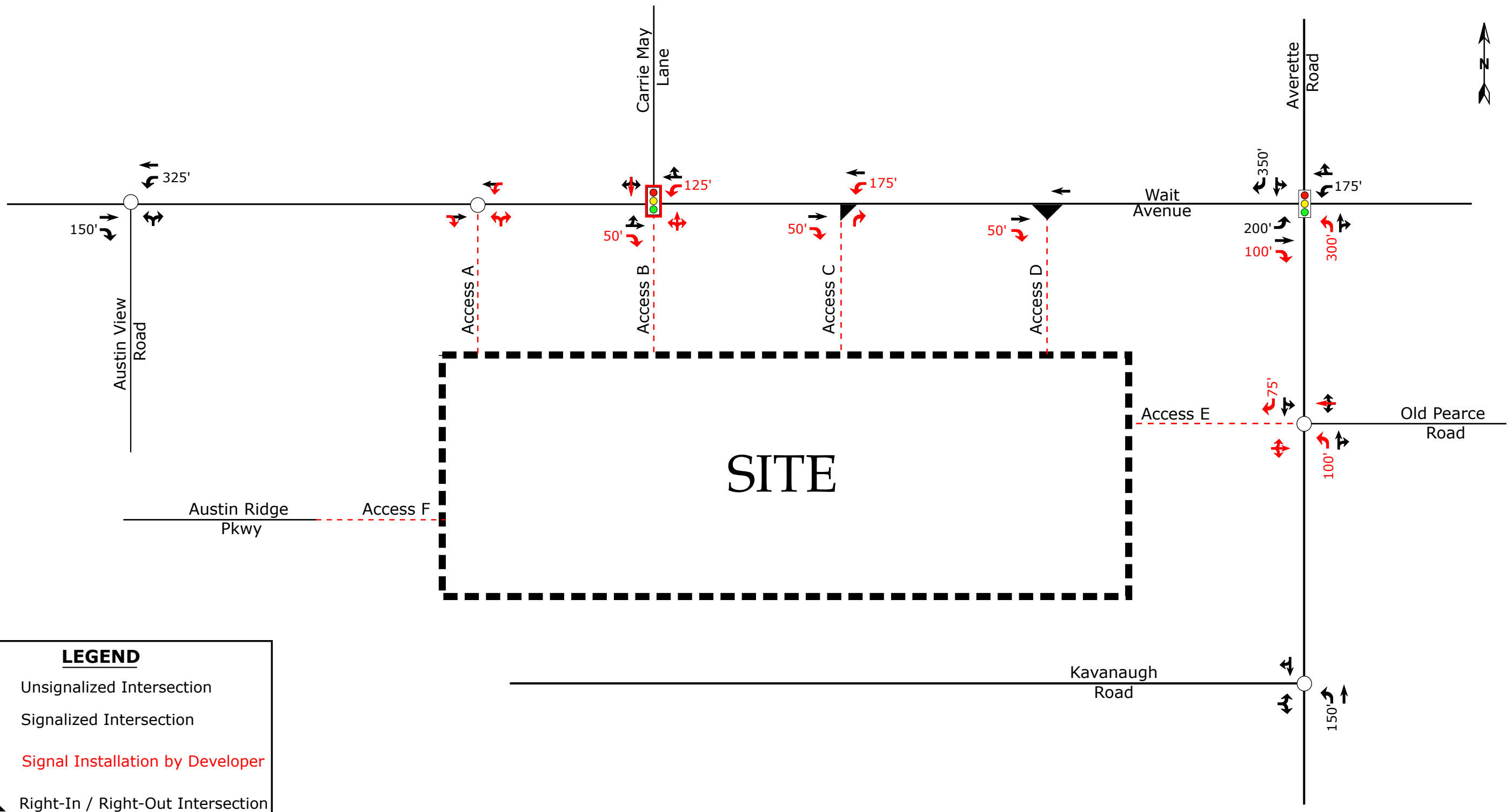
- Construct Site Access E (westbound approach) as a with one ingress and one egress lane.
- Construct a northbound Averette Road left turn lane with 100 feet of storage and appropriate taper length.
- Construct a southbound Averette Road right turn lane with 75 feet of storage and appropriate taper length.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

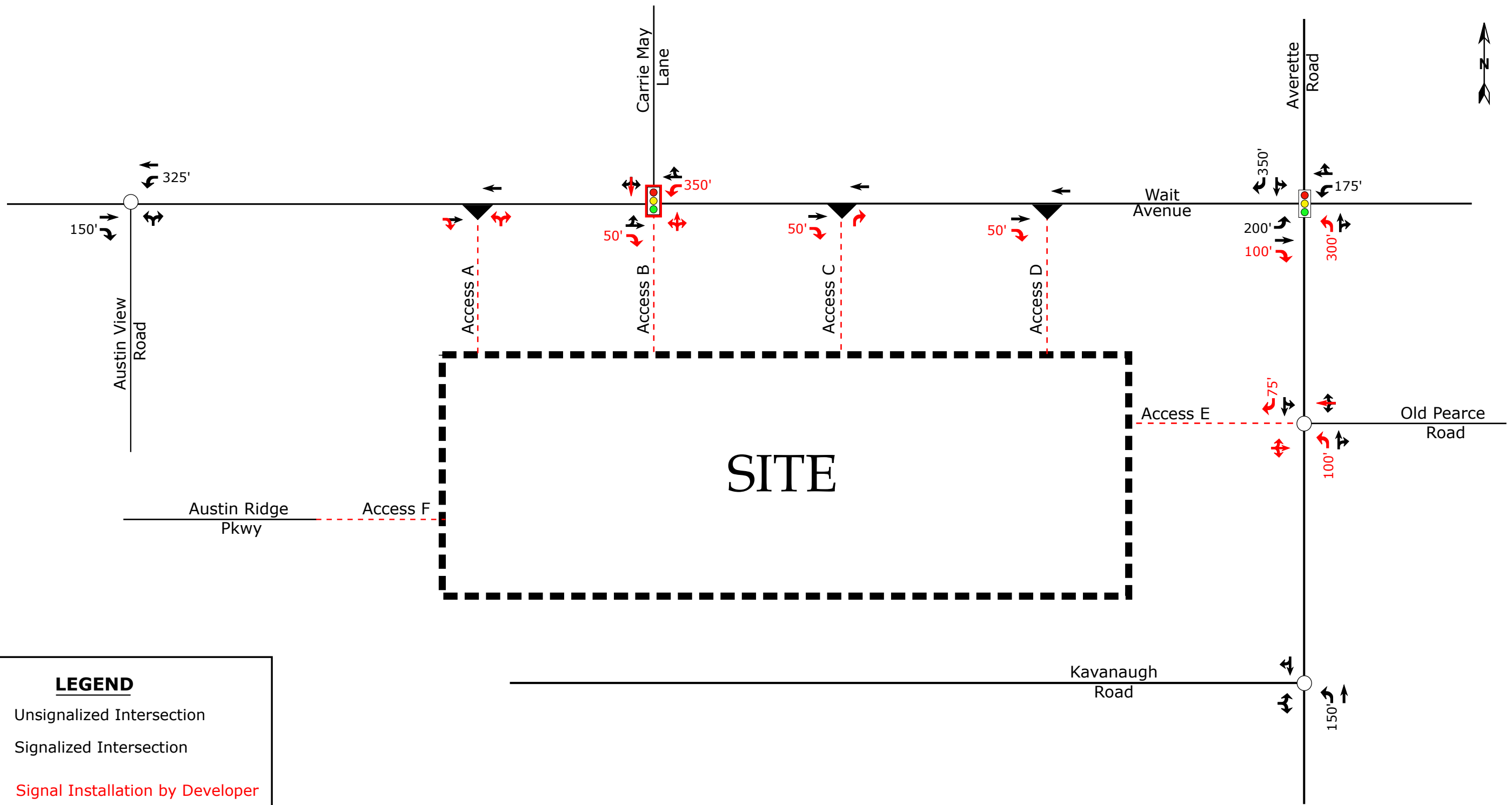
- Construct an eastbound Wait Avenue right turn lane with 50 feet of storage and appropriate taper length.



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



**LEGEND**

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

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

	<p>Wait Avenue Mixed-Use Rolesville, NC</p>	<p>Recommended Lane Configurations Scenario-2</p>		
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Scale: Not to Scale</td> <td style="width: 50%;">Figure E-2</td> </tr> </table>	Scale: Not to Scale	Figure E-2
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# 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**

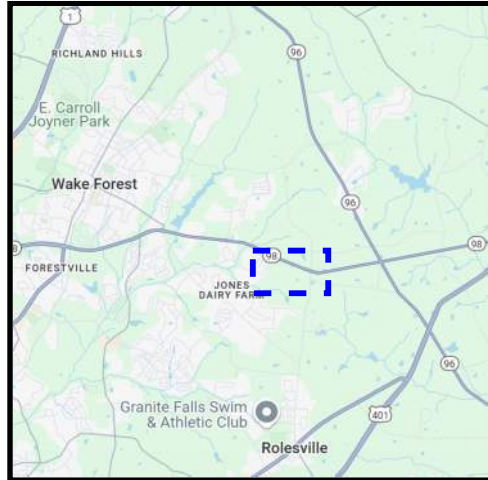
Existing lane configurations (number of traffic lanes on each intersection approach), speed limits, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.




**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	
	Study Intersection
	Proposed Site Access
	Study Area



Wait Avenue Mixed-Use  
Rolesville, NC

Site Location Map	
Scale: Not to Scale	Figure 1

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, HELLMAN 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	1850940299	MCNEAL, 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 / 1625	2022 / 574
AT	1850946232	BAVOTTI, 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	19198 / 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

**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
<b>TOTAL AREA TO BE REZONED</b>	<b>101.123 AC</b>
TOTAL COMMERCIAL AREA	25.291 AC
COMMERCIAL PERCENTAGE	25.01%

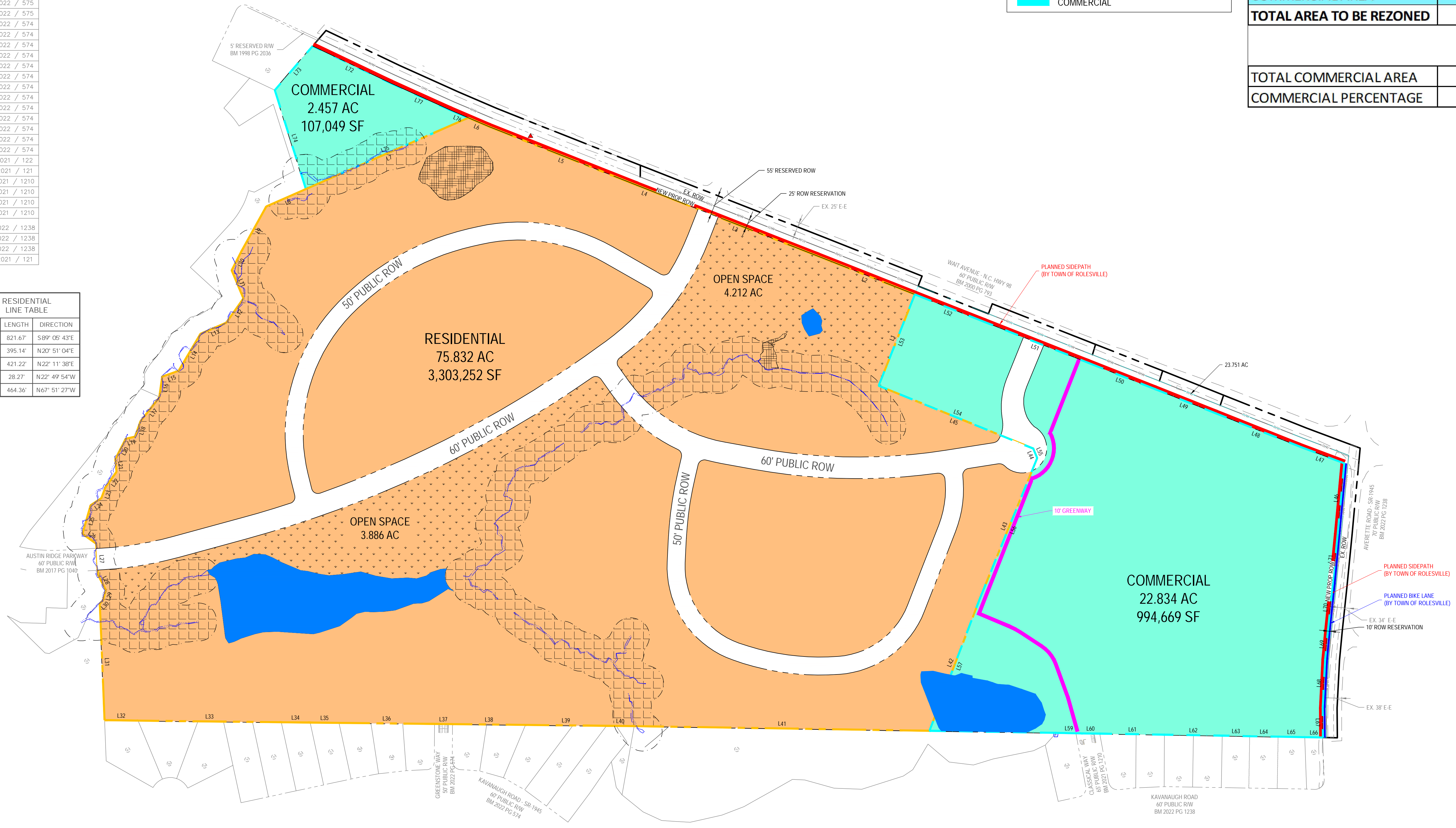
RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	273.29'	N21° 35' 45"E
L2	288.95'	N68° 25' 12"W
L3	485.08'	N68° 36' 29"W
L4	56.53'	N68° 30' 35"W
L5	442.49'	N68° 23' 19"W
L6	62.94'	N66° 45' 05"W
L7	493.27'	S66° 17' 31"W
L8	120.37'	S66° 17' 31"W
L9	139.83'	S29° 02' 26"W
L10	62.39'	S27° 04' 26"W
L11	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° 00' 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

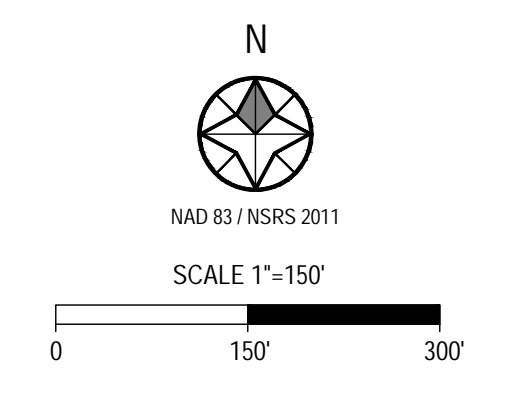
RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L41	821.67'	S89° 05' 43"E
L42	395.14'	N20° 51' 04"E
L43	421.22'	N22° 11' 38"E
L44	28.27'	N22° 49' 54"W
L45	464.36'	N67° 51' 27"W

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



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

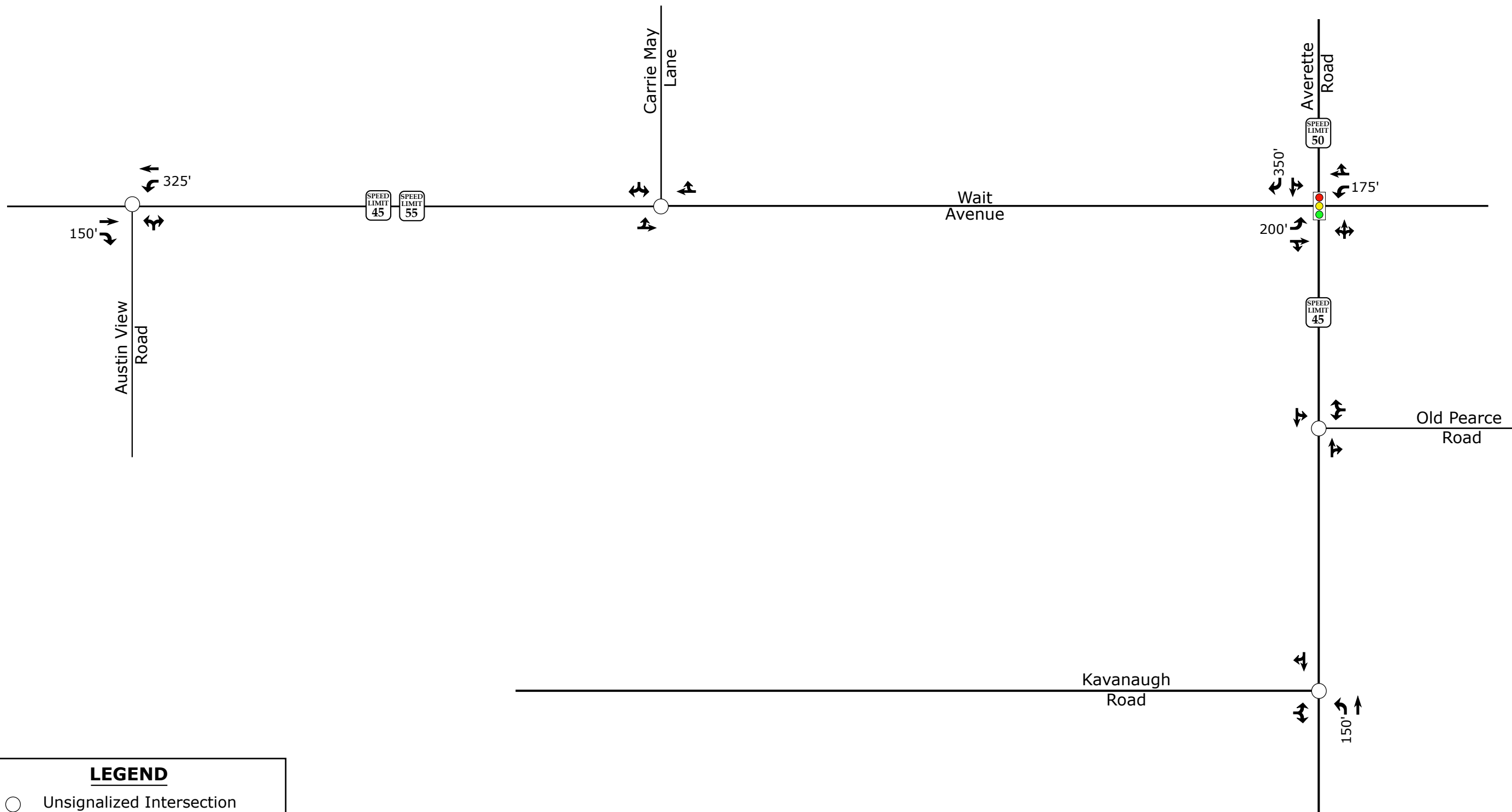


THALESWAIT AVENUE REZONING EXHIBIT  
 REZ-24-05

WAKE COUNTY



P:\2024 Projects\240811\_Nha\_Avenue\_Thaleswait\Drawings\SitePlan\240811\_C200\_Site\_Plan.dwg



**LEGEND**

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ➔ Existing Lane
- X' Storage (In Feet)
- 🚫  
SPEED LIMIT XX 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**

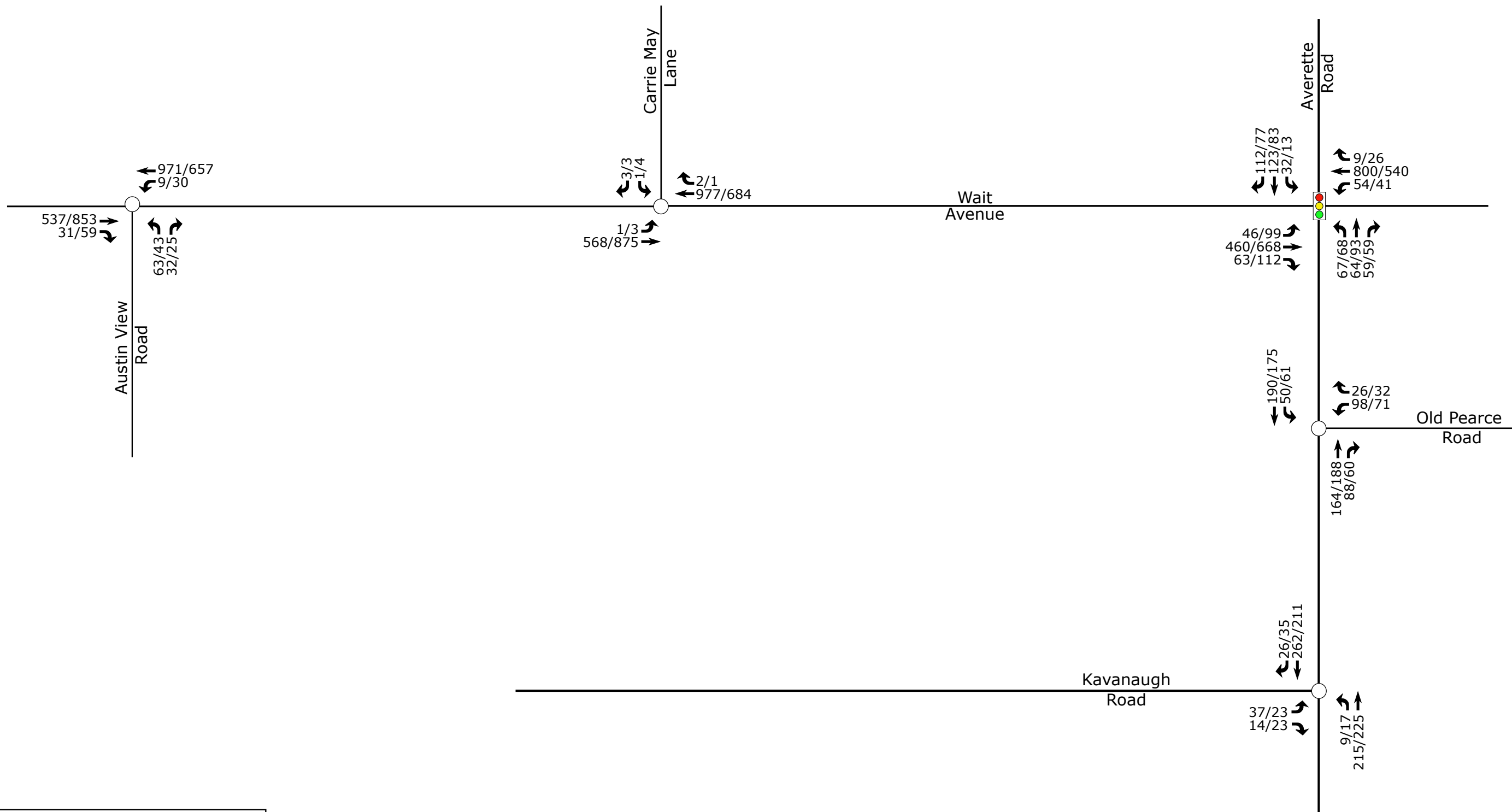
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in May of 2025 by DRMP during a typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods while schools were in session:

- 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**

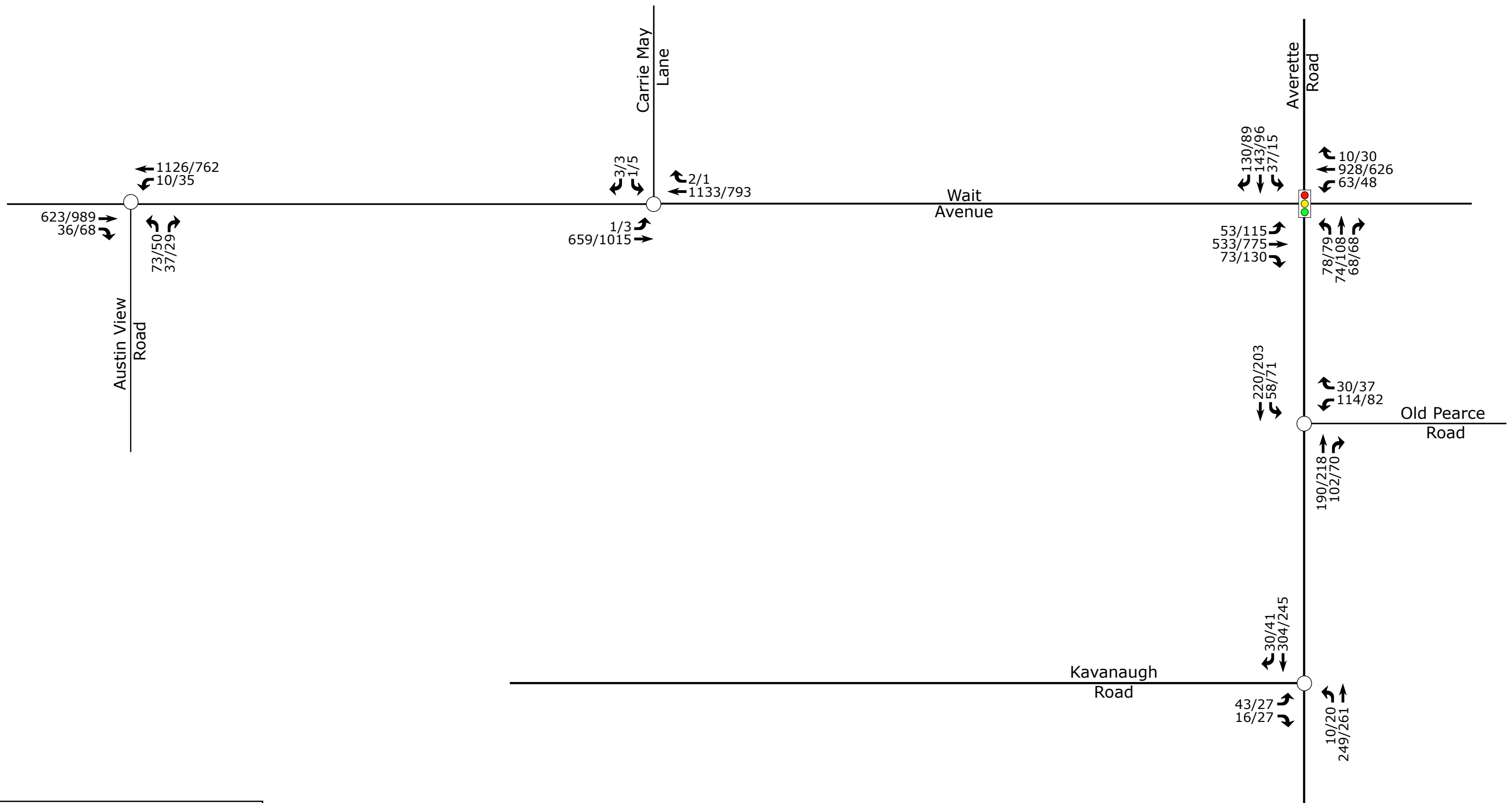
Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

#### **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
<b>Total Trips</b>		<b>14,353</b>	<b>383</b>	<b>411</b>	<b>794</b>	<b>689</b>	<b>647</b>	<b>1,336</b>
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
<b>Total External Trips</b>			<b>355</b>	<b>383</b>	<b>738</b>	<b>620</b>	<b>582</b>	<b>1,202</b>
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
<b>Primary Trips</b>			<b>212</b>	<b>240</b>	<b>452</b>	<b>400</b>	<b>362</b>	<b>762</b>

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

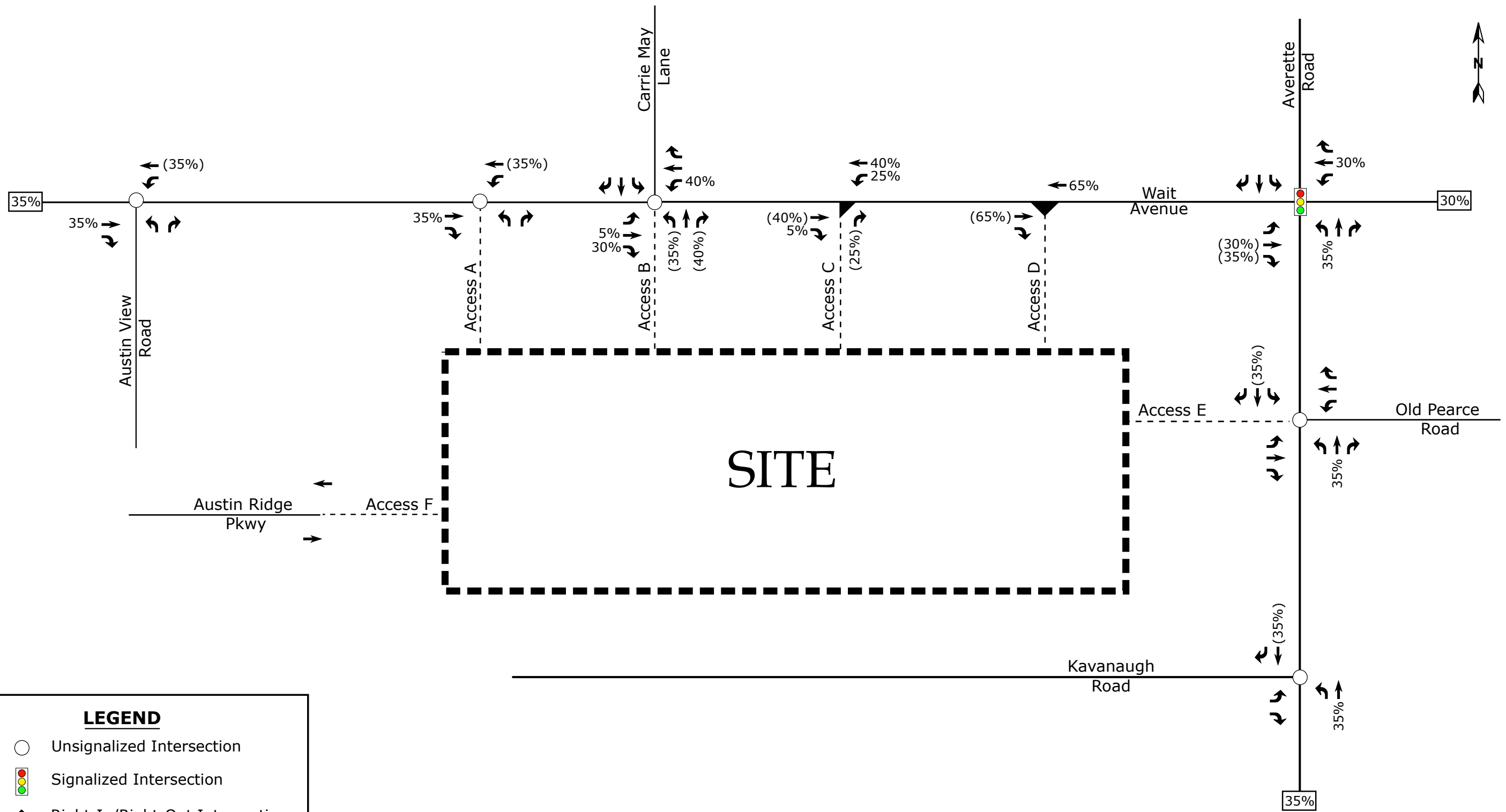
It is estimated that the primary commercial site trips will be regionally distributed as follows:

- 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.

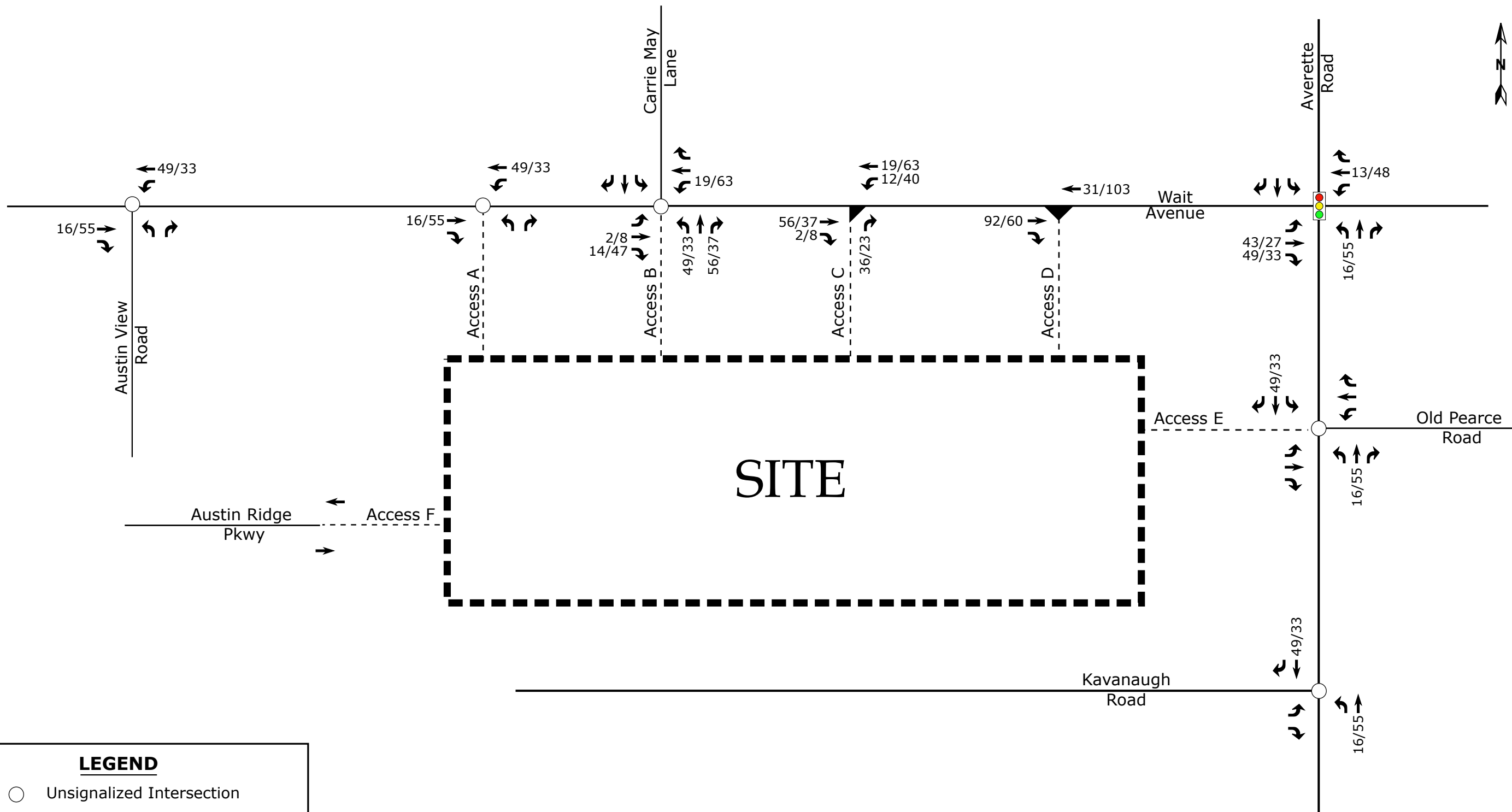


**LEGEND**

- 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.

	<p>Wait Avenue Mixed-Use Rolesville, NC</p>	<p>Residential Site Trip Distribution Scenario-1</p>
	<p>Scale: Not to Scale    Figure 6a</p>	

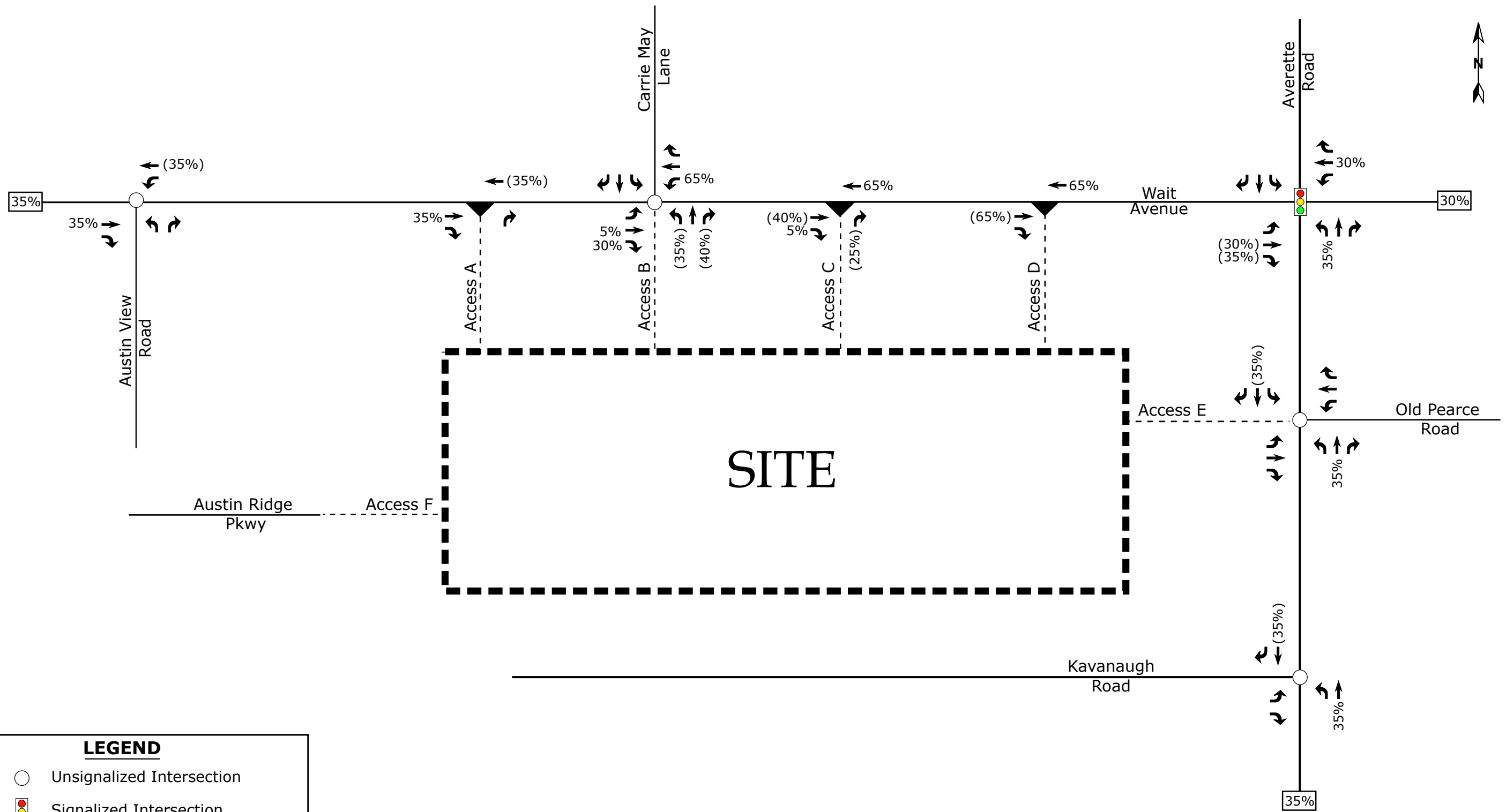


**LEGEND**

- 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.

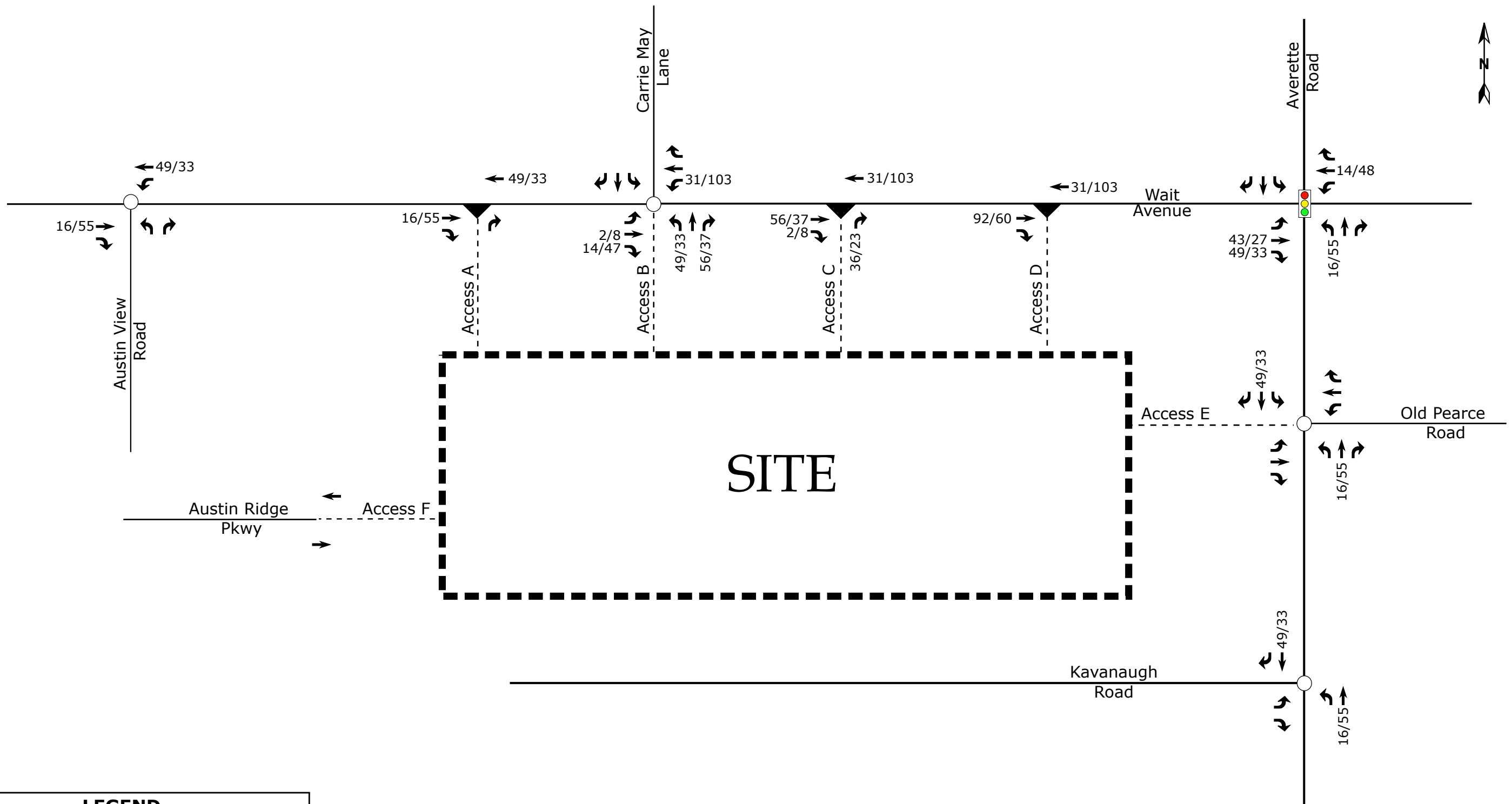
	Wait Avenue Mixed-Use Rolesville, NC	Residential Site Trip Assignment Scenario-1
	Scale: Not to Scale    Figure 6b	



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

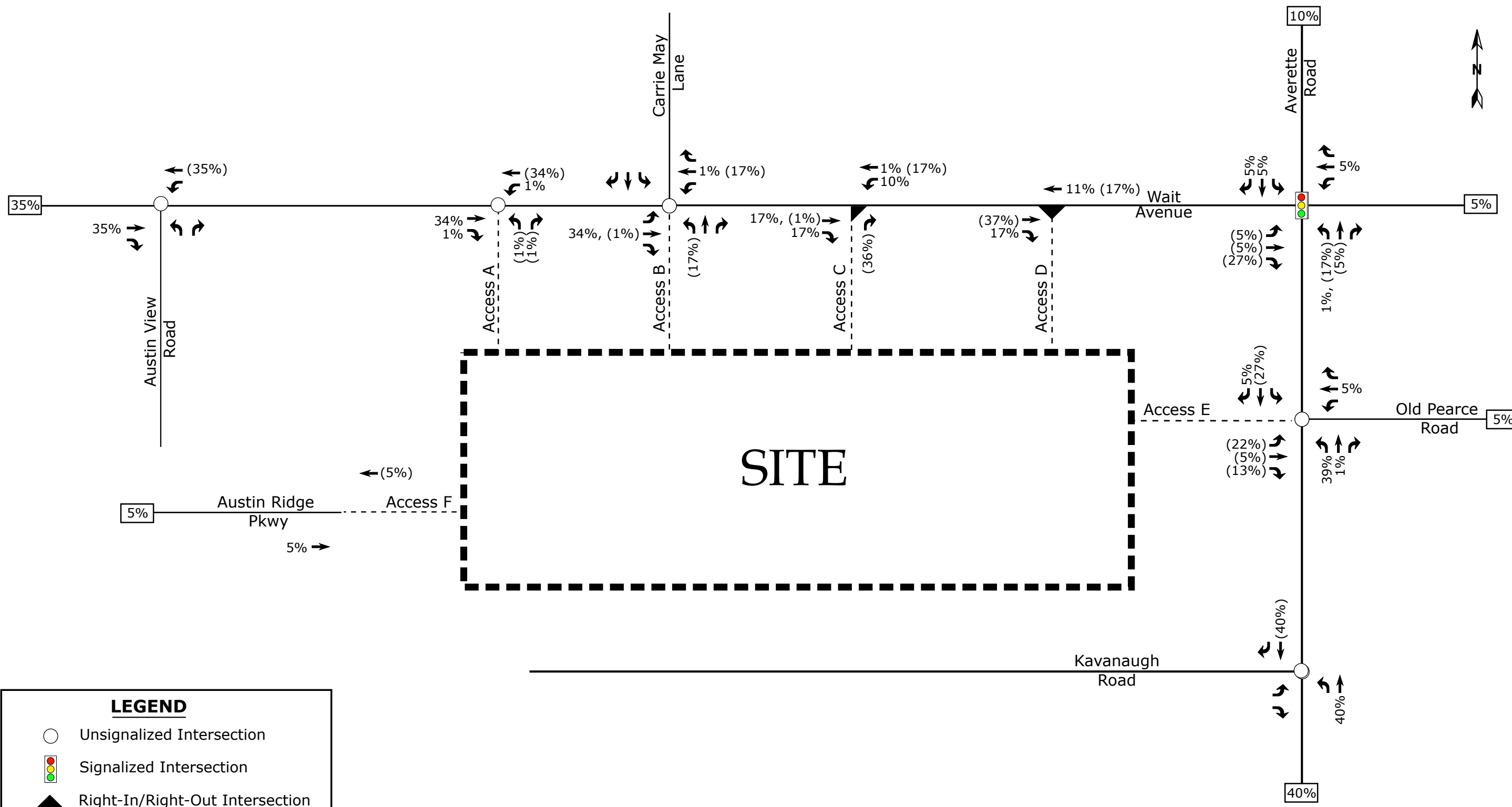
	Wait Avenue Mixed-Use Rolesville, NC	Residential Site Trip Distribution Scenario-2	
		Scale: Not to Scale	Figure 7a




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

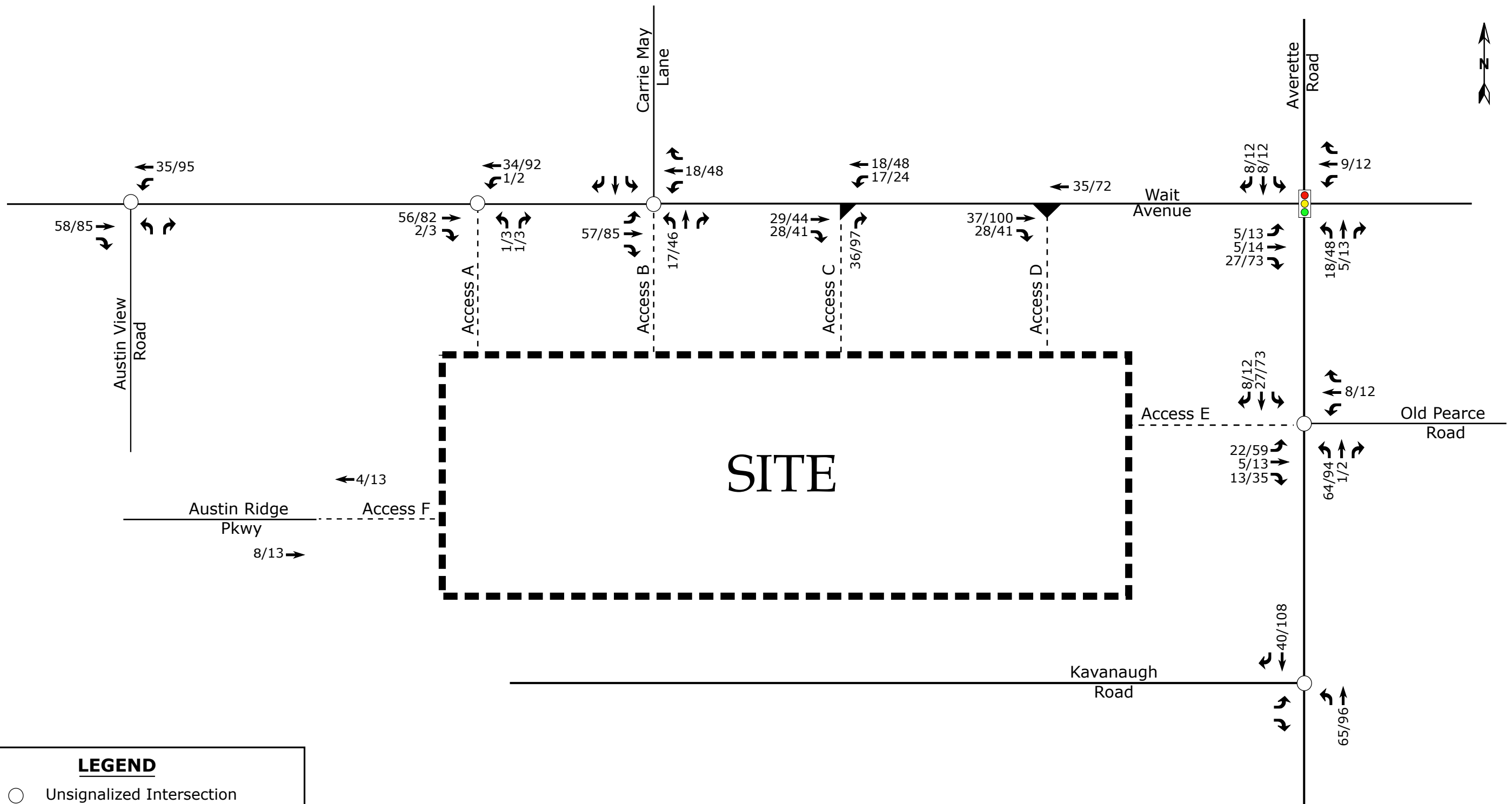
Note: In Scenario 2, Access A will be analyzed as a right-in/right-out access point

	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	<b>Commercial Site          Trip Distribution          Scenario-1</b>
		Scale: Not to Scale    Figure 8a

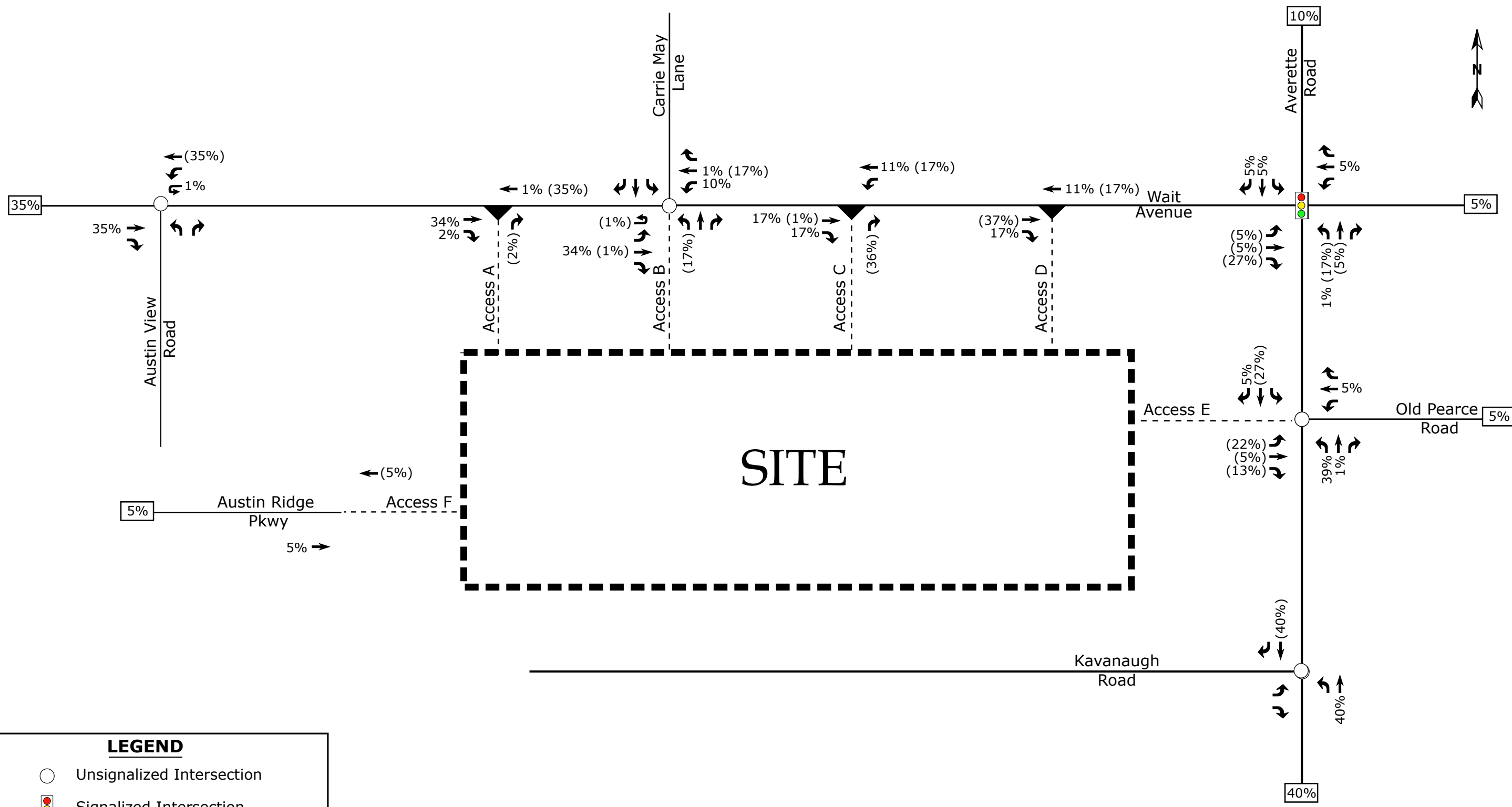


**LEGEND**

- 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

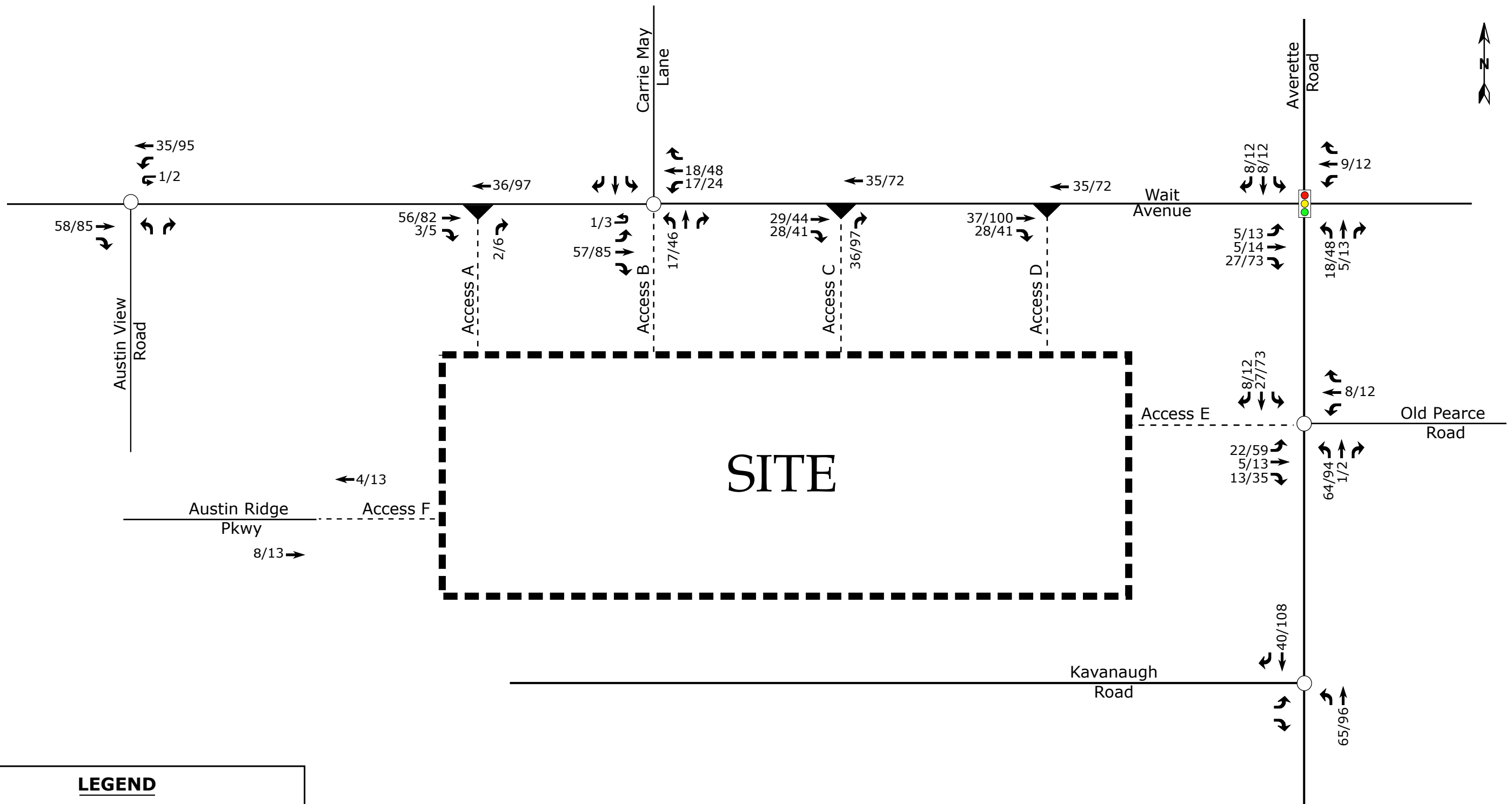


**LEGEND**

- 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	

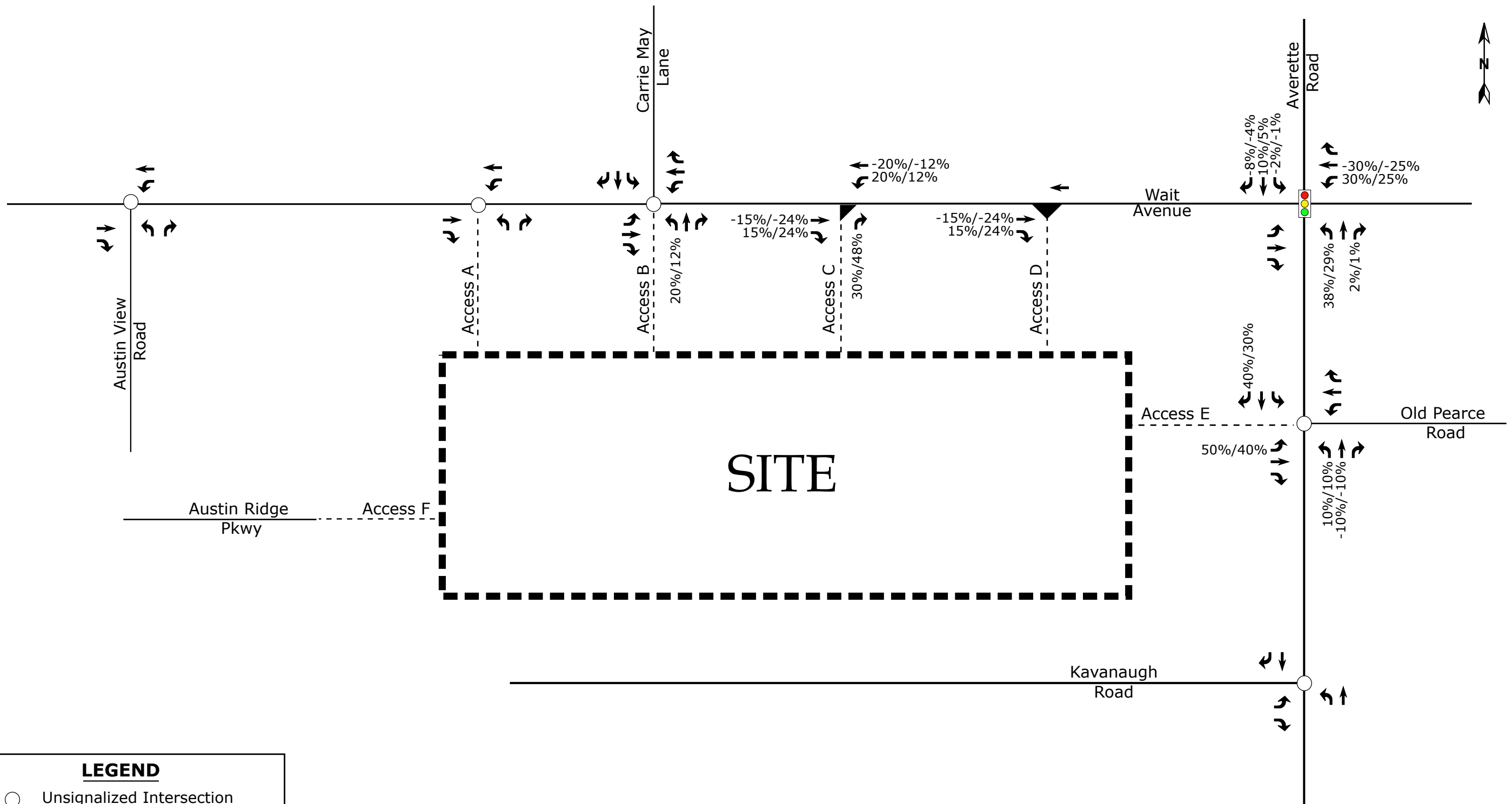


**LEGEND**

- 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

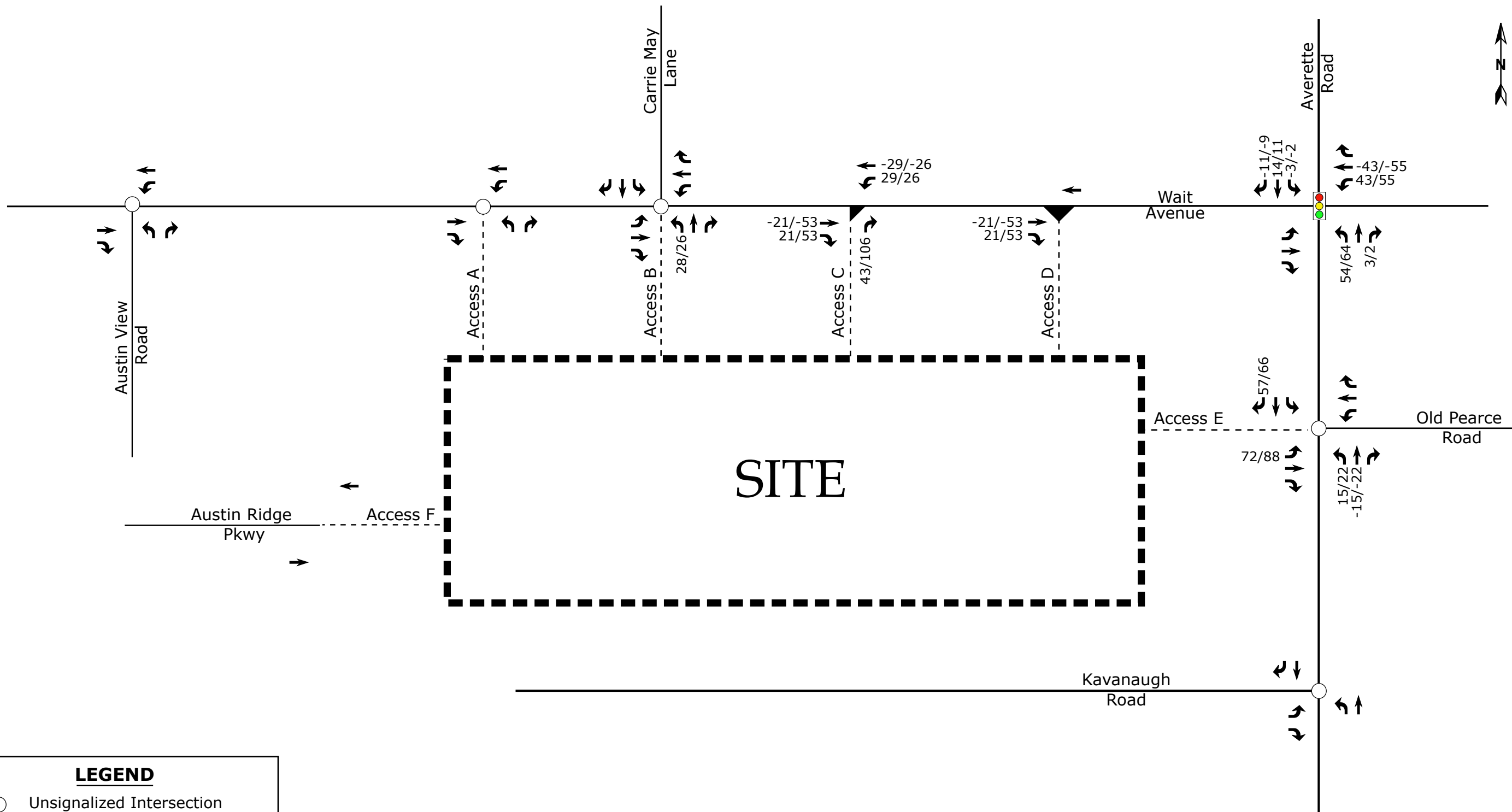


**LEGEND**

- 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

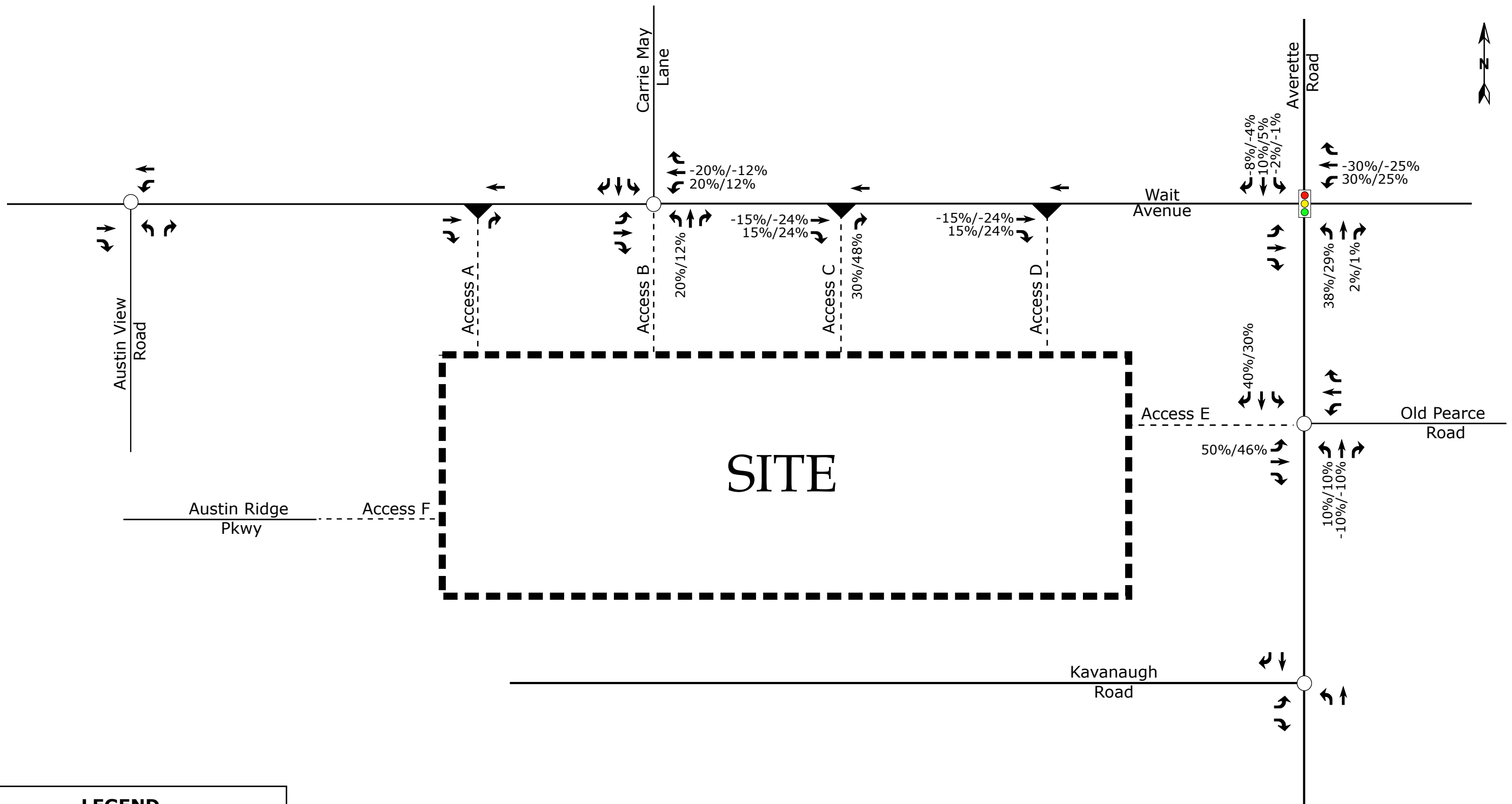


**LEGEND**

- 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

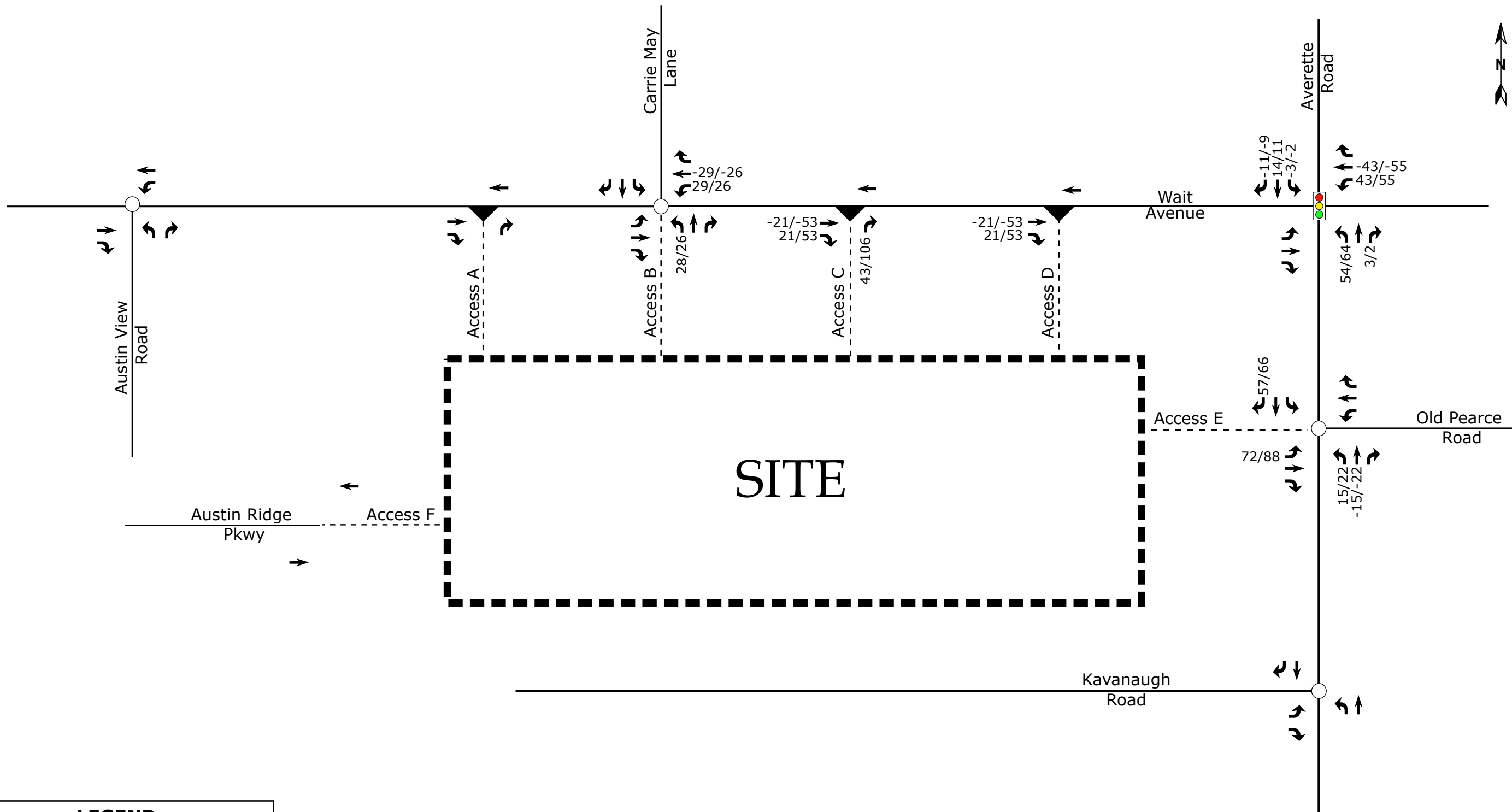


**LEGEND**

- 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.

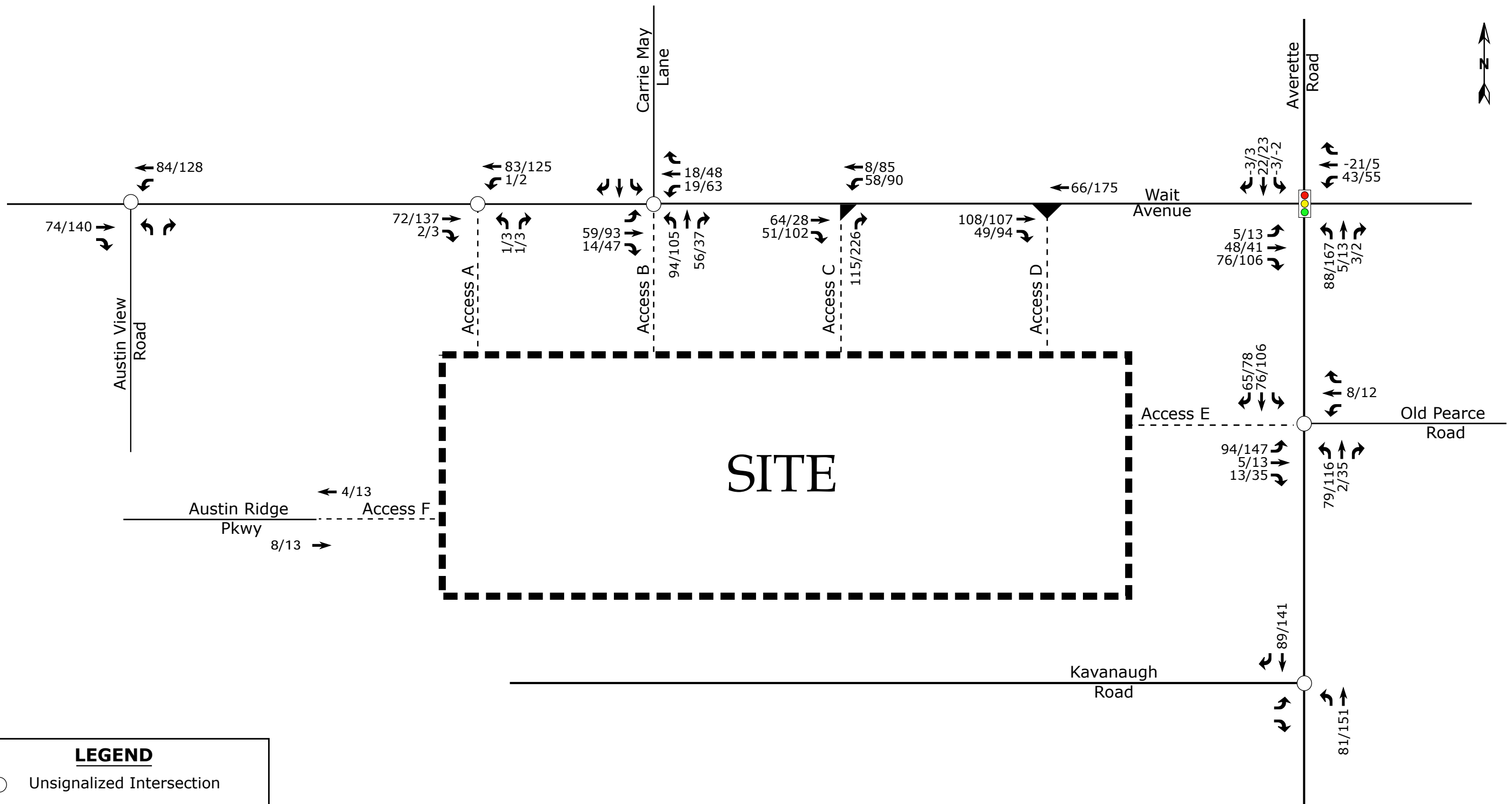
	Wait Avenue Mixed-Use Rolesville, NC	Pass-By Site Trip Distribution Scenario-2	
		Scale: Not to Scale	Figure 11a



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.

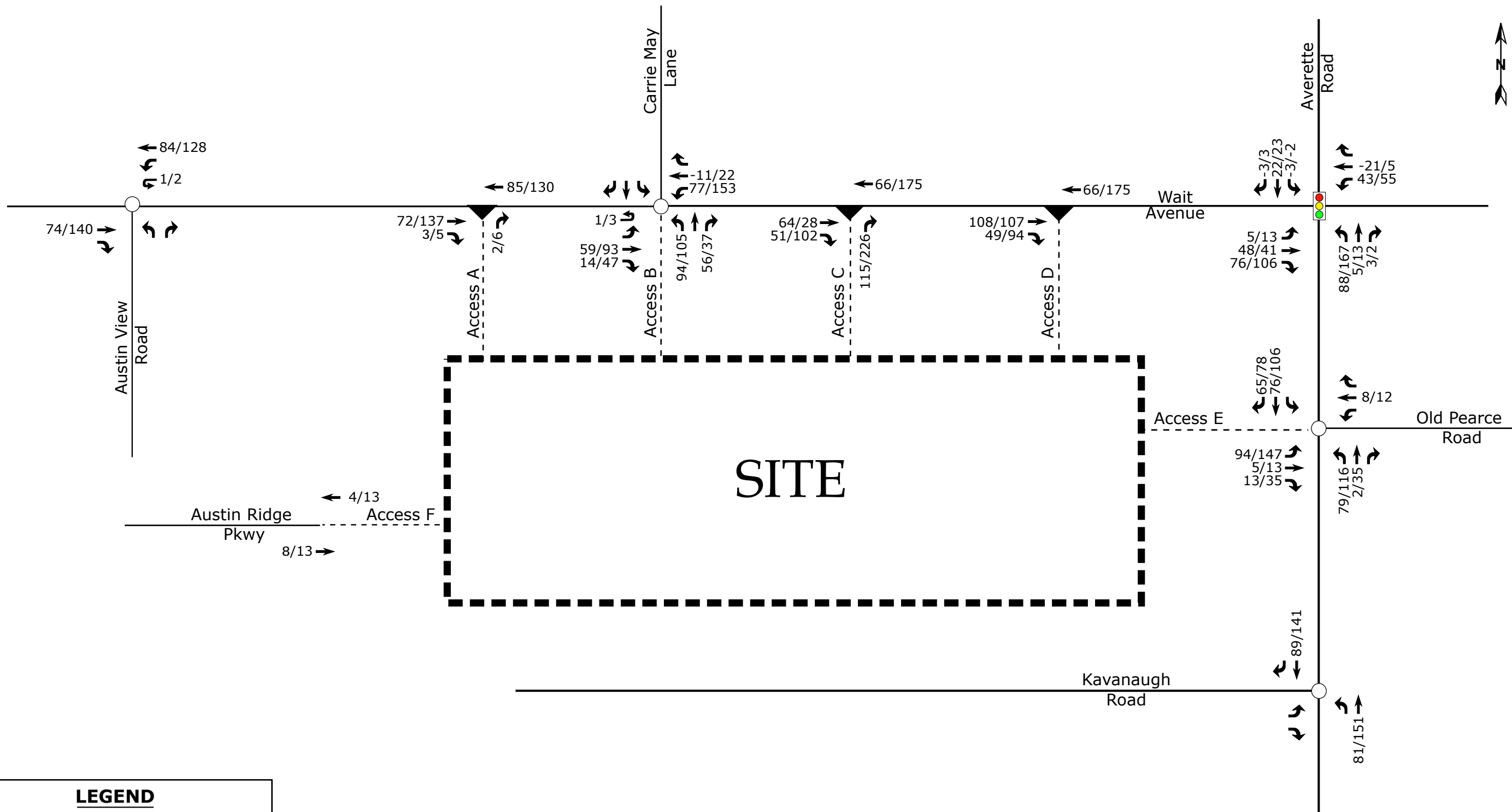
	Wait Avenue Mixed-Use Rolesville, NC	Pass-By Site Trip Assignment Scenario-2	
		Scale: Not to Scale	Figure 11b



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
- X/Y → 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

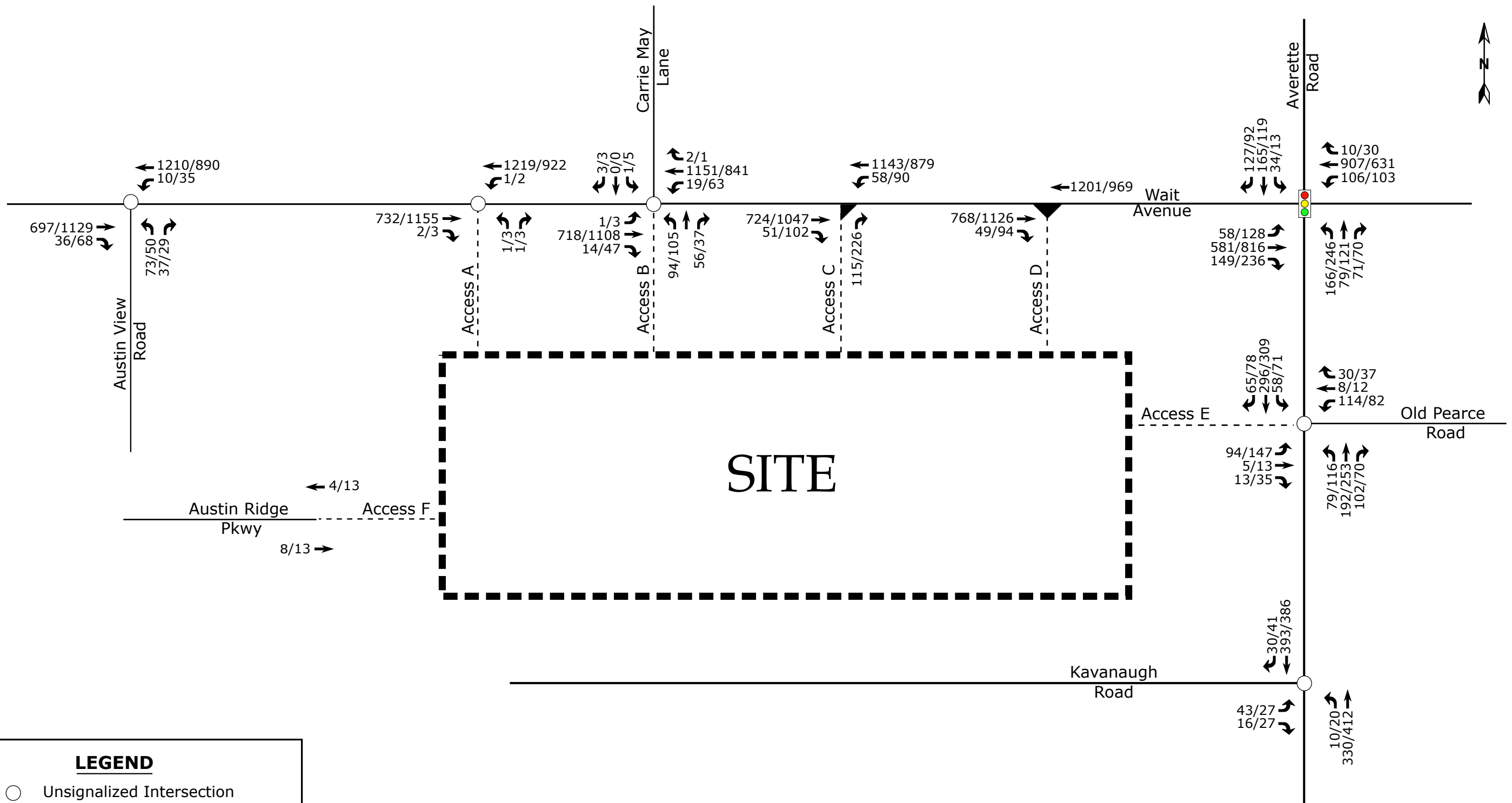
## **5. 2031 BUILD TRAFFIC CONDITIONS**

### **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.

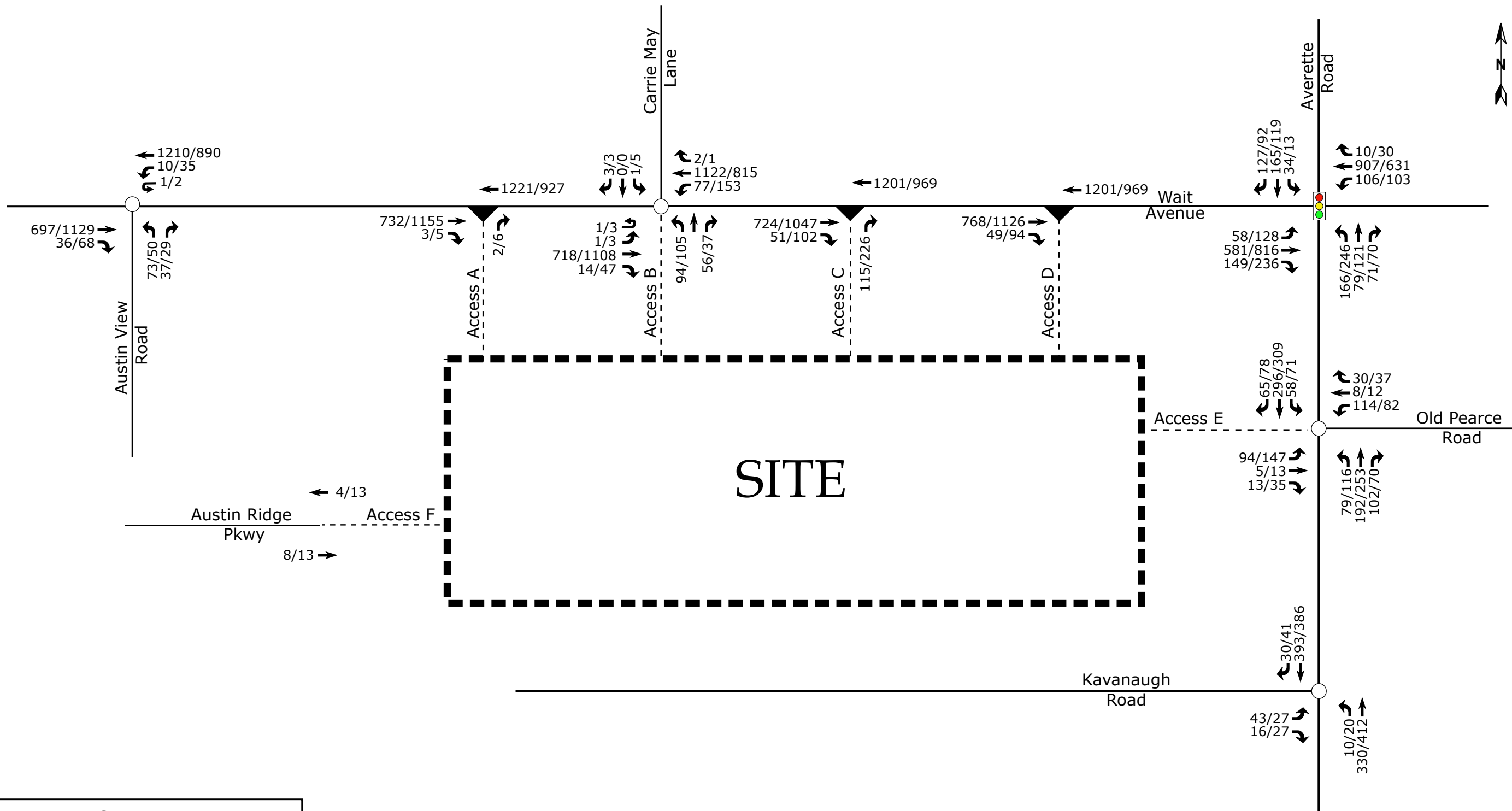


**LEGEND**

- 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), 6<sup>th</sup> 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	LT, TH-RT	A (10)	B (17)	B (16)	B (17)
	WB	1 LT, TH-RT	B (17)		B (10)	
	NB	1 LT-TH-RT	C (31)		C (33)	
	SB	1 LT-TH, 1 RT	C (25)		C (23)	
2031 No-Build	EB	LT, TH-RT	C (22)	D (43)	D (39)	D (39)
	WB	1 LT, TH-RT	D (45)		C (24)	
	NB	1 LT-TH-RT	F (94)		F (82)	
	SB	1 LT-TH, 1 RT	D (43)		C (34)	
2031 Build	EB	LT, TH-RT	D (46)	E (62)	F (138)	F (111)
	WB	1 LT, TH-RT	D (71)		E (59)	
	NB	1 LT-TH-RT	F (109)		F (175)	
	SB	1 LT-TH, 1 RT	C (28)		C (27)	
2031 Build Improved	EB	LT, TH-RT	C (31)	D (54)	D (48)	D (54)
	WB	1 LT, 1 TH, <b>1 RT</b>	E (56)		D (47)	
	NB	<b>1 LT</b> , 1 TH-RT	E (77)		E (79)	
	SB	1 LT-TH, 1 RT	E (79)		E (64)	

**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) <sup>1</sup> -- D (32) <sup>2</sup>	N/A	A (9) <sup>1</sup> -- D (30) <sup>2</sup>	N/A
2031 No-Build	EB WB SB	1 LT-TH 1 TH-RT 1 LT-RT	B (12) <sup>1</sup> -- E (45) <sup>2</sup>	N/A	A (10) <sup>1</sup> -- E (45) <sup>2</sup>	N/A
2031 Build Scenario-1	EB WB <b>NB</b> SB	1 LT-TH, <b>1 RT</b> <b>1 LT</b> , 1 TH-RT <b>1 LT-TH-RT</b> 1 LT-TH-RT	B (12) <sup>1</sup> A (10) <sup>1</sup> F (1341) <sup>2</sup> F (113) <sup>2</sup>	N/A	A (10) <sup>1</sup> B (13) <sup>1</sup> F (2656) <sup>2</sup> F (241) <sup>2</sup>	N/A
2031 Build Improved Scenario-1 <b>(Signalized)</b>	EB WB <b>NB</b> SB	1 LT-TH, <b>1 RT</b> <b>1 LT</b> , 1 TH-RT <b>1 LT-TH-RT</b> 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 <b>NB</b> SB	1 LT-TH, <b>1 RT</b> <b>1 LT</b> , 1 TH-RT <b>1 LT-TH-RT</b> 1 LT-TH-RT	B (12) <sup>1</sup> A (10) <sup>1</sup> F (1863) <sup>2</sup> F (149) <sup>2</sup>	N/A	A (10) <sup>1</sup> B (15) <sup>1</sup> F (4579) <sup>2</sup> F (511) <sup>2</sup>	N/A
2031 Build Improved Scenario-2 <b>(Signalized)</b>	EB WB <b>NB</b> SB	1 LT-TH, <b>1 RT</b> <b>1 LT</b> , 1 TH-RT <b>1 LT-TH-RT</b> 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) <sup>1</sup> F (87) <sup>2</sup>	N/A	-- A (9) <sup>1</sup> F (87) <sup>2</sup>	N/A
2031 No-Build	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 LT-RT	-- A (9) <sup>1</sup> F (270) <sup>2</sup>	N/A	-- B (12) <sup>1</sup> F (200) <sup>2</sup>	N/A
2031 Build	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 LT-RT	-- A (10) <sup>1</sup> F (429) <sup>2</sup>	N/A	-- B (13) <sup>1</sup> F (474) <sup>2</sup>	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) <sup>2</sup> -- A (8) <sup>1</sup>	N/A	B (14) <sup>2</sup> -- A (8) <sup>1</sup>	N/A
2031 No-Build	WB NB SB	1 LT-RT 1 TH-RT 1 LT-TH	C (17) <sup>2</sup> -- A (8) <sup>1</sup>	N/A	C (16) <sup>2</sup> -- A (8) <sup>1</sup>	N/A
2031 Build	<b>EB</b> WB NB SB	<b>1 LT-TH-RT</b> 1 LT- <b>TH</b> -RT <b>1 LT</b> , 1 TH-RT 1 LT-TH, <b>1 RT</b>	E (39) <sup>1</sup> E (49) <sup>1</sup> A (8) <sup>2</sup> A (8) <sup>2</sup>	N/A	F (221) <sup>1</sup> F (82) <sup>1</sup> A (9) <sup>2</sup> A (8) <sup>2</sup>	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) <sup>2</sup> A (8) <sup>1</sup> --	N/A	B (12) <sup>2</sup> A (8) <sup>1</sup> --	N/A
2031 No-Build	EB NB SB	1 LT-RT 1 LT, TH 1 TH-RT	B (14) <sup>2</sup> A (8) <sup>1</sup> --	N/A	B (12) <sup>2</sup> A (8) <sup>1</sup> --	N/A
2031 Build	EB NB SB	1 LT-RT 1 LT, TH 1 TH-RT	C (17) <sup>2</sup> A (8) <sup>1</sup> --	N/A	C (16) <sup>2</sup> A (8) <sup>1</sup> --	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) <sup>1</sup> F (51) <sup>2</sup>	N/A	-- B (12) <sup>1</sup> F (66) <sup>2</sup>	N/A
2031 Build Scenario-2 (RIRO)	EB WB NB	1 TH-RT 1 TH 1 RT	-- -- B (15) <sup>2</sup>	N/A	-- -- C (24) <sup>2</sup>	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	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 Scenario-1 (left-over)	EB WB NB	1 TH, 1 RT 1 LT, 1 TH 1 RT	-- B (10) <sup>1</sup> C (19) <sup>2</sup>	N/A	-- B (13) <sup>1</sup> F (120) <sup>2</sup>	N/A
2031 Build Scenario-2 (RIRO)	EB WB NB	1 TH, 1 RT 1 TH 1 RT	-- -- C (19) <sup>2</sup>	N/A	-- -- F (120) <sup>2</sup>	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

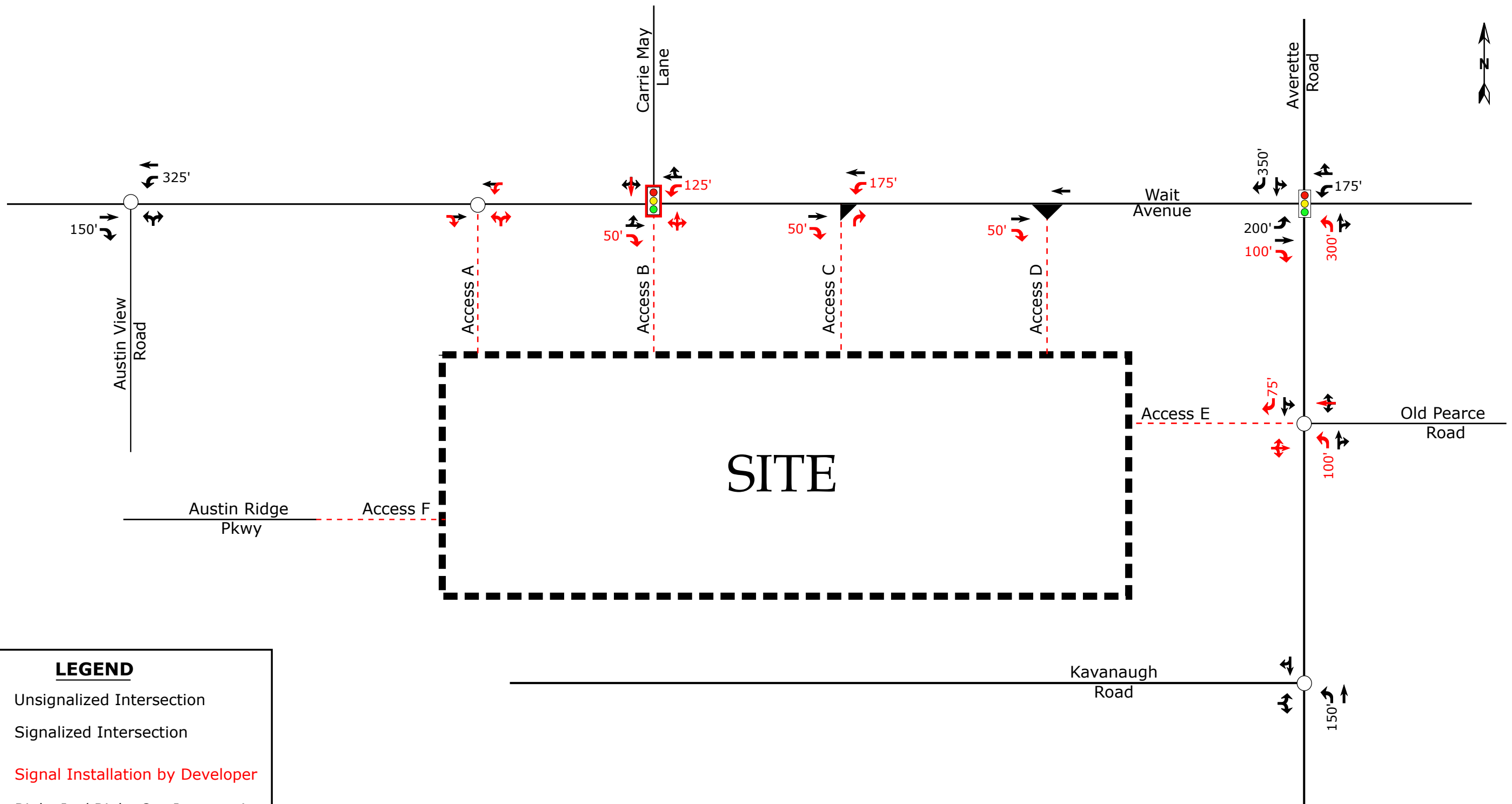
- Construct Site Access E (westbound approach) as a with one ingress and one egress lane.
- Construct a northbound Averette Road Left turn lane with 100 feet of storage and appropriate taper length.
- Construct a southbound Averette Road left turn lane with 125 feet of storage and appropriate taper length.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

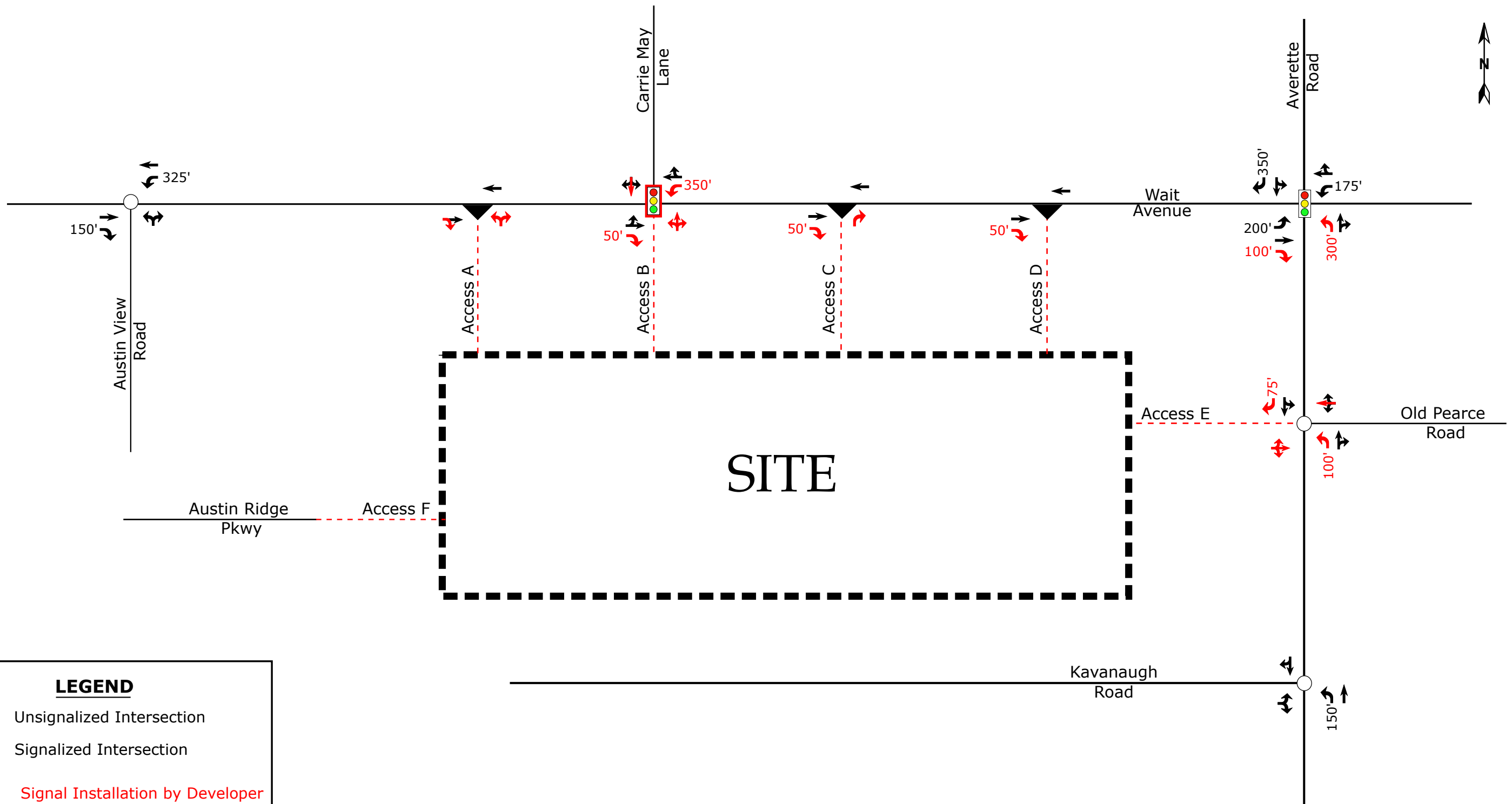


**LEGEND**

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

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

	<p>Wait Avenue Mixed-Use Rolesville, NC</p>	<p>Recommended Lane Configurations Scenario-1</p>		
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Scale: Not to Scale</td> <td style="width: 50%;">Figure 14a</td> </tr> </table>	Scale: Not to Scale	Figure 14a
Scale: Not to Scale	Figure 14a			



**LEGEND**

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

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](mailto: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*, 11<sup>th</sup> 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
<b>Total Trips</b>		<b>14,353</b>	<b>383</b>	<b>411</b>	<b>794</b>	<b>689</b>	<b>647</b>	<b>1,336</b>
Internal Capture (7% AM & 10% PM)			-28	-28	-56	-69	-65	-134
<b>Total External Trips</b>			<b>355</b>	<b>383</b>	<b>738</b>	<b>620</b>	<b>582</b>	<b>1,202</b>
<i>Pass-By Trips</i>			-143	-143	-286	-220	-220	-440
<b>Primary Trips</b>			<b>212</b>	<b>240</b>	<b>452</b>	<b>400</b>	<b>362</b>	<b>762</b>

## 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.

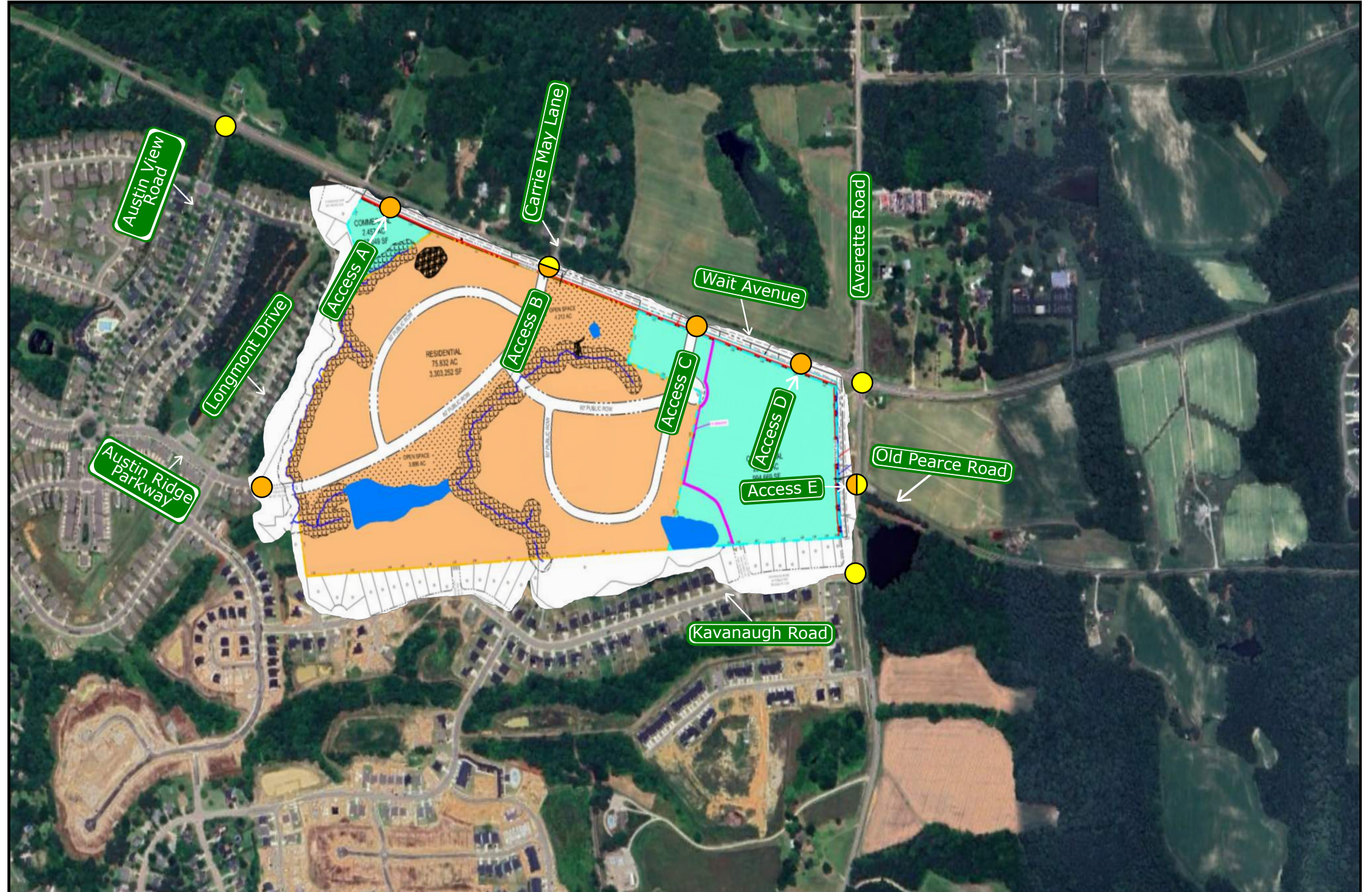
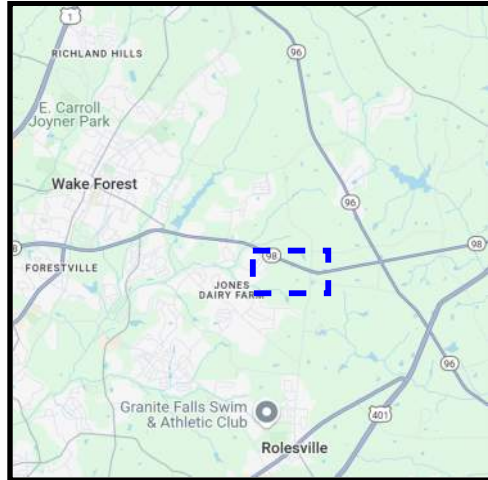
Sincerely,




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	
	Study Intersection
	Proposed Site Access
	Study Area



Wait Avenue Mixed-Use  
Rolesville, NC

Site Location Map	
Scale: Not to Scale	Figure 1

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, HELLMAN 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 / 1625	2022 / 574
AT	1850946232	BAVOTTI, 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	19198 / 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	THIGPEN, APRIL LINDSAY	19736 / 2558	2022 / 1238
BE	1860146265	EXPERIENCEONE HOMES LLC	17509 / 1101	2021 / 121

**LEGEND:**

- RESIDENTIAL SINGLE FAMILY
- OPEN SPACE
- EXISTING WETLANDS UNDISTURBED
- EXISTING ENVIRONMENTAL UNDISTURBED
- COMMERCIAL

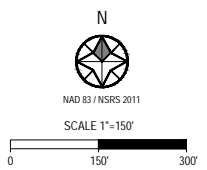
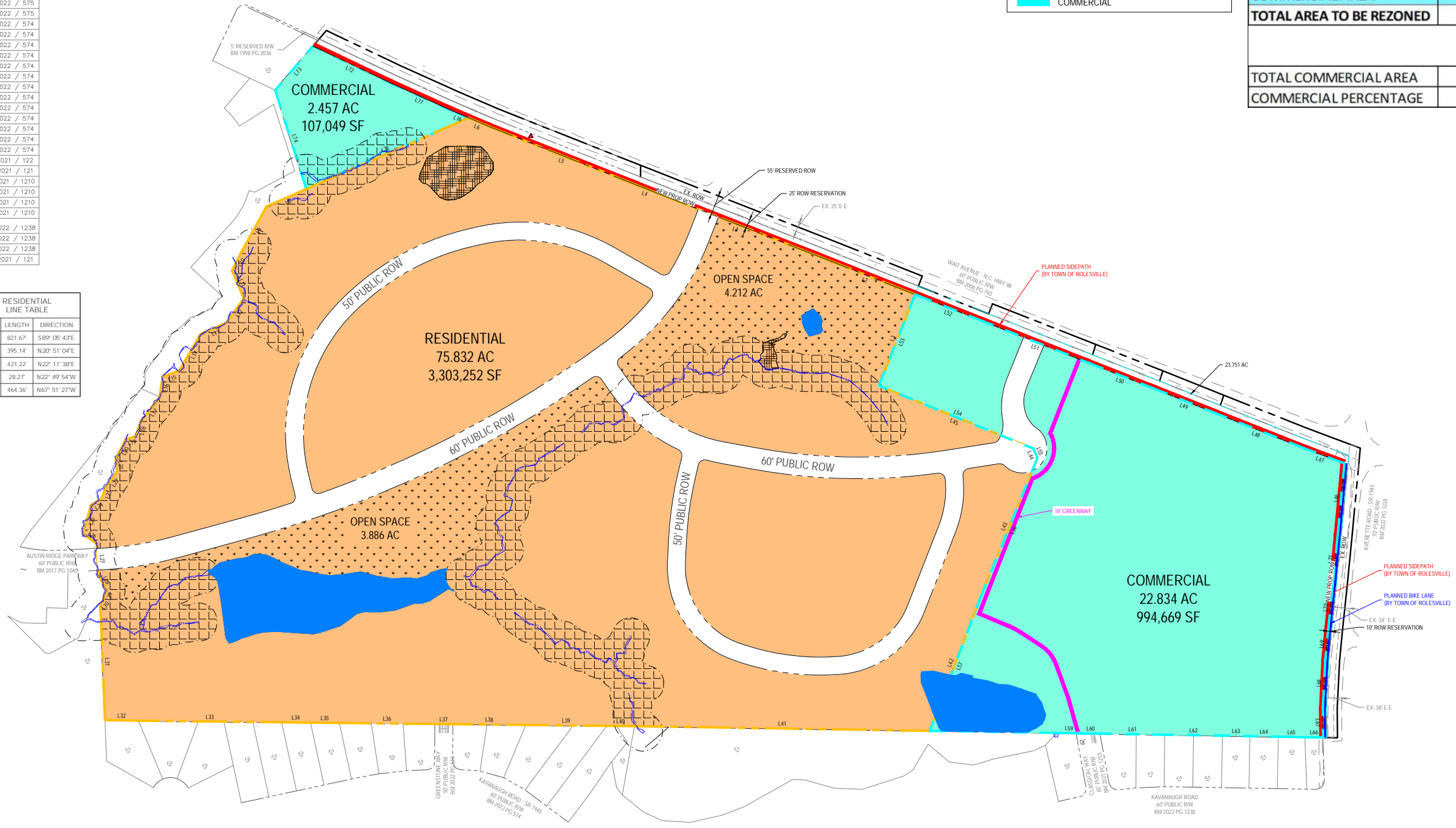
**NC RE-ZONED AREAS POST R/W RESERVATION**

RESIDENTIAL AREA	75.832 AC
COMMERCIAL AREA	2.457 AC
COMMERCIAL AREA	22.834 AC
<b>TOTAL AREA TO BE REZONED</b>	<b>101.123 AC</b>
TOTAL COMMERCIAL AREA	25.291 AC
COMMERCIAL PERCENTAGE	25.01%

RESIDENTIAL LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	273.29	N21° 35' 45"E
L2	288.95	N68° 25' 12"W
L3	485.08	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

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

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

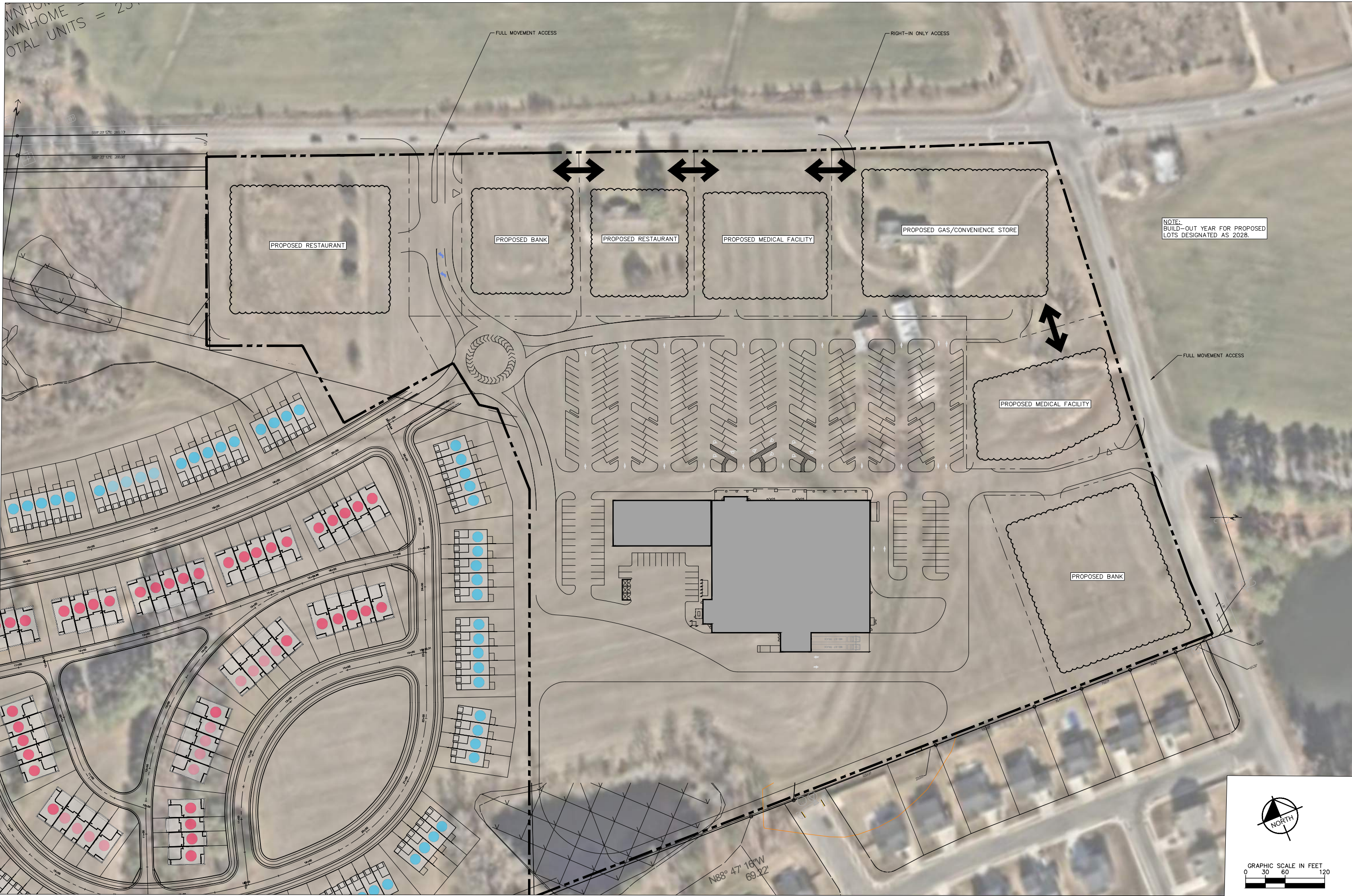


THALESWAIT AVENUE REZONING EXHIBIT  
REZ-24-05  
WAKE COUNTY



P:\2024 Projects\240817\Res\_Avms\Thaleswait\_Avenue\_Rezoning\240817\_Civil\_Site.dwg

WNHOM  
DOWNHOME  
TOTAL UNITS = 25



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

N88° 47' 16"W  
69.22'



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 <sup>3</sup>		
	ITE LUCs <sup>1</sup>	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 <sup>2</sup>	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. <sup>4</sup>	% Transit	% Non-Motorized	Veh. Occ. <sup>4</sup>	% 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 <sup>2</sup>	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 <sup>5</sup>	789	381	408
External Transit-Trips <sup>6</sup>	0	0	0
External Non-Motorized Trips <sup>6</sup>	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

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

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

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

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

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

<sup>6</sup>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

<b>Project Name:</b>	REZ-24-05
<b>Analysis Period:</b>	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	0	0	1.10	0	0
Retail	1.10	326	359	1.10	256	282
Restaurant	1.10	0	0	1.10	0	0
Cinema/Entertainment	1.10	0	0	1.10	0	0
Residential	1.10	51	56	1.10	151	166
Hotel	1.10	0	0	1.10	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		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 <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	2	357	359	325	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	55	56	50	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	7	7	6	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	1	281	282	255	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	164	166	149	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	4	4	4	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips

<sup>3</sup>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 (For Information Only)			Estimated Vehicle-Trips <sup>3</sup>		
	ITE LUCs <sup>1</sup>	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 <sup>2</sup>	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. <sup>4</sup>	% Transit	% Non-Motorized	Veh. Occ. <sup>4</sup>	% 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 <sup>2</sup>	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 <sup>5</sup>	1,147	595	552
External Transit-Trips <sup>6</sup>	0	0	0
External Non-Motorized Trips <sup>6</sup>	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

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

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

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

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

<b>Project Name:</b>	REZ-24-05
<b>Analysis Period:</b>	PM Street Peak Hour

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	0	0	1.10	0	0
Retail	1.10	505	556	1.10	536	590
Restaurant	1.10	0	0	1.10	0	0
Cinema/Entertainment	1.10	0	0	1.10	0	0
Residential	1.10	176	194	1.10	103	113
Hotel	1.10	0	0	1.10	0	0

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	

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	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	15	541	556	492	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	89	105	194	95	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	9	9	8	0	0

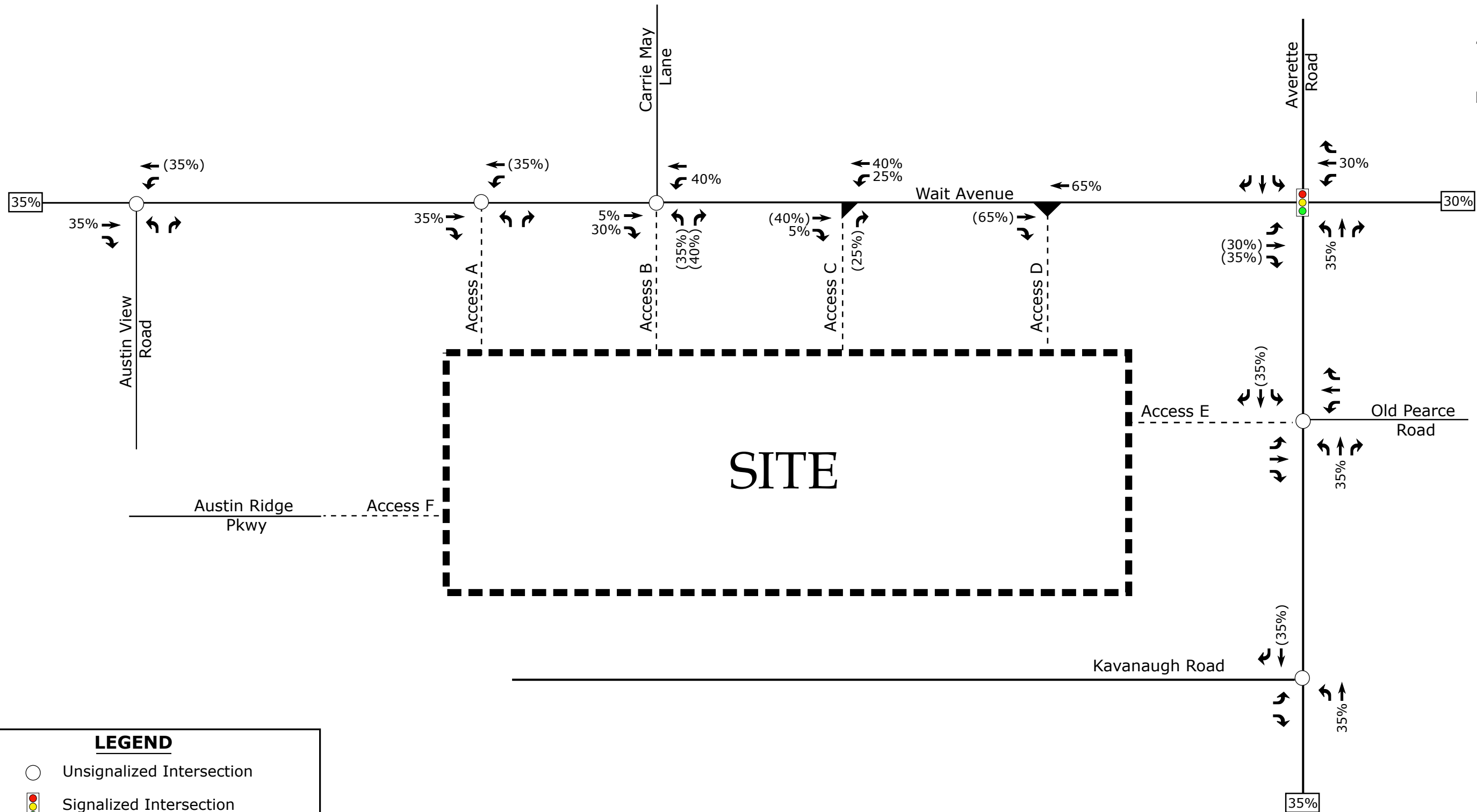
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	0	0	0	0	0	0
Retail	89	501	590	455	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	15	98	113	89	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses <sup>3</sup>	0	9	9	8	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>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.

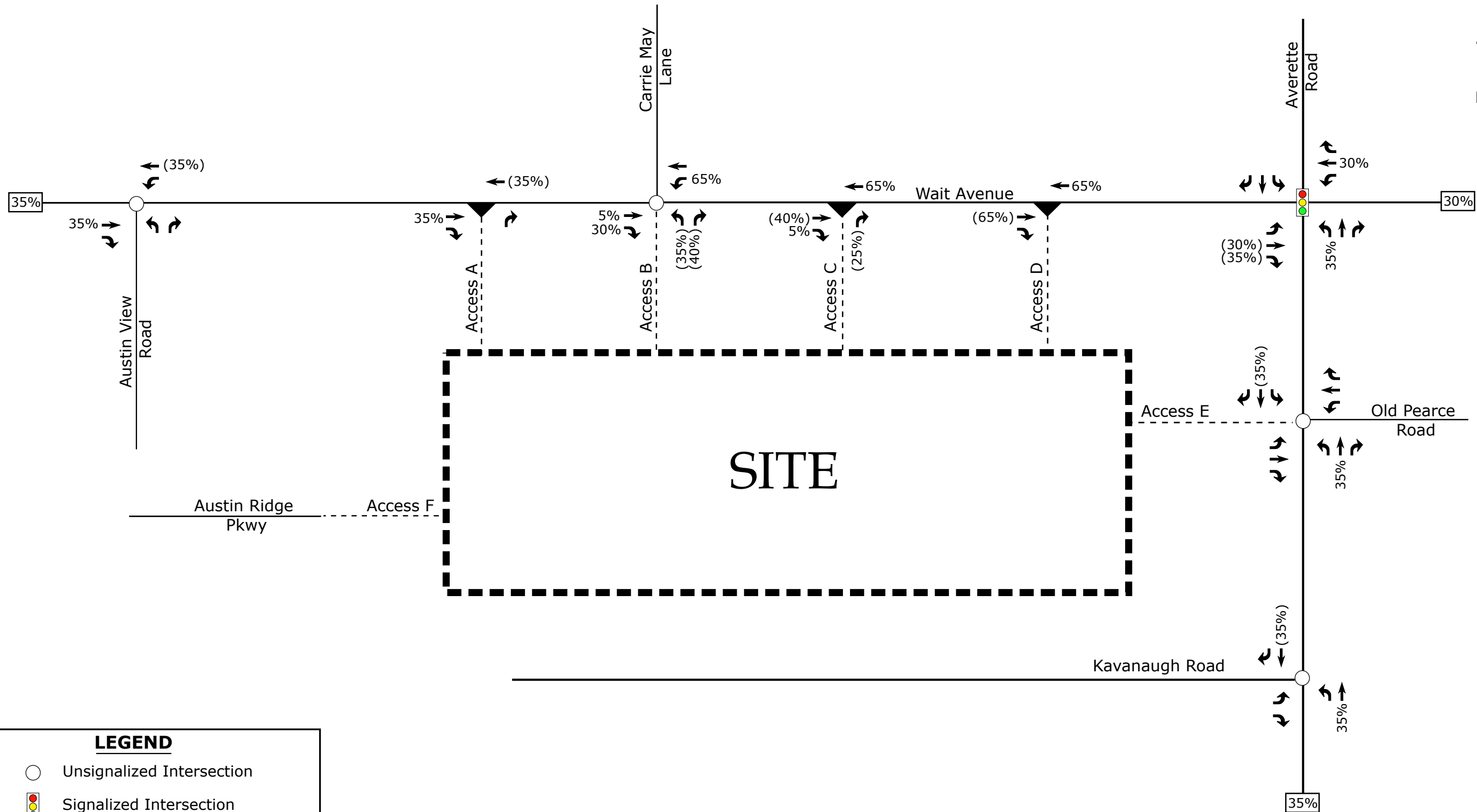


**LEGEND**

- 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	

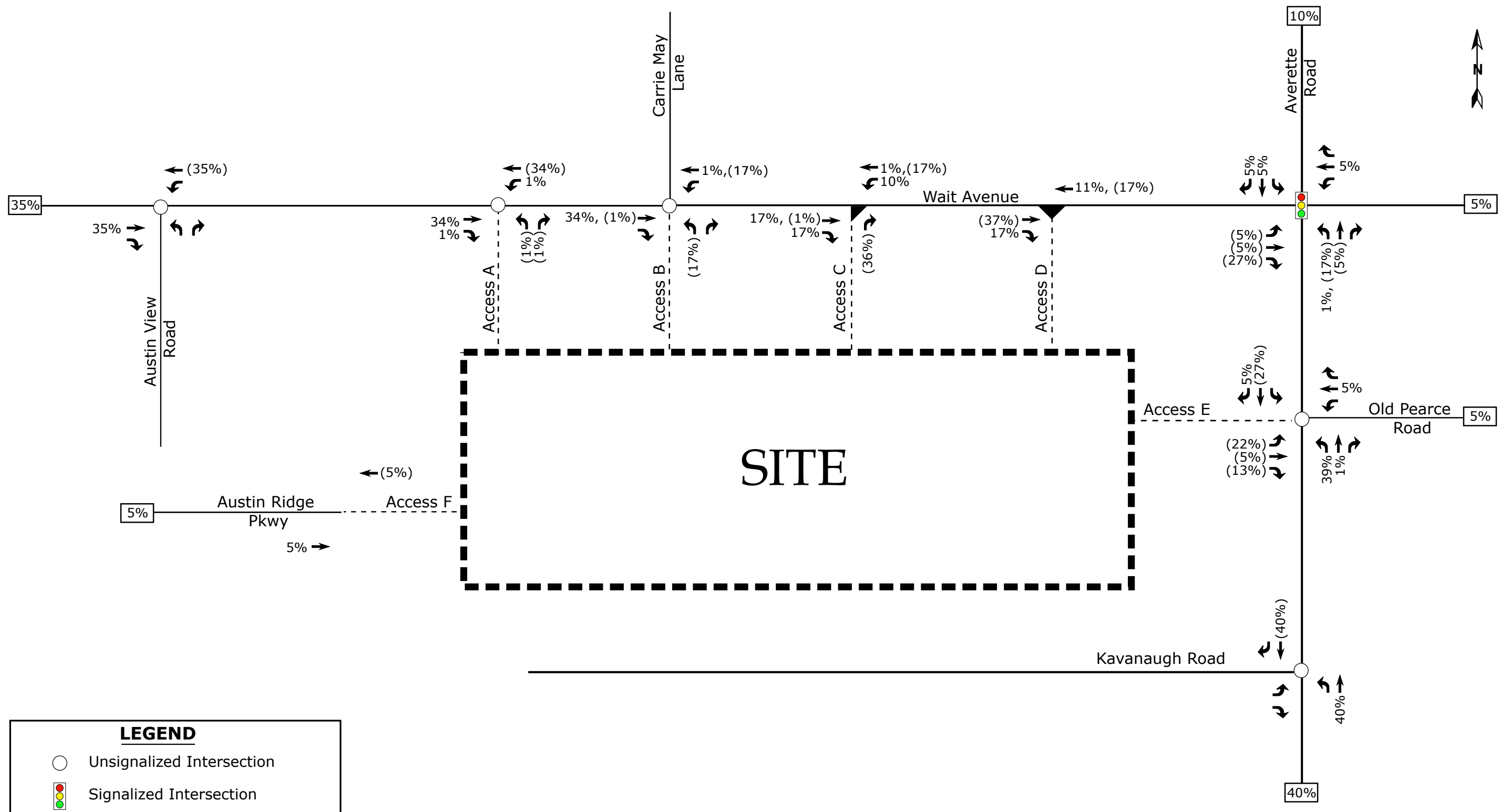


**LEGEND**

- 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

	<p>Wait Avenue Mixed-Use Rolesville, NC</p>	<p>Residential Site Trip Distribution Scenario-2</p>
	<p>Scale: Not to Scale</p>	

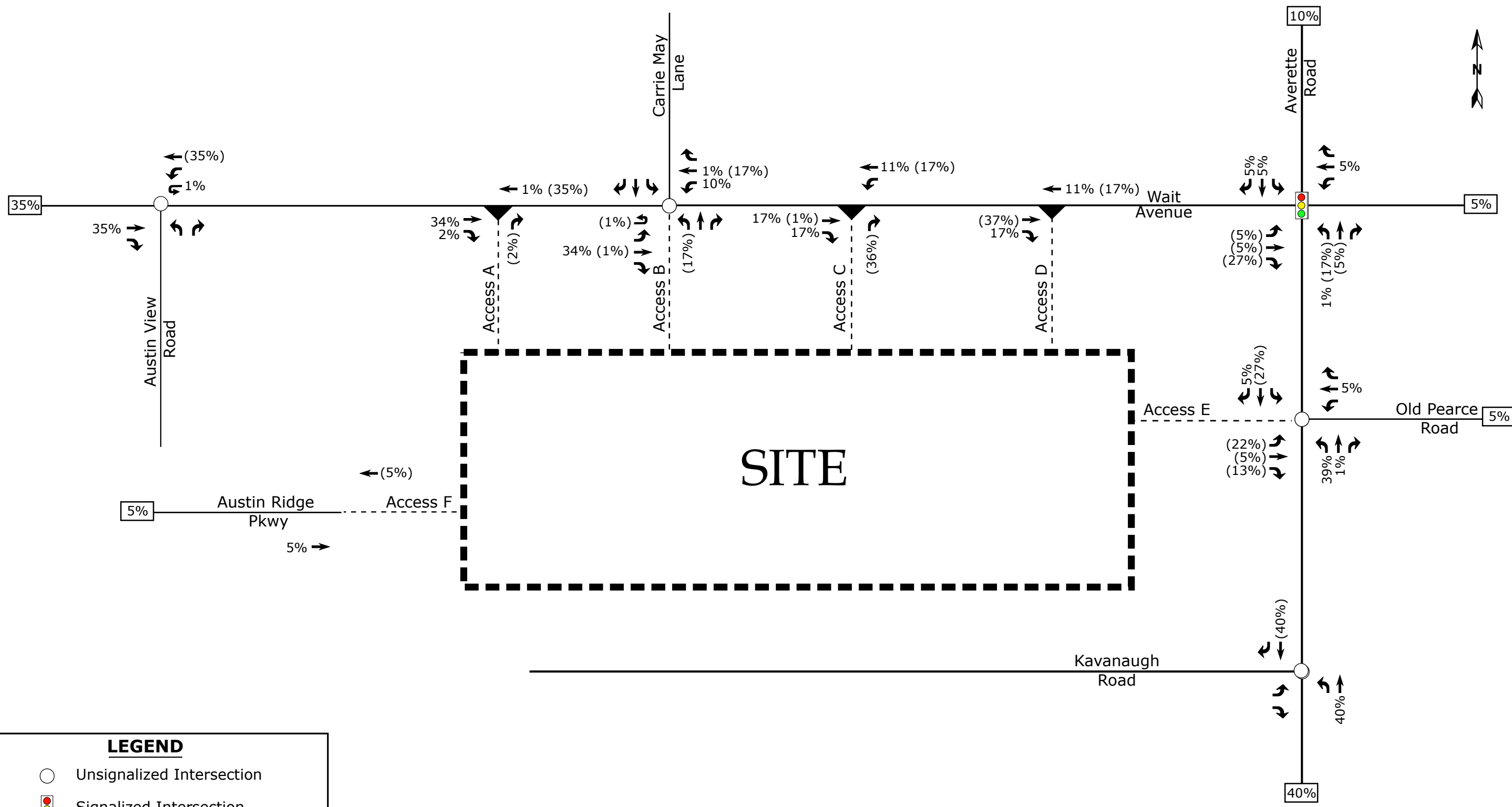


Note: Under Scenario 1, Access A will be considered a full-movement driveway.


**LEGEND**

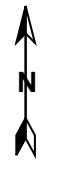
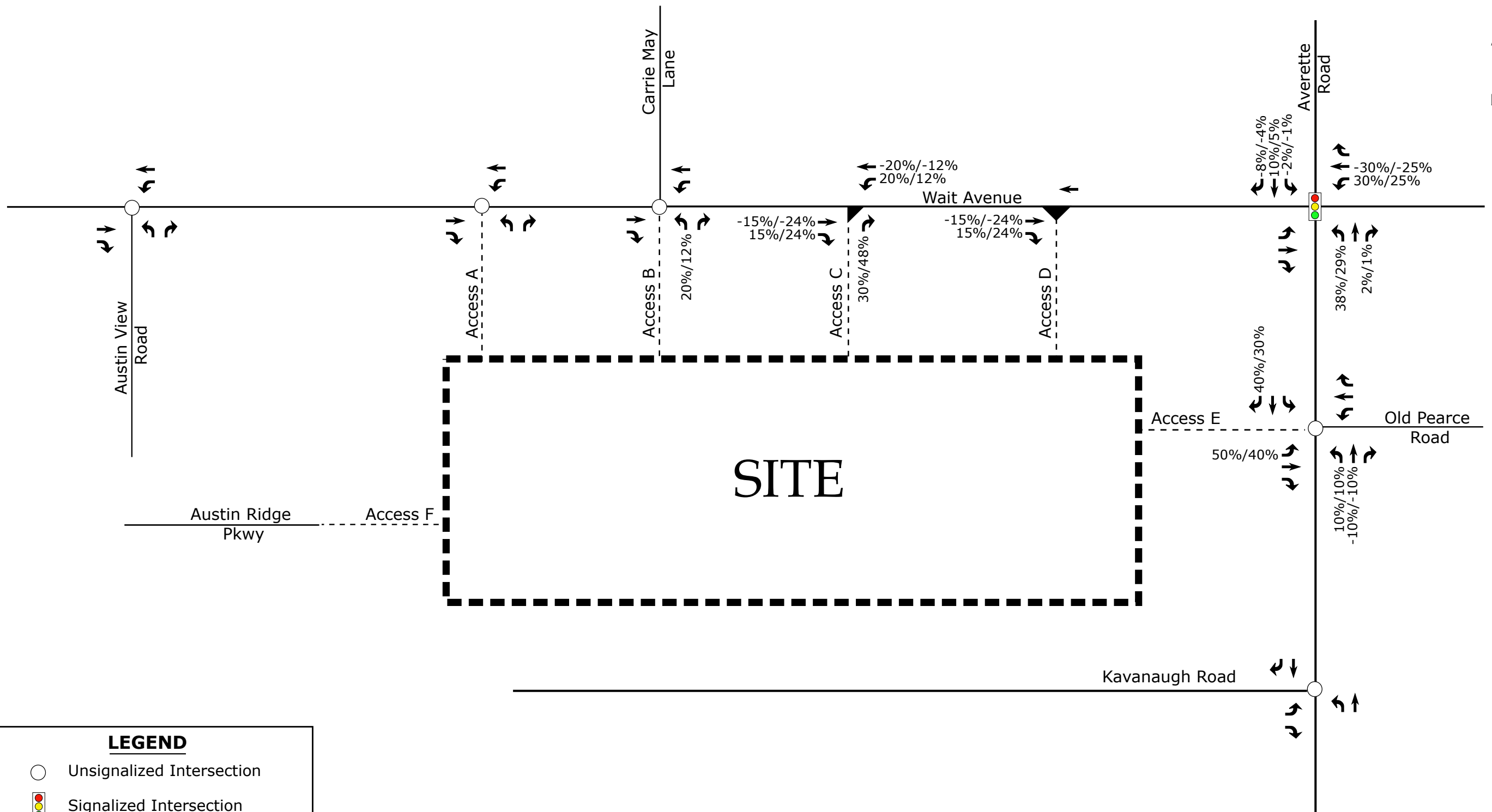
- Unsignalized Intersection
- 🚦 Signalized Intersection
- ▲ Right-In/Right-Out Intersection
- x% → Entering Trip Distribution
- (y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution

	<p>Wait Avenue Mixed-Use Rolesville, NC</p>	<p>Commercial Site Trip Distribution Scenario-1</p>
	<p>Scale: Not to Scale</p>	



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

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



**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				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
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	383
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	113	0	64	1	0	0	0	0	0	976	60	0	25	1782	0	0	3021
	63.48%	0.00%	35.96%	0.56%					0.00%	94.21%	5.79%	0.00%	1.38%	98.62%	0.00%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	62	0	32	1	0	0	0	0	0	533	31	0	9	971	0	0	1639
<b>PEAK HR FACTOR :</b>	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
			0.699							0.922				0.935			
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	70	0	45	2	0	0	0	0	0	1634	137	0	64	1228	0	0	3180
	59.83%	0.00%	38.46%	1.71%					0.00%	92.26%	7.74%	0.00%	4.95%	95.05%	0.00%	0.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																TOTAL
<b>PEAK HR VOL :</b>	42	0	25	1	0	0	0	0	0	853	59	0	30	657	0	0	1667
<b>PEAK HR FACTOR :</b>	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
			0.773							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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	111	0	62	1	0	0	0	0	0	934	57	0	21	1726	0	0	2912
	63.79%	0.00%	35.63%	0.57%					0.00%	94.25%	5.75%	0.00%	1.20%	98.80%	0.00%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	61	0	31	1	0	0	0	0	0	508	29	0	8	941	0	0	1579
<b>PEAK HR FACTOR :</b>	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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	66	0	43	2	0	0	0	0	0	1587	135	0	62	1204	0	0	3099
	59.46%	0.00%	38.74%	1.80%					0.00%	92.16%	7.84%	0.00%	4.90%	95.10%	0.00%	0.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																TOTAL
<b>PEAK HR VOL :</b>	39	0	25	1	0	0	0	0	0	833	59	0	29	644	0	0	1630
<b>PEAK HR FACTOR :</b>	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			

# 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 - HT

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

# 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 - Bikes

NS/EW Streets:	Austin View Blvd				Austin View Blvd				Wait Ave/SR 98				Wait Ave/SR 98				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>TOTAL</b>
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<b>TOTAL</b>
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

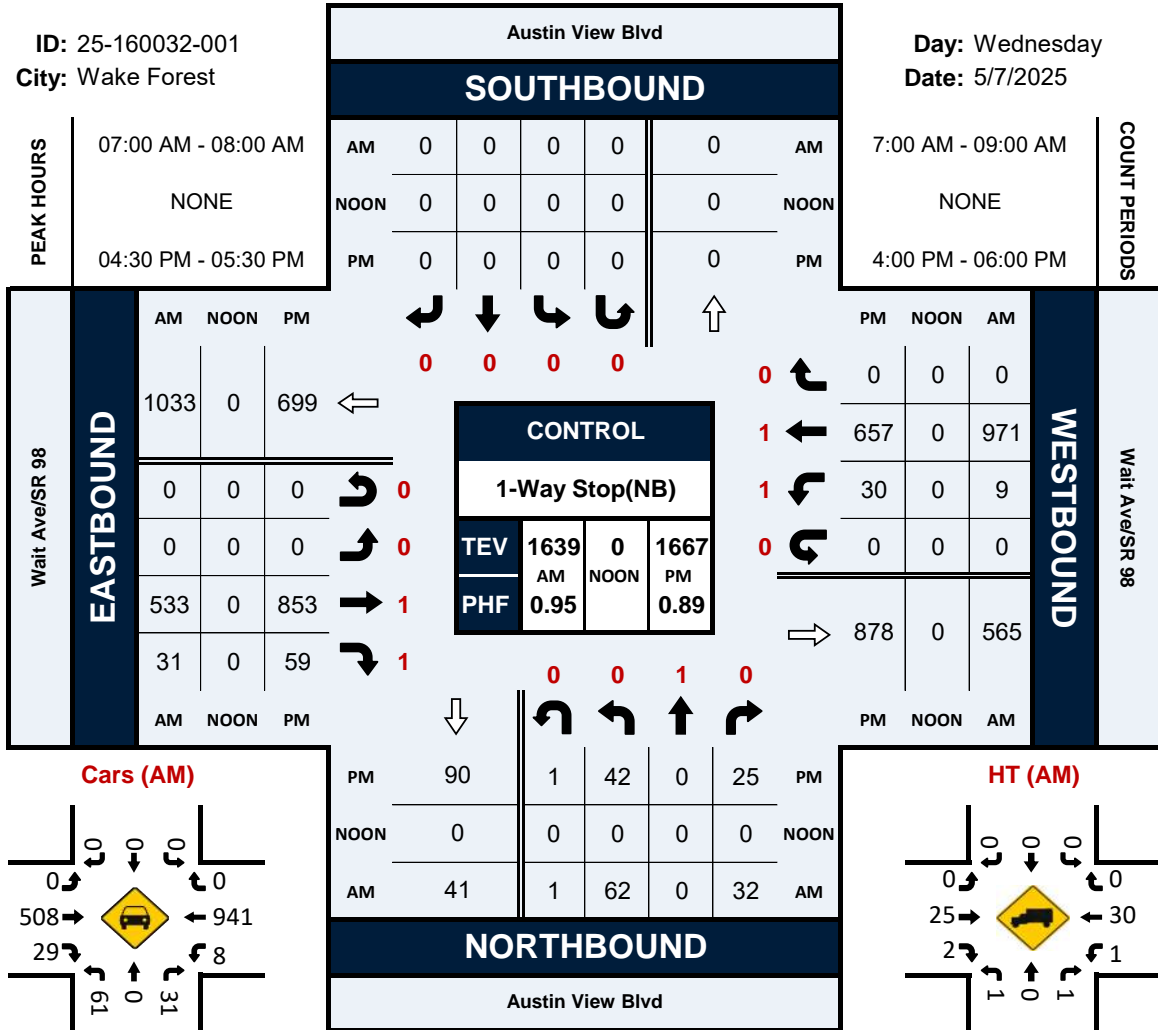


# Austin View Blvd & Wait Ave/SR 98

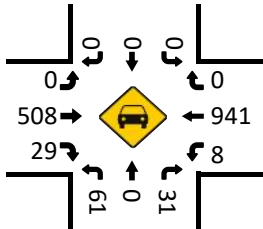
## Peak Hour Turning Movement Count

ID: 25-160032-001  
City: Wake Forest

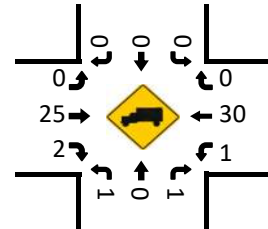
Day: Wednesday  
Date: 5/7/2025



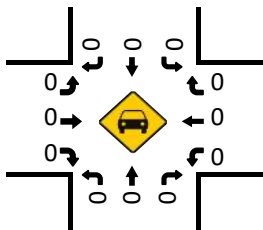
Cars (AM)



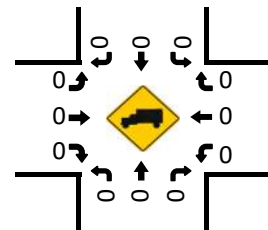
HT (AM)



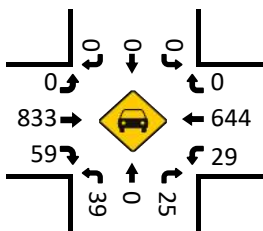
Cars (NOON)



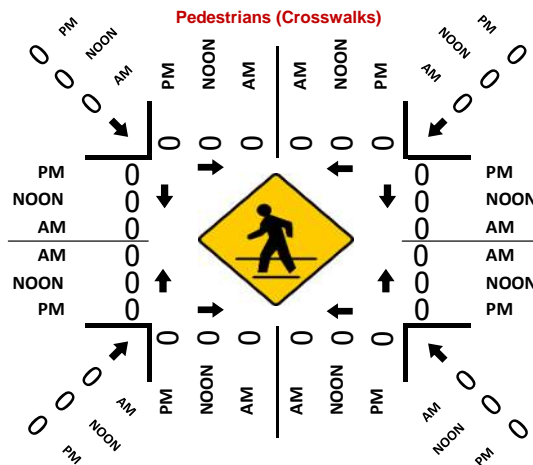
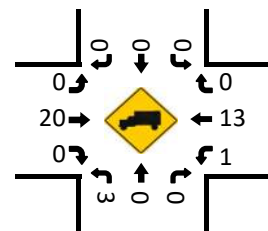
HT (NOON)



Cars (PM)



HT (PM)



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	
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	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				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				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				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				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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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
<b>TOTAL VOLUMES :</b>	0	0	0	0	3	0	5	0	1	1029	0	0	0	1801	3	0	2842
<b>APPROACH %'s :</b>					37.50%	0.00%	62.50%	0.00%	0.10%	99.90%	0.00%	0.00%	0.00%	99.83%	0.17%	0.00%	
<b>PEAK HR :</b>	<b>07:00 AM - 08:00 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	1	0	3	0	1	565	0	0	0	973	2	0	1545
<b>PEAK HR FACTOR :</b>	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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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
<b>TOTAL VOLUMES :</b>	0	0	0	0	7	0	5	0	6	1665	0	0	0	1290	3	0	2976
<b>APPROACH %'s :</b>					58.33%	0.00%	41.67%	0.00%	0.36%	99.64%	0.00%	0.00%	0.00%	99.77%	0.23%	0.00%	
<b>PEAK HR :</b>	<b>04:30 PM - 05:30 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	4	0	3	0	3	867	0	0	0	681	1	0	1559
<b>PEAK HR FACTOR :</b>	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	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	0	0	0	0	0	1	0	0	0	119	0	0	0	222	1	0	343
7:15 AM	0	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	0	155	0	0	0	236	0	0	391
7:45 AM	0	0	0	0	1	0	0	0	0	0	128	0	0	0	225	0	0	354
8:00 AM	0	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	0	113	0	0	0	183	0	0	298
8:30 AM	0	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	0	105	0	0	0	212	1	0	320
<b>TOTAL VOLUMES :</b>	0	0	0	0	3	0	5	0	0	1	984	0	0	0	1739	3	0	2735
<b>APPROACH %'s :</b>					37.50%	0.00%	62.50%	0.00%		0.10%	99.90%	0.00%	0.00%	0.00%	99.83%	0.17%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																	<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	1	0	3	0	0	1	539	0	0	0	944	2	0	1490
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.250	0.869	0.000	0.000	0.000	0.000	0.904	0.500	0.927
						0.500					0.871				0.903			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	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	0	210	0	0	0	152	0	0	363
4:30 PM	0	0	0	0	1	0	0	0	0	2	189	0	0	0	163	0	0	355
4:45 PM	0	0	0	0	2	0	2	0	0	1	230	0	0	0	161	0	0	396
5:00 PM	0	0	0	0	0	0	1	0	0	0	190	0	0	0	154	0	0	345
5:15 PM	0	0	0	0	1	0	0	0	0	0	239	0	0	0	188	1	0	429
5:30 PM	0	0	0	0	0	0	2	0	0	2	181	0	0	0	153	0	0	338
5:45 PM	0	0	0	0	2	0	0	0	0	1	186	0	0	0	155	2	0	346
<b>TOTAL VOLUMES :</b>	0	0	0	0	7	0	5	0	0	6	1617	0	0	0	1265	3	0	2903
<b>APPROACH %'s :</b>					58.33%	0.00%	41.67%	0.00%		0.37%	99.63%	0.00%	0.00%	0.00%	99.76%	0.24%	0.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																	<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	4	0	3	0	0	3	848	0	0	0	666	1	0	1525
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.500	0.000	0.375	0.000	0.000	0.375	0.887	0.000	0.000	0.000	0.000	0.886	0.250	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	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	0	12
7:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	11	0	0	0	15
7:30 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	7	0	0	0	16
7:45 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	4	0	0	0	12
8:00 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	0	0	18
8:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	10
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	0	0	10
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	0	0	14
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	45	0	0	0	62	0	0	0	107
<b>APPROACH %'s :</b>									0.00% 100.00% 0.00% 0.00%				0.00% 100.00% 0.00% 0.00%					
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	26	0	0	0	29	0	0	0	55
<b>PEAK HR FACTOR :</b>	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	0.000	0.859
									0.722				0.659					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	0	0	12
4:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	0	0	9
4:30 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	0	0	11
4:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	2	0	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	0	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	8
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	6
5:45 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	12
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	48	0	0	0	25	0	0	0	73
<b>APPROACH %'s :</b>									0.00% 100.00% 0.00% 0.00%				0.00% 100.00% 0.00% 0.00%					
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	19	0	0	0	15	0	0	0	34
<b>PEAK HR FACTOR :</b>	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	0.000	0.773
									0.679				0.750					

# 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 - Bikes

NS/EW Streets:	Carrie May Ln				Carrie May Ln				Wait Ave/SR 98				Wait Ave/SR 98				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

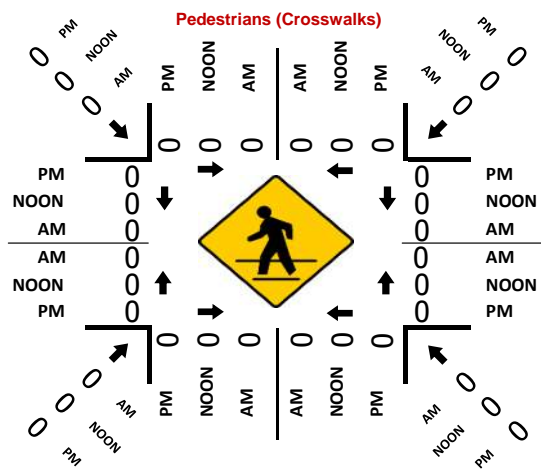
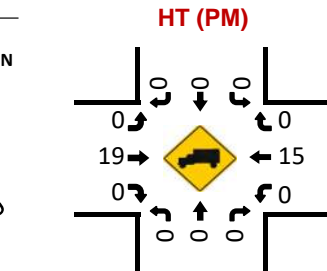
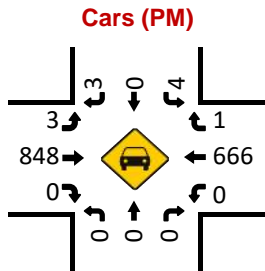
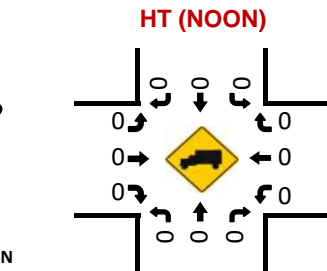
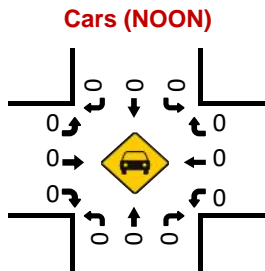
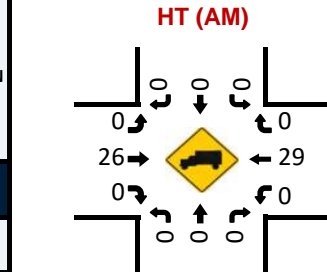
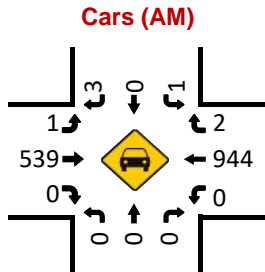
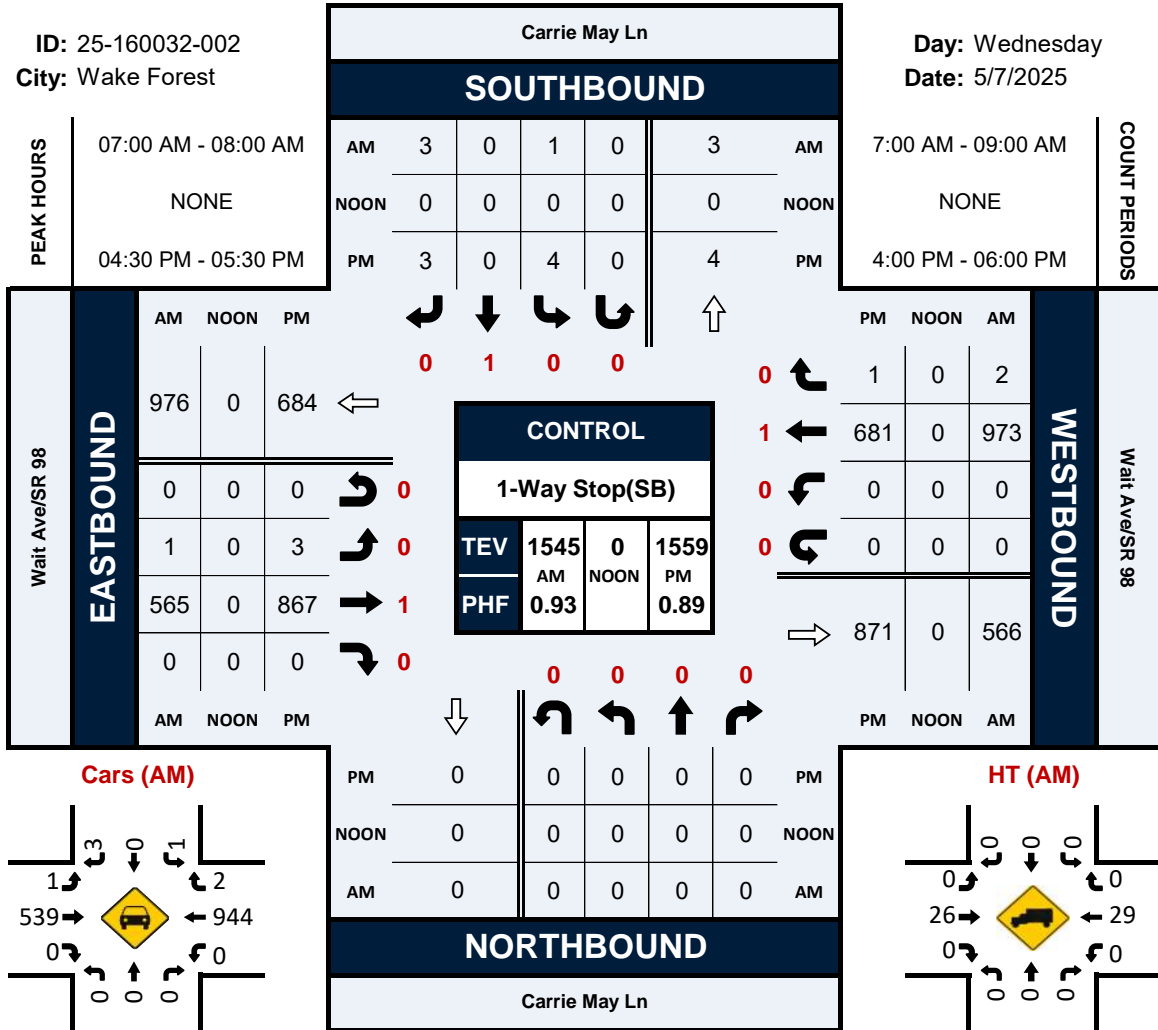


# Carrie May Ln & Wait Ave/SR 98

## Peak Hour Turning Movement Count

ID: 25-160032-002  
City: Wake Forest

Day: Wednesday  
Date: 5/7/2025



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

Start Time	Carrie May Ln Northbound						Carrie May Ln 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	0	0	0	0	0	0	0	0	1	0	0	1	0	124	0	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	
Approch %	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.3	99.7	0.0	0.0	0.0	0.0	0.0	99.8	0.2	0.0	0.0	0.0		
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		
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**

Start Time	Carrie May Ln Northbound					Carrie May Ln Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
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**

Start Time	Carrie May Ln Northbound					Carrie May Ln Southbound					Wait Ave/SR 98 Eastbound					Wait Ave/SR 98 Westbound					Int. Total
	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	Left	Thru	Rgt	Utum	App. Total	
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

Peak Hour Analysis from 07:00 AM - 09:00 AM  
 Peak Hour for Entire Intersection Begins at 07:00 AM

Peak Hour Analysis from 04:00 PM - 06:00 PM  
 Peak Hour for Entire Intersection Begins at 04:30 PM

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**

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	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
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**

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	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
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				
	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	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	67	64	59	0	32	123	112	0	46	460	63	0	54	794	9	0	1883
<b>PEAK HR FACTOR :</b>	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				
	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	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																TOTAL
<b>PEAK HR VOL :</b>	68	88	59	0	13	74	77	0	99	665	112	0	41	540	26	0	1862
<b>PEAK HR FACTOR :</b>	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				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	59	61	57	0	31	122	112	0	44	443	56	0	51	772	9	0	1817
<b>PEAK HR FACTOR :</b>	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				
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																TOTAL
<b>PEAK HR VOL :</b>	68	85	57	0	12	70	75	0	96	654	107	0	39	529	23	0	1815
<b>PEAK HR FACTOR :</b>	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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	1	0	0	0.5	0.5	1	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
<b>TOTAL VOLUMES :</b>	12	6	10	0	3	3	0	0	8	29	8	0	6	50	2	0	137
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	8	3	2	0	1	1	0	0	2	17	7	0	3	22	0	0	66
<b>PEAK HR FACTOR :</b>	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
	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
<b>TOTAL VOLUMES :</b>	2	3	4	0	3	9	5	0	7	37	5	0	2	18	3	0	98
<b>APPROACH %'s :</b>	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%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	3	2	0	1	4	2	0	3	11	5	0	2	11	3	0	47
<b>PEAK HR FACTOR :</b>	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  
**Control:** Signalized

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

### Data - Bikes

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Wait Ave/SR 98				Wait Ave/SR 98				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	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	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	1	0	0	0	0	0	0	0	0	0	0	1
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>APPROACH %'s :</b>					0.00%	100.00%	0.00%	0.00%									
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																
<b>PEAK HR VOL :</b>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250

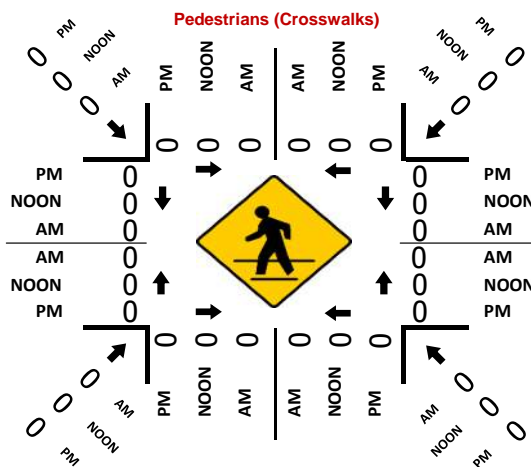
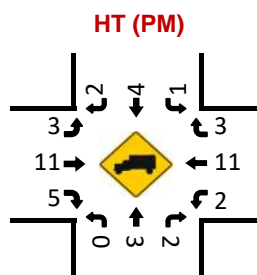
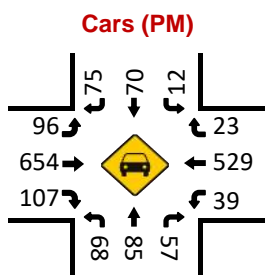
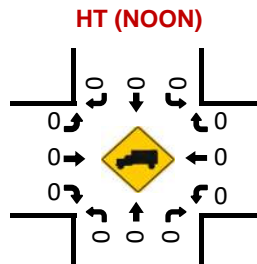
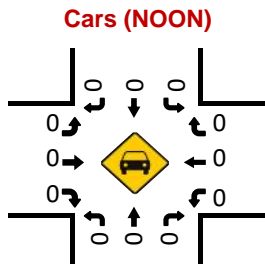
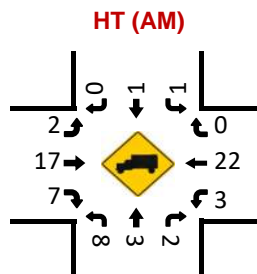
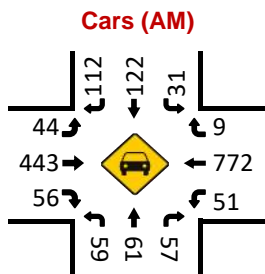
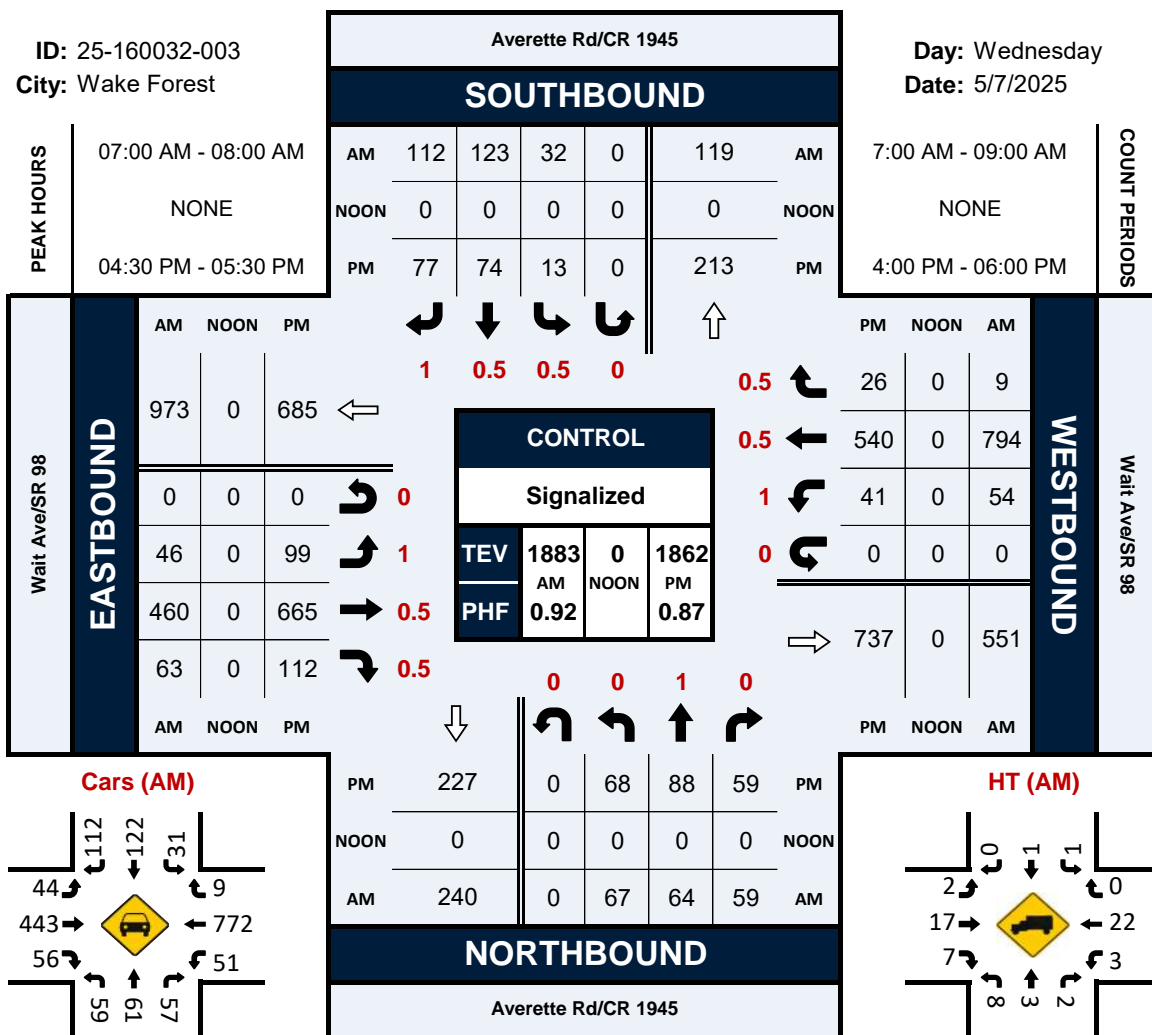


# Averette Rd/CR 1945 & Wait Ave/SR 98

## 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						Averette Rd/CR 1945						Wait Ave/SR 98						Wait Ave/SR 98						Int. Total
	Northbound			Southbound			Southbound			Eastbound			Eastbound			Westbound			Westbound						
	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
Approch %	33.8	34.8	31.4	0.0	0.0	10.7	10.7	46.5	42.8	0.0	0.0	11.1	9.4	79.7	10.9	0.0	0.0	38.8	6.5	90.6	2.9	0.0	0.0	39.4	
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	0	712	78	352	330	0	0	760	242	2107	285	0	0	2634	172	2443	74	0	0	2689	6795
% Cars, PU, Vans	94.5	96.6	94.0	0.0	0.0	95.1	92.9	96.7	98.5	0.0	0.0	97.1	94.2	97.0	95.6	0.0	0.0	96.6	95.6	97.3	93.7	0.0	0.0	97.1	96.7
Heavy trucks	14	9	14	0	0	37	6	12	5	0	0	23	15	66	13	0	0	94	8	68	5	0	0	81	235
% Heavy trucks	5.5	3.4	6.0	0.0	0.0	4.9	7.1	3.3	1.5	0.0	0.0	2.9	5.8	3.0	4.4	0.0	0.0	3.4	4.4	2.7	6.3	0.0	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**

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	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
	7:00 AM	17	19	12	0	48	5	23	21	0	49	11	94	11	0	116	10	202	2	0	
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**

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	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	
	4:30 PM	21	20	16	0	57	5	14	24	0	43	13	155	30	0	198	15	117	8	0	
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

# 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 - Total

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Old Pearce Rd				Old Pearce Rd				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	22	0	7	0	135
7:15 AM	0	49	21	0	16	53	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	26	0	9	0	169
7:45 AM	0	35	24	0	6	46	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	21	0	3	0	125
8:15 AM	0	28	13	0	5	38	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	18	0	4	0	81
8:45 AM	0	36	16	0	1	32	0	0	0	0	1	0	18	0	4	0	108
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	274	139	0	73	333	0	0	0	0	1	0	171	0	41	0	1032
	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%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	0	164	88	0	50	188	0	0	0	0	0	0	98	0	26	0	614
<b>PEAK HR FACTOR :</b>	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		
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	11	26	0	0	0	0	0	0	21	0	0	0	133
4:15 PM	0	42	13	0	20	40	0	0	0	0	0	0	24	0	5	0	144
4:30 PM	0	47	12	0	22	37	0	0	0	0	0	0	16	0	13	0	147
4:45 PM	0	41	16	0	22	30	0	0	0	0	0	0	9	0	10	0	128
5:00 PM	0	47	16	0	13	42	0	0	0	0	0	0	13	0	6	0	137
5:15 PM	0	45	16	0	19	43	0	0	0	0	0	0	18	0	11	0	152
5:30 PM	0	39	11	0	12	36	0	0	0	0	0	0	15	0	10	0	123
5:45 PM	0	54	17	0	17	53	0	0	0	0	0	0	25	0	5	0	171
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	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%	0.00%	0.00%	0.00%	0.00%	70.15%	0.00%	29.85%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	0	185	60	0	61	174	0	0	0	0	0	0	71	0	32	0	583
<b>PEAK HR FACTOR :</b>	0.000	0.856	0.882	0.000	0.803	0.821	0.000	0.000	0.000	0.000	0.000	0.000	0.710	0.000	0.727	0.000	0.852
			0.863			0.839									0.858		

# 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				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	247	136	0	70	319	0	0	0	0	0	0	160	0	40	0	972
	0.00%	64.49%	35.51%	0.00%	17.99%	82.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	80.00%	0.00%	20.00%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	0	151	86	0	48	179	0	0	0	0	0	0	92	0	26	0	582
<b>PEAK HR FACTOR :</b>	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				
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	368	111	0	133	294	0	0	0	0	0	0	139	0	58	0	1103
	0.00%	76.83%	23.17%	0.00%	31.15%	68.85%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	70.56%	0.00%	29.44%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	0	184	57	0	60	168	0	0	0	0	0	0	70	0	32	0	571
<b>PEAK HR FACTOR :</b>	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				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	27	3	0	3	14	0	0	0	0	1	0	11	0	1	0	60
	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%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	0	13	2	0	2	9	0	0	0	0	0	0	6	0	0	0	32
<b>PEAK HR FACTOR :</b>	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		
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	6	6	0	3	13	0	0	0	0	0	0	2	0	2	0	32
	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%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	0	1	3	0	1	6	0	0	0	0	0	0	1	0	0	0	12
<b>PEAK HR FACTOR :</b>	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		

# 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 - Bikes

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Old Pearce Rd				Old Pearce Rd				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
<b>APPROACH %'s :</b>																	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	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	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	1	0	0	0	0	0	0	0	0	0	0	1
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
<b>TOTAL VOLUMES :</b>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	TOTAL
<b>APPROACH %'s :</b>					0.00%	100.00%	0.00%	0.00%									
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

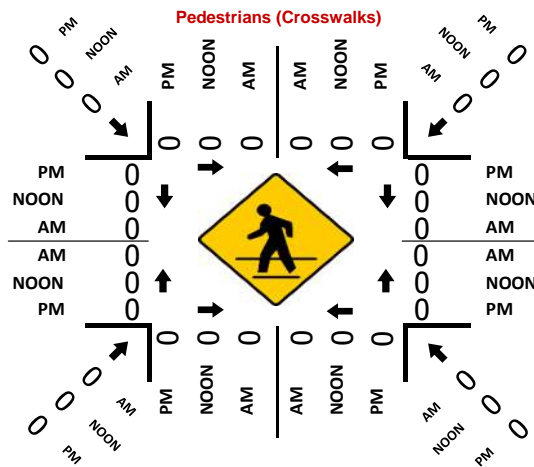
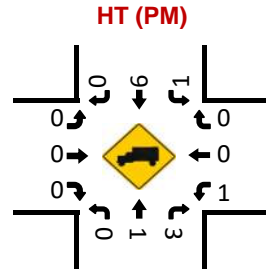
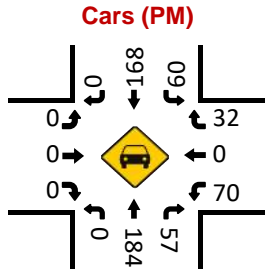
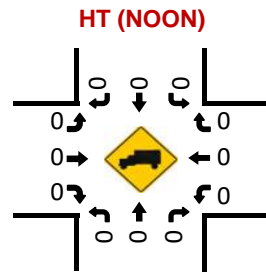
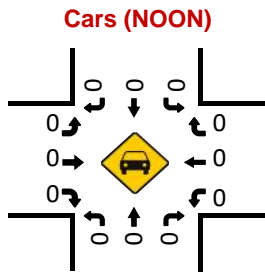
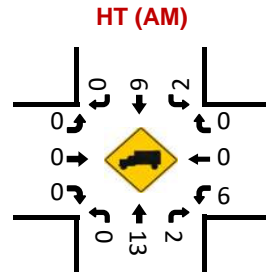
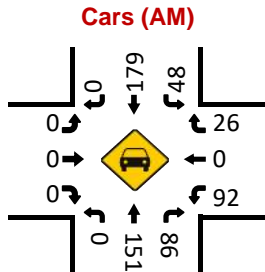
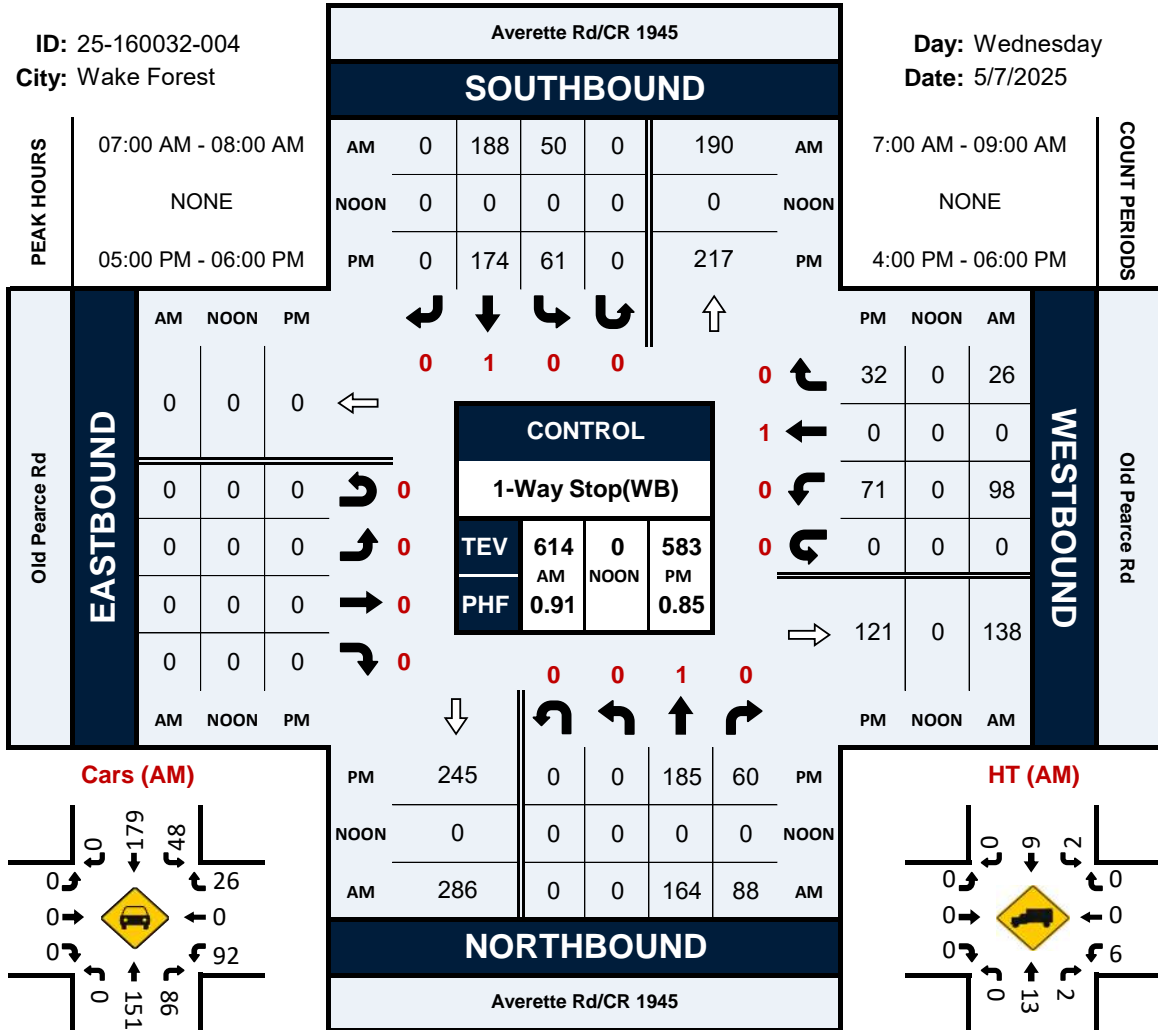


# Averette Rd/CR 1945 & Old Pearce Rd

## Peak Hour Turning Movement Count

ID: 25-160032-004  
City: Wake Forest

Day: Wednesday  
Date: 5/7/2025



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	
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				
<b>AM</b>	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	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	23	344	0	0	0	439	61	0	69	0	42	0	0	0	0	0	978
<b>APPROACH %'s :</b>	6.27%	93.73%	0.00%	0.00%	0.00%	87.80%	12.20%	0.00%	62.16%	0.00%	37.84%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	9	215	0	0	0	253	26	0	37	0	14	0	0	0	0	0	554
<b>PEAK HR FACTOR :</b>	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								
<b>PM</b>	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	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	5	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	42	446	0	0	0	381	70	0	46	0	36	0	0	0	0	0	1021
<b>APPROACH %'s :</b>	8.61%	91.39%	0.00%	0.00%	0.00%	84.48%	15.52%	0.00%	56.10%	0.00%	43.90%	0.00%	0.00%	0.00%	0.00%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	17	225	0	0	0	211	35	0	23	0	23	0	0	0	0	0	534
<b>PEAK HR FACTOR :</b>	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								

# 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 - Cars

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Kavanaugh Rd				Kavanaugh Rd				
<b>AM</b>	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	TOTAL
7:00 AM	3	51	0	0	0	42	2	0	8	0	5	0	0	0	0	0	111
7:15 AM	0	53	0	0	0	67	3	0	10	0	1	0	0	0	0	0	134
7:30 AM	3	47	0	0	0	71	9	0	10	0	6	0	0	0	0	0	146
7:45 AM	1	51	0	0	0	61	9	0	7	0	2	0	0	0	0	0	131
8:00 AM	2	31	0	0	0	51	9	0	7	0	5	0	0	0	0	0	105
8:15 AM	2	29	0	0	0	47	6	0	9	0	4	0	0	0	0	0	97
8:30 AM	2	18	0	0	0	38	8	0	6	0	11	0	0	0	0	0	83
8:45 AM	8	40	0	0	0	41	11	0	6	0	7	0	0	0	0	0	113
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	21	320	0	0	0	418	57	0	63	0	41	0	0	0	0	0	920
<b>APPROACH %'s :</b>	6.16%	93.84%	0.00%	0.00%	0.00%	88.00%	12.00%	0.00%	60.58%	0.00%	39.42%	0.00%					
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	7	202	0	0	0	241	23	0	35	0	14	0	0	0	0	0	522
<b>PEAK HR FACTOR :</b>	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
			0.968				0.825				0.766						
<b>PM</b>	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	TOTAL
4:00 PM	2	64	0	0	0	36	10	0	6	0	3	0	0	0	0	0	121
4:15 PM	6	50	0	0	0	55	10	0	5	0	2	0	0	0	0	0	128
4:30 PM	9	53	0	0	0	40	11	0	5	0	3	0	0	0	0	0	121
4:45 PM	7	47	0	0	0	31	4	0	7	0	5	0	0	0	0	0	101
5:00 PM	6	55	0	0	0	46	9	0	7	0	4	0	0	0	0	0	127
5:15 PM	5	53	0	0	0	47	10	0	7	0	9	0	0	0	0	0	131
5:30 PM	3	49	0	0	0	42	9	0	1	0	4	0	0	0	0	0	108
5:45 PM	2	64	0	0	0	69	7	0	8	0	6	0	0	0	0	0	156
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	40	435	0	0	0	366	70	0	46	0	36	0	0	0	0	0	993
<b>APPROACH %'s :</b>	8.42%	91.58%	0.00%	0.00%	0.00%	83.94%	16.06%	0.00%	56.10%	0.00%	43.90%	0.00%					
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	16	221	0	0	0	204	35	0	23	0	23	0	0	0	0	0	522
<b>PEAK HR FACTOR :</b>	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
			0.898				0.786				0.719						

# 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				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>	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%					
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	2	13	0	0	0	12	3	0	2	0	0	0	0	0	0	0	32
<b>PEAK HR FACTOR :</b>	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						
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	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	0	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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>	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%									
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	1	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12
<b>PEAK HR FACTOR :</b>	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										

# 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 - Bikes

NS/EW Streets:	Averette Rd/CR 1945				Averette Rd/CR 1945				Kavanaugh Rd				Kavanaugh Rd				
<b>AM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR :</b>	<b>07:00 AM - 08:00 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	0	0.5	0.5	0	0	1	0	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
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	1	0	0	0	0	0	0	0	0	0	0	1
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
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>PEAK HR FACTOR :</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

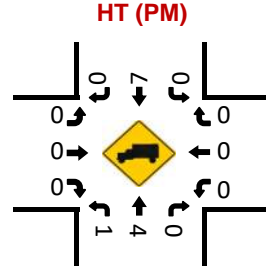
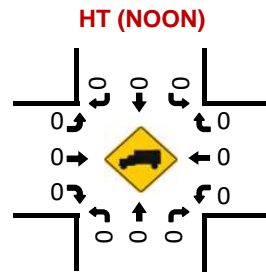
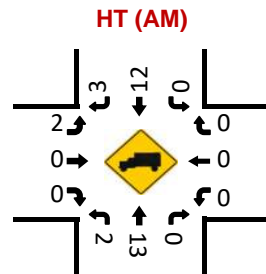
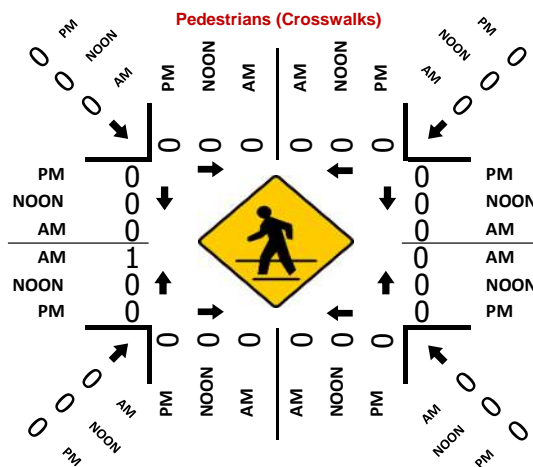
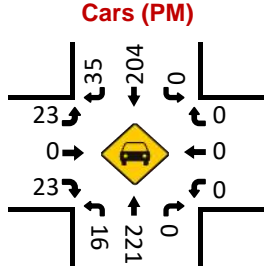
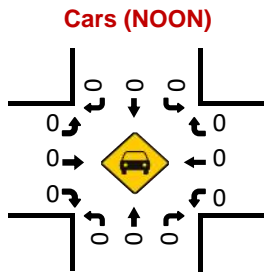
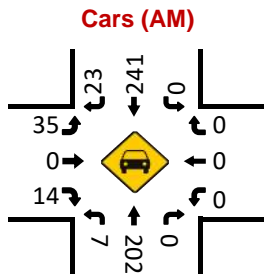
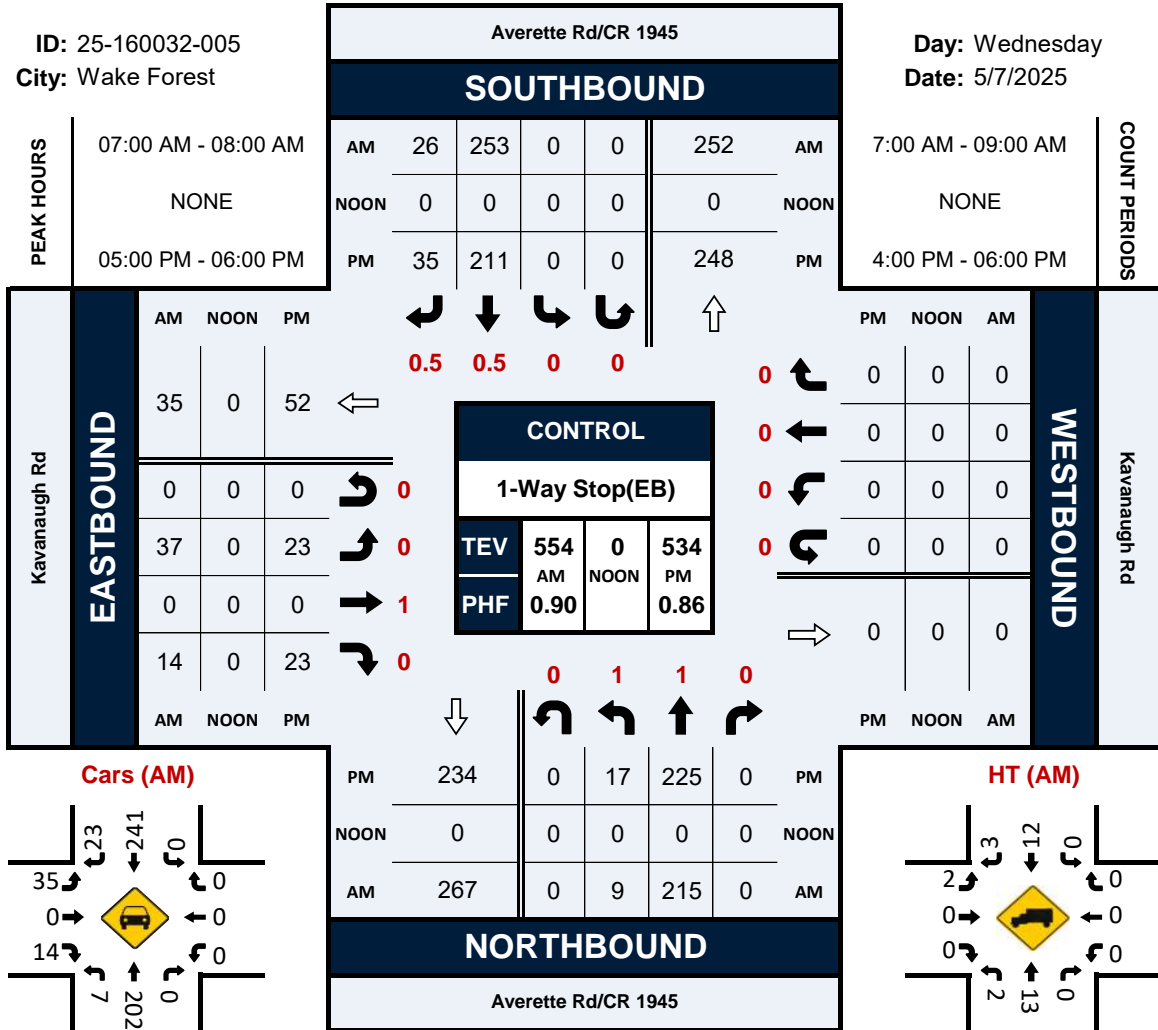


# Averette Rd/CR 1945 & Kavanaugh Rd

## Peak Hour Turning Movement Count

ID: 25-160032-005  
City: Wake Forest

Day: Wednesday  
Date: 5/7/2025







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	
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
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

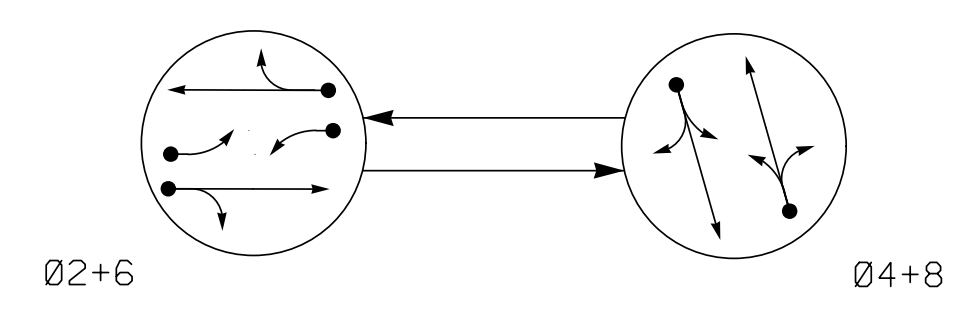
**PM**

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	
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
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**

**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

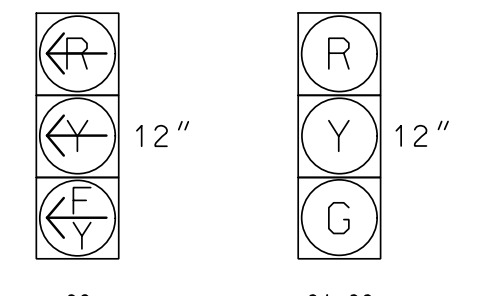
- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- ←- -→ UNSIGNALIZED MOVEMENT
- ←- - - - -> PEDESTRIAN MOVEMENT

**TABLE OF OPERATION**

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.



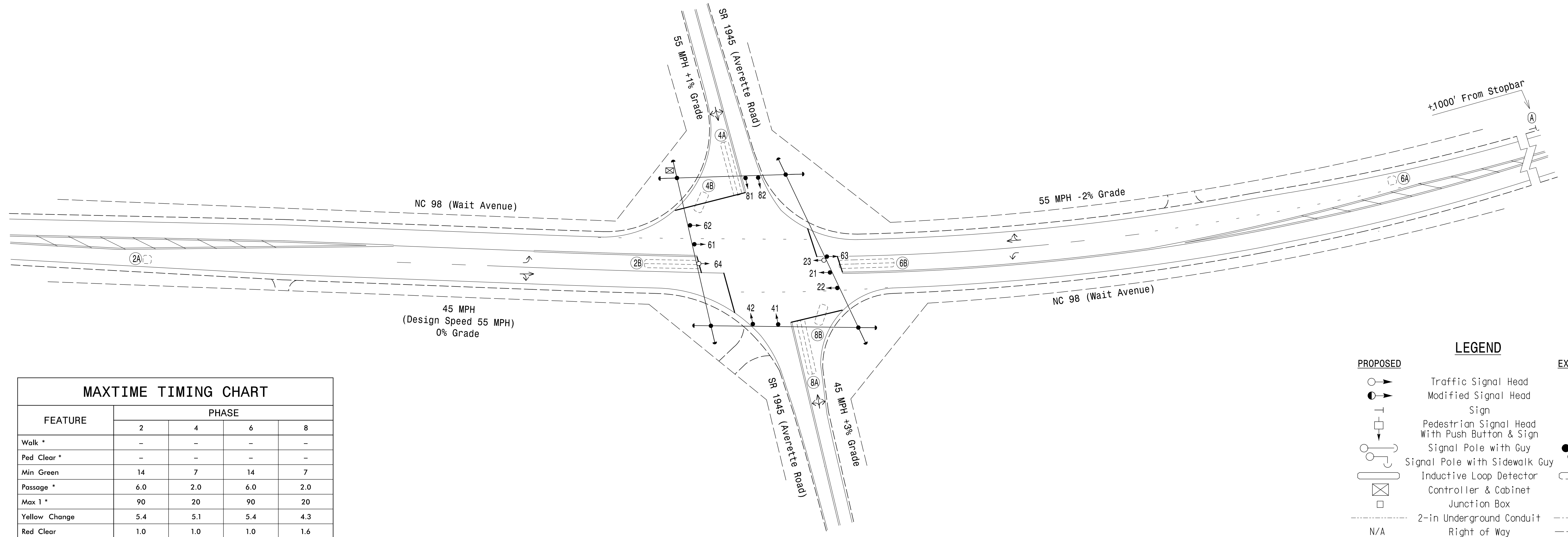
**MAXTIME DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING								
					CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	QUEUE	CALL	DELAY DURING GREEN	
2A	6X6	420	EXIST	-	2	-	-	X	X	-	X	-	X
2B	6X40	0	2-4-2	-	2	3	-	X	-	-	X	X	X
4A	6X40	0	2-4-2	-	4	5	-	X	-	-	X	-	X
4B	6X15	+5	EXIST	-	4	15	-	X	-	-	X	-	X
6A	6X6	420	EXIST	-	6	-	-	X	X	-	X	-	X
6B	6X40	0	2-4-2	-	6	3	-	X	-	-	X	X	X
8A	6X40	0	2-4-2	-	8	5	-	X	-	-	X	-	X
8B	6X15	+5	EXIST	-	8	15	-	X	-	-	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 I *	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
	N/A
N/A	

**Signal Upgrade**

Prepared For: **Transpiration Mobility and Safety Solutions**

PLANS PREPARED IN THE OFFICE OF:  
**Kimley-Horn**  
 750 N. Greenfield Pkwy, Garner, NC 27529  
 NC License #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: \_\_\_\_\_ INIT. DATE

3/2/2023  
 DATE

SIGNATURE: \_\_\_\_\_  
 DATE

SIG. INVENTORY NO. 05-1935

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

3/2/2023 11:37:20 AM M011y.Burke K:\RRAL\_TPI\DK-ITS\W011036492\_U-6023\_Wake\_Forest\_Signal\_System\Task\Task451\gn01\_Design\MS4 - Signal\_Design\MS4-1935.dgn

# **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
Fr <sub>t</sub>		0.982			0.998			0.958				0.850
Fl <sub>t</sub> Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1770	1829	0	1787	1878	0	0	1728	0	0	1835	1575
Fl <sub>t</sub> 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 Effct 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

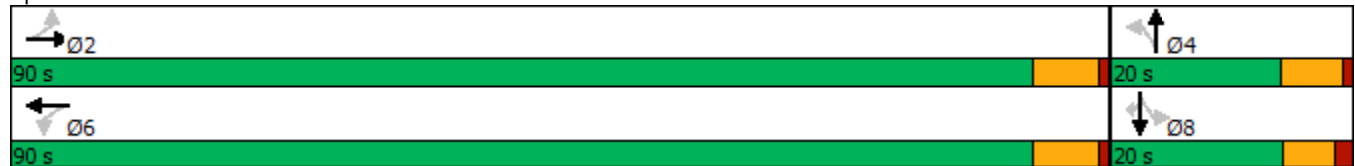
2025 Existing  
Timing Plan: AM Peak Hour

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



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
Fr <sub>t</sub>		0.979			0.993			0.964				0.850
Fl <sub>t</sub> Protected	0.950			0.950				0.985			0.993	
Satd. Flow (prot)	1770	1824	0	1787	1868	0	0	1742	0	0	1840	1575
Fl <sub>t</sub> 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 Effct 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



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
Fr <sub>t</sub>		0.982			0.998			0.958				0.850
Fl <sub>t</sub> Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1770	1829	0	1787	1878	0	0	1728	0	0	1835	1575
Fl <sub>t</sub> 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 Effct 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%

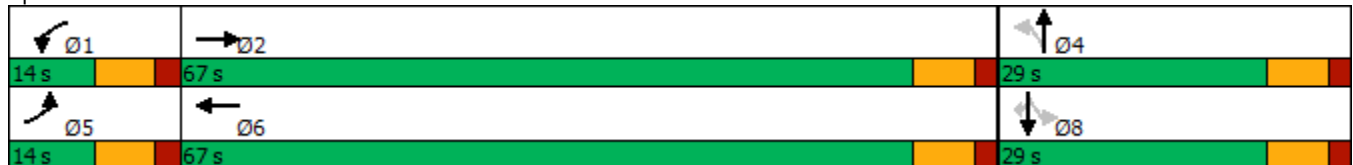
ICU Level of Service E

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



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
Fr <sub>t</sub>		0.979			0.993			0.964				0.850
Fl <sub>t</sub> Protected	0.950			0.950				0.985			0.993	
Satd. Flow (prot)	1770	1824	0	1787	1868	0	0	1742	0	0	1840	1575
Fl <sub>t</sub> 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 Effct 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

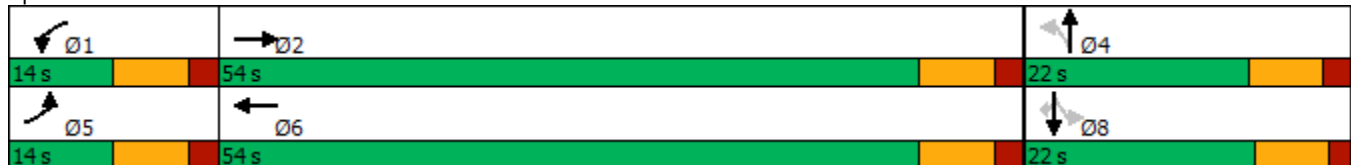
Intersection Capacity Utilization 87.9%      ICU Level of Service E

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



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
Fr <sub>t</sub>		0.969			0.998			0.970				0.850
Fl <sub>t</sub> Protected	0.950			0.950				0.974			0.991	
Satd. Flow (prot)	1770	1805	0	1787	1878	0	0	1733	0	0	1837	1575
Fl <sub>t</sub> 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 Effct 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



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 Effct 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%

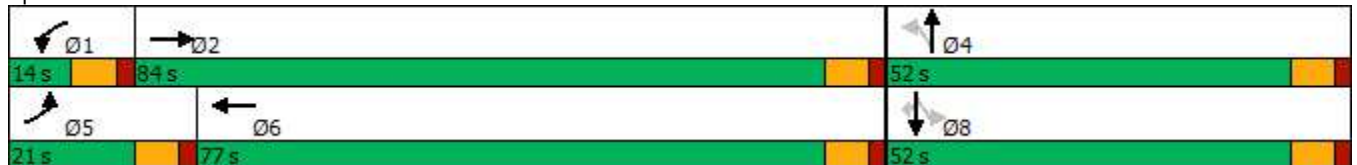
ICU Level of Service G

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
Fr <sub>t</sub>			0.850		0.998			0.929				0.850
Fl <sub>t</sub> Protected	0.950			0.950			0.950				0.991	
Satd. Flow (prot)	1770	1863	1583	1787	1878	0	1743	1705	0	0	1837	1575
Fl <sub>t</sub> 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 Effct 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
Fr <sub>t</sub>			0.850		0.993			0.945				0.850
Fl <sub>t</sub> Protected	0.950			0.950			0.950				0.995	
Satd. Flow (prot)	1770	1863	1583	1787	1868	0	1743	1734	0	0	1844	1575
Fl <sub>t</sub> 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 Effct 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

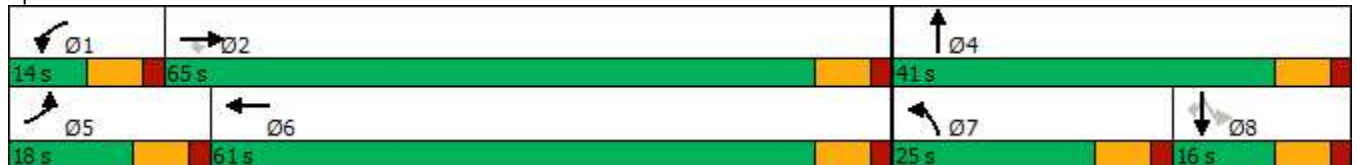
Intersection Capacity Utilization 81.6%      ICU Level of Service D

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**

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

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

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

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

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	-

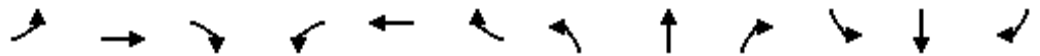
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.9	\$ 2655.9	241.2
HCM LOS			F	F

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

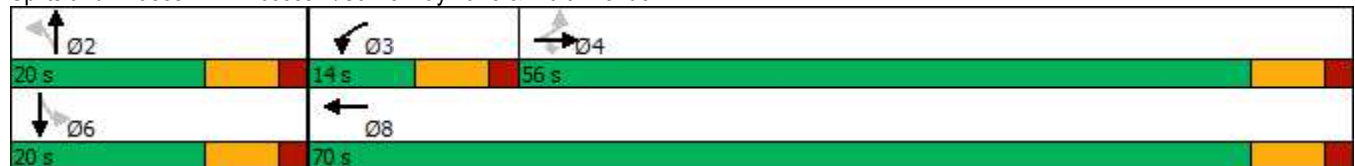


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		205	2	11	546			94			6	
Queue Length 95th (ft)		#617	12	33	#977			#189			21	
Internal Link Dist (ft)		467			640			996			1113	
Turn Bay Length (ft)			50	125								
Base Capacity (vph)		1091	1039	185	1409			248			282	
Starvation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

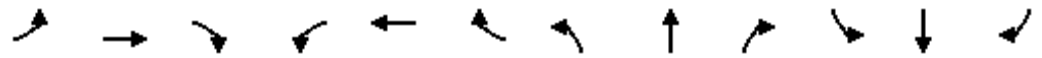
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	86.5
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.96
Intersection Signal Delay:	27.1
Intersection LOS:	C
Intersection Capacity Utilization	85.0%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume 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

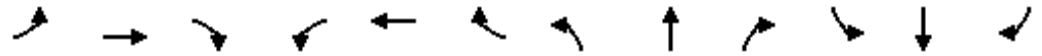
2031 Build Improved Scenario-1  
Timing Plan: PM Peak Hour



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

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	-

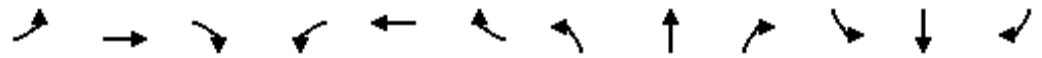
Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.3	\$ 4578.6	\$ 511.3
HCM LOS			F	F

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

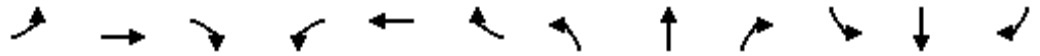
2031 Build Improved - Scenario-2  
Timing Plan: AM Peak Hour



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

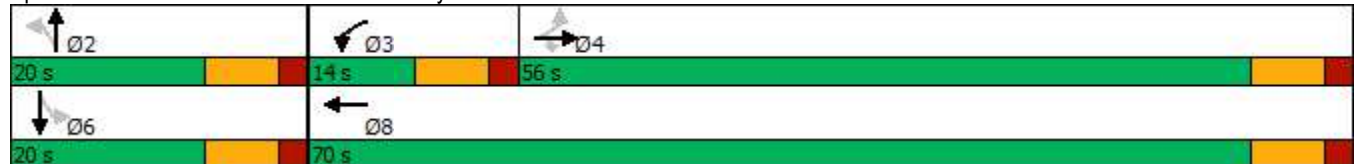


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		337	0	47	504			78			4	
Queue Length 95th (ft)		514	0	94	#937			#162			19	
Internal Link Dist (ft)		467			694			996			1113	
Turn Bay Length (ft)			50	350								
Base Capacity (vph)		1095	1032	194	1457			282			297	
Starvation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

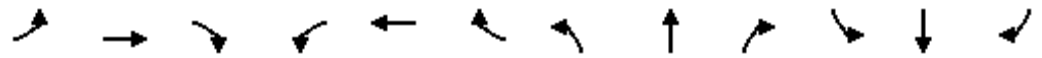
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	84
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	26.0
Intersection LOS:	C
Intersection Capacity Utilization	87.9%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume 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



Lane Group	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	Minor2	Minor3
Conflicting Flow All	0	0	631	0	1696
Stage 1	-	-	-	-	597
Stage 2	-	-	-	-	1099
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	951	-	102
Stage 1	-	-	-	-	550
Stage 2	-	-	-	-	319
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	951	-	101
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	-

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
Stage 1	-	-	-	-	948
Stage 2	-	-	-	-	796
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	684	-	95
Stage 1	-	-	-	-	377
Stage 2	-	-	-	-	444
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	684	-	90
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	-

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	0	1965 692
Stage 1	-	-	-	-	692 -
Stage 2	-	-	-	-	1273 -
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	-	-	873	-	~ 69 444
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	263 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	873	-	~ 68 444
Mov Cap-2 Maneuver	-	-	-	-	~ 68 -
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	260 -

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

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	0	2024
Stage 1	-	-	-	-	1099
Stage 2	-	-	-	-	925
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	594	-	64
Stage 1	-	-	-	-	319
Stage 2	-	-	-	-	386
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	594	-	60
Mov Cap-2 Maneuver	-	-	-	-	60
Stage 1	-	-	-	-	319
Stage 2	-	-	-	-	361

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	-

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

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	0	2321 1254
Stage 1	-	-	-	-	1254 -
Stage 2	-	-	-	-	1067 -
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	-	-	519	-	~ 41 210
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	331 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	519	-	~ 38 210
Mov Cap-2 Maneuver	-	-	-	-	~ 38 -
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	306 -

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

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

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	0	2321 1254
Stage 1	-	-	-	-	1254 -
Stage 2	-	-	-	-	1067 -
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	-	-	519	-	~ 41 210
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	331 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	519	-	~ 38 210
Mov Cap-2 Maneuver	-	-	-	-	~ 38 -
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	306 -

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

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

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	0	2325	1254
Stage 1	-	-	-	-	1254	-
Stage 2	-	-	-	-	1071	-
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	-	-	519	-	~ 41	210
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	329	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	519	-	~ 38	210
Mov Cap-2 Maneuver	-	-	-	-	~ 38	-
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	303	-

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

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

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	0	2325 1254
Stage 1	-	-	-	-	1254 -
Stage 2	-	-	-	-	1071 -
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	-	-	519	-	~ 41 210
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	329 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	519	-	~ 38 210
Mov Cap-2 Maneuver	-	-	-	-	~ 38 -
Stage 1	-	-	-	-	269 -
Stage 2	-	-	-	-	303 -

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
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
HCM Lane LOS	-	-	B	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
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
HCM Lane LOS	-	-	B	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	TT		TT			TT
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
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
HCM Lane LOS	-	-	C	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
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
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2

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	-

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

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	-

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

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	-

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

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	EBLn1WBLn1	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	-

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	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

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

# **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	Y		Y	↑	↑	
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	-	-

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	-	-

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	-	-

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**

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	-

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	Minor2	Minor3
Conflicting Flow All	0	0	1287	0	2317
Stage 1	-	-	-	-	1285
Stage 2	-	-	-	-	1032
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	539	-	42
Stage 1	-	-	-	-	260
Stage 2	-	-	-	-	344
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	539	-	41
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	-

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	-

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	Minor2	Minor3
Conflicting Flow All	0	0	1287	0	2317
Stage 1	-	-	-	-	1285
Stage 2	-	-	-	-	1032
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	539	-	42
Stage 1	-	-	-	-	260
Stage 2	-	-	-	-	344
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	539	-	41
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	-

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	-	-	-

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	-	-	-

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	-	-	-

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	Minor2	Minor3
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
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	544
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	Minor2	Minor3
Conflicting Flow All	0	0	861	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	-	781	-	0
Stage 1	-	-	-	-	0
Stage 2	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	781	-	-
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
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	544
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
<b>Pedestrians</b>						
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	
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>WB 1</b>			
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						
<b>Intersection Summary</b>						
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
<b>Pedestrians</b>						
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	
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>WB 1</b>			
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						
<b>Intersection Summary</b>						
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
<b>Pedestrians</b>						
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
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>WB 1</b>			
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						
<b>Intersection Summary</b>						
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
<b>Pedestrians</b>						
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	
<b>Direction, Lane #</b>	<b>EB 1</b>	<b>EB 2</b>	<b>WB 1</b>			
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						
<b>Intersection Summary</b>						
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
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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
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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
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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
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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
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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
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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
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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
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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
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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
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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)		

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Intersection: 7: Access C & Wait Avenue

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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)	

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Intersection: 8: Access D & Wait Avenue

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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

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Network Summary

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Network wide Queuing Penalty: 150

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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
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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.

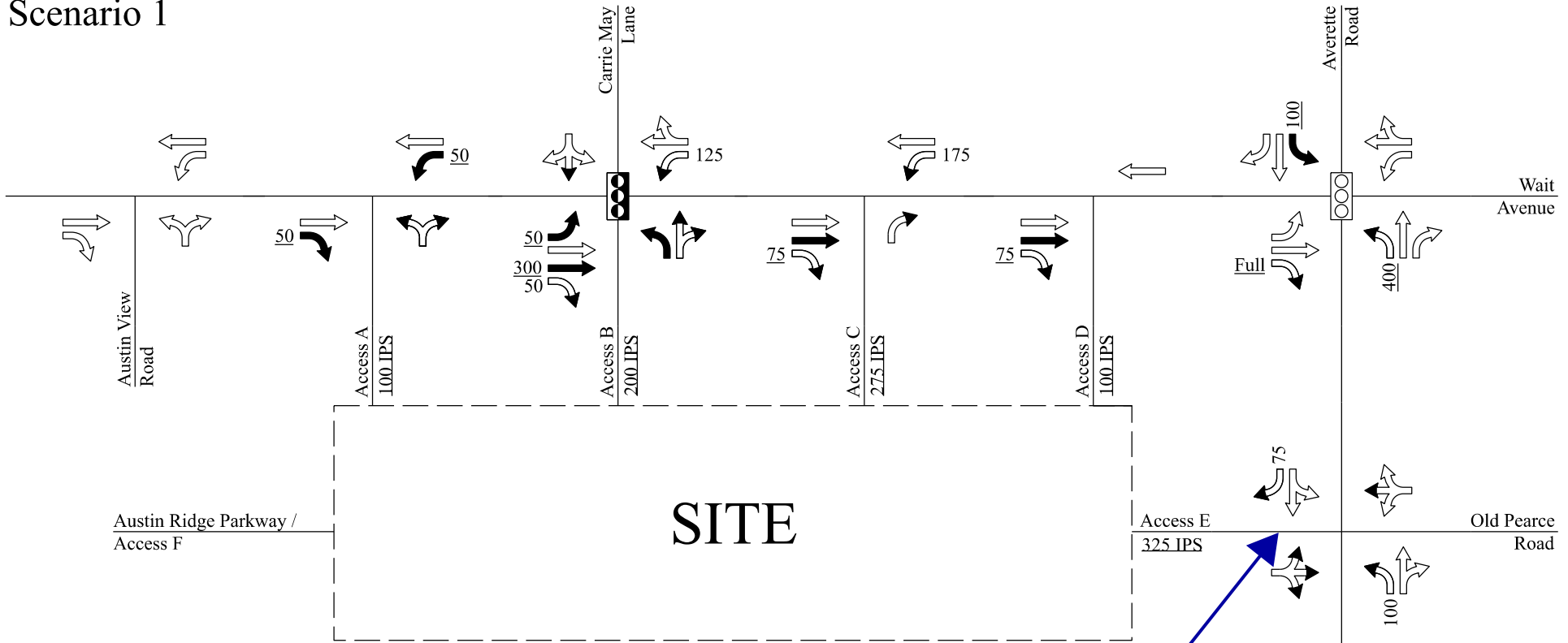
## Access E

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



**SITE**

## Wait Avenue Mixed-Use SC-2025-182

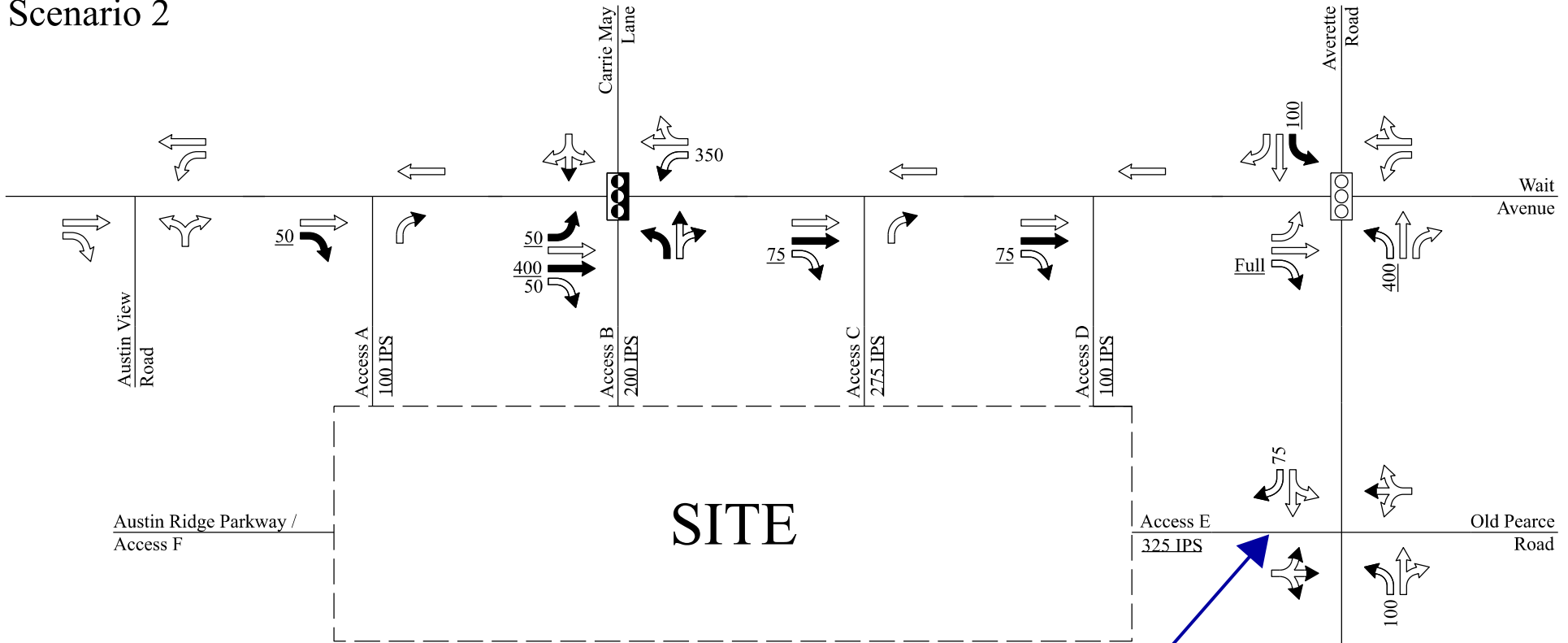
**District Note:**  
Add SB LTL on Averette onto Old Pearce utilizing the pavement provided for the NB LTL - tdd

- 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

Kavanaugh Road



# Scenario 2



## Wait Avenue Mixed-Use SC-2025-182

**District Note:**  
**Add SB LTL on Averette onto Old Pearce utilizing  
 the pavement provided for the NB LTL - tdd**

- 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



**ORDINANCE ORD-2026-XX**

**ORDINANCE OF THE BOARD OF COMMISSIONERS OF THE TOWN OF ROLESVILLE AMENDING THE OFFICIAL ZONING DISTRICT MAP OF THE TOWN OF ROLESVILLE TO CHANGE THE ZONING OF APPROXIMATELY 105.619 ACRES LOCATED AT 2028, 2200, 2206, 2216, AND 2232 WAIT AVENUE BEING WAKE COUNTY TAX PINS 1850950449, 1860056400, 1860045778, 1860151206, AND 1860143789 FROM RESIDENTIAL & PLANNED UNIT DEVELOPMENT (R&PUD) AND RESIDENTIAL LOW ZONING DISTRICT (RL) TO NEIGHBORHOOD CENTER CONDITIONAL ZONING DISTRICT (NC-CZ)**

**REZ-24-05**

**ATTICUS WOODS – WAIT AVENUE**

**WHEREAS**, the application submitted by Comm Dev, LLC for the rezoning of land hereinafter described was duly filed with the Planning Department; and

**WHEREAS**, the Planning Board was presented the application for Recommendation on October 27, 2025 and December 15, 2025, and the Board of Commissioners held a Legislative hearing on March 3, 2026 and April 7, 2026;

**WHEREAS**, mailed notices and property sign postings were carried out in advance of the Legislative hearing pursuant to G.S. § 160D-602 and the Land Development Ordinance; and

**WHEREAS**, the Planning Board submitted its recommendation to the Board of Commissioners recommending Approval of said application that was generally consistent with the Comprehensive Plan for the lands hereinafter described, all in accordance with the requirements of the Town of Rolesville Land Development Ordinance and the provisions of Chapter 160D, Article 6, of the North Carolina General Statutes;

**NOW, THEREFORE, BE IT ORDAINED** by the Board of Commissioners of the Town of Rolesville, North Carolina:

Section 1: The lands that are the subject of the Ordinance are those certain lands described in **Exhibit 1 – Legal Description** and shown in **Exhibit 2 – Rezoning Plat**, which is incorporated herein by reference, and said lands are hereafter referred to as the “Rezoned Lands.”

Section 2: The parcels identified by the Wake County Tax Parcel Identification Numbers 1850950449, 1860056400, 1860045778, 1860151206, and 1860143789, and described and observed in **Exhibits 1 and 2**, are located within the Town’s Corporate Limits OR Extraterritorial Jurisdiction OR in Wake County.

Section 3: The Town of Rolesville Land Development Ordinance, including the Town of Rolesville North Carolina Official Zoning District Map, which is a part of said Ordinance, is hereby amended by changing the zoning classification of the “Rezoned Lands” from existing R&PUD and RL zoning districts to a proposed NC-CZ zoning district.

Section 4: The “Rezoned Lands” are subject to all the standards and conditions in **Exhibit 3 – Conditions of Approval dated March 31, 2026, and associated and referenced Exhibits**, which are imposed as part of this rezoning.

Section 5: The Administrator is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Rolesville, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 6: After reviewing all the information presented at the Legislative hearing and the Town of Rolesville plans, policies and ordinances, the Rolesville Board of Commissioners find the Rezoning map amendment request reasonable and consistent with the 2017 Comprehensive Plan and Rolesville 2050 Comprehensive Plan and is in the interest of the public and adopted a Plan Consistency and Reasonableness Statement.

Section 7: The “Rezoned Lands” shall be perpetually bound to the Conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Land Development Ordinance.

Adopted and effective this the 7<sup>th</sup> day of April, 2026.

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Ronnie Currin  
Mayor

ATTEST:

APPROVED AS TO FORM:

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Christina Ynclan-Frazier  
Town Clerk

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Dave Neill  
Town Attorney