AGENDA

Planning Board
Thursday, March 19, 2026: 6:00 PM
Douglass Community Center: 1185 W. Pennsylvania Ave

CALL TO ORDER

APPROVAL OF MINUTES

1. **January 22, 2026 Regular Meeting**

PUBLIC HEARING

1. **Z-02-26: Request Submitted by Sandhills Presbyterian Church to Rezone 11.31 Acres on Pee Dee Road to General Business Conditional District (GBCD)**

PRELIMINARY FORUM

1. **PD-07-25 Request Submitted by Mavis Tire, LLC for a Preliminary Development Plan Within the Morganton Park South Planned Development**

UNFINISHED BUSINESS

NEW BUSINESS

PUBLIC COMMENTS

MINUTES
Planning Board Regular Meeting
E.S. Douglass Community Center, 1185 W. Pennsylvania Avenue
Thursday, January 22, 2026, at 6:00 PM

Chair Walden called the meeting to order at 6:00 PM.

Chair Matthew Walden, Jennifer Garner, Monica Brickey, Michael Skolnick, Jason Scribner Andrew Speck and Jeremy Haskell were present.

Jason Scribner made a motion, which was seconded by Andy Speck, to approve the Minutes of the December 2025 regular meeting. The motion carried.

PUBLIC HEARING:

OA-01-26: Proposed Text Amendments to the Unified Development Ordinance

The Town of Southern Pines Planning Department is proposing to amend multiple sections of the Unified Development Ordinance (UDO) related to two main topics. UDO §2.5.16(B) and §2.21.10 are proposed for deletion because those sections require waiting periods for refiling development applications and recent changes to North Carolina state law (Session Law 2025-94) now prohibit these types of waiting periods. UDO §4.6.16(F) is proposed to be amended to allow Temporary Signs to be located within town rights of way adjoining private property with the property owner's permission. The proposed revisions will ensure the UDO is more consistent with North Carolina state law regarding allowed locations for political signs prior to elections.

Additionally, the Engineering Department is proposing to amend Appendix B of the UDO. The proposed amendments are primarily related to recent changes to North Carolina state law (Session Laws 2025-94 & 2024-133) limiting pavement design standards for roads and parking areas to North Carolina Department of Transportation minimums. Other proposed amendments are related to clarifying roadway base testing requirements, updating asphalt specifications, meeting Americans with Disabilities Act (ADA) alignment standards and clarifying sight distance measurements.

Chair Walden opened the public hearing.

Planning Director BJ Grieve provided details of the proposed UDO text amendments.

Member Garner inquired about the placement of signs in railroad rights-of-way since they are governed by federal law.

Mr. Grieve responded that he would research the sign placement regulations for railroad rights-of-way.

Town Engineer James Michel shared proposed changes to Appendix B of the UDO, which included updates to simplify standards for private roads and parking lots to ensure that the Town's standards do not exceed state standards. In addition, technical changes that were proposed included updates to asphalt specifications and ADA compliance requirements.

Chair Walden inquired about durability of the new asphalt standards.

Mr. Michel responded that the changes are not expected to affect durability.

There being no further questions or comments, Chair Walden closed the public hearing.

Monica Brickey made a motion, seconded by Jason Scribner, that after reviewing the proposed text amendments to the UDO and considering the criteria for approval of text amendments found in UDO §2.17.10, the proposed amendments are consistent with the Comprehensive Plan for the reasons set forth in Attachment A of staff report OA-01-26; and therefore, to recommend approval of OA-01-26 to the Town Council. The motion carried by a vote of 7-0.

UNFINISHED BUSINESS:

Sr. Planner James Broadwell provided an update regarding Phase 3 of Comprehensive Plan implementation which is focused on tree protection and landscaping. He said the plan involves adopting the recommended species lists from Appendix F of the UDO and to incorporate tree protection under Open Space to avoid creating non-conformities.

Discussion ensued regarding the flexibility of the new approach allowing developers to meet open space requirements through tree protection areas. A point system to incentivize tree preservation and buffer planting was discussed and the need to balance ecological soundness with practical development requirements was emphasized.

NEW BUSINESS:

Mr. Broadwell confirmed that there will be a February meeting.

Monica Brickey made a motion, which was seconded by Jennifer Garner. The motion carried.

The meeting adjourned at 7:42 PM.

Respectfully submitted:

Cindy Williams
Secretary to the Planning Board

An audio recording of the meeting is available upon request.

DRAFT

Planning Staff Report

To: Planning Board
From: Mason Mattox, Planner II
Date: March 19, 2026
Item: Application #Z-02-26 Conditional Zoning District for Sandhills Presbyterian Church to Rezone from RS-3 to GB-CD.

I. EXECUTIVE SUMMARY

Longitude Planning Group, PLLC, on behalf of Sandhills Presbyterian Church, has submitted an application to rezone an approximately 11.31-acre parcel located at 650 Pee Dee Road. The property is currently zoned RS-3 (Residential Single-Family). The applicant is requesting to rezone the property to GB-CD (General Business Conditional Zoning District) to allow for the continued operation and expansion of the existing church campus and the Covenant Preparatory School.

The property currently contains the Sandhills Presbyterian Church, originally constructed in 2001, along with associated parking and site improvements. Since 2014, Covenant Preparatory School (PreK-8) has operated within the church facilities and an existing modular classroom structure located on the property.

The purpose of the proposed conditional zoning district is to bring the existing church and school uses into conformity with the Town of Southern Pines Unified Development Ordinance (UDO) and allow for phased expansion of the campus over time.

The proposal includes the following elements in two phases:

<u>Phase One (A) – School Expansion</u>
1. Construction of ±9,000 SF building to have seven (7) classrooms; 2-story walk-out
2. Remove existing modular classroom structure, upon completion of new facility
3. Provide additional parking for the school building
4. Construction of port-cochere at main entrance of church building
5. Construction of front / rear patios at church building
6. Provide service / dumpster / recycle area

<u>Phase Two (B) Future Phases – Church / School Expansion</u>
1. Construction of new 2-story school building (±30,000 SF) to provide additional classroom space and supporting facilities, along with additional parking and drop-off loop; and associated stormwater facilities
2. Convert Phase 1 School Building into administrative offices
3. Expand the existing church facilities with a multi-story structure; size TBD
4. Additional outdoor patio / gathering spaces for the church
5. Trail connections to Whitehall at Reservoir Park, which borders the existing property, will be provided
6. Construction of a campanella (bell tower) structure.

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II. PROJECT INFORMATION

A. Physical Address

650 Pee Dee Road (Parcel ID 99000100)

B. Property Owner and Applicant

Sandhills Presbyterian Church
650 Pee Dee Road
Southern Pines, NC 28387

C. Authorized Agent: Longitude Planning Group, PLLC

PO Box 1466
Southern Pines, NC 28388

D. Existing Zoning

The subject property is currently zoned RS-3 (Residential Single-Family). Two zoning overlays are present on the site:

- Urban Transition Highway Corridor (See Figure 2).
- Water Supply Watershed High Quality Water (See Figure 3).

Figure 1. Aerial Vicinity Map (Subject Property Outlined in Blue).

Figure 2. Zoning Vicinity Map (Subject Property Outlined in Blue).

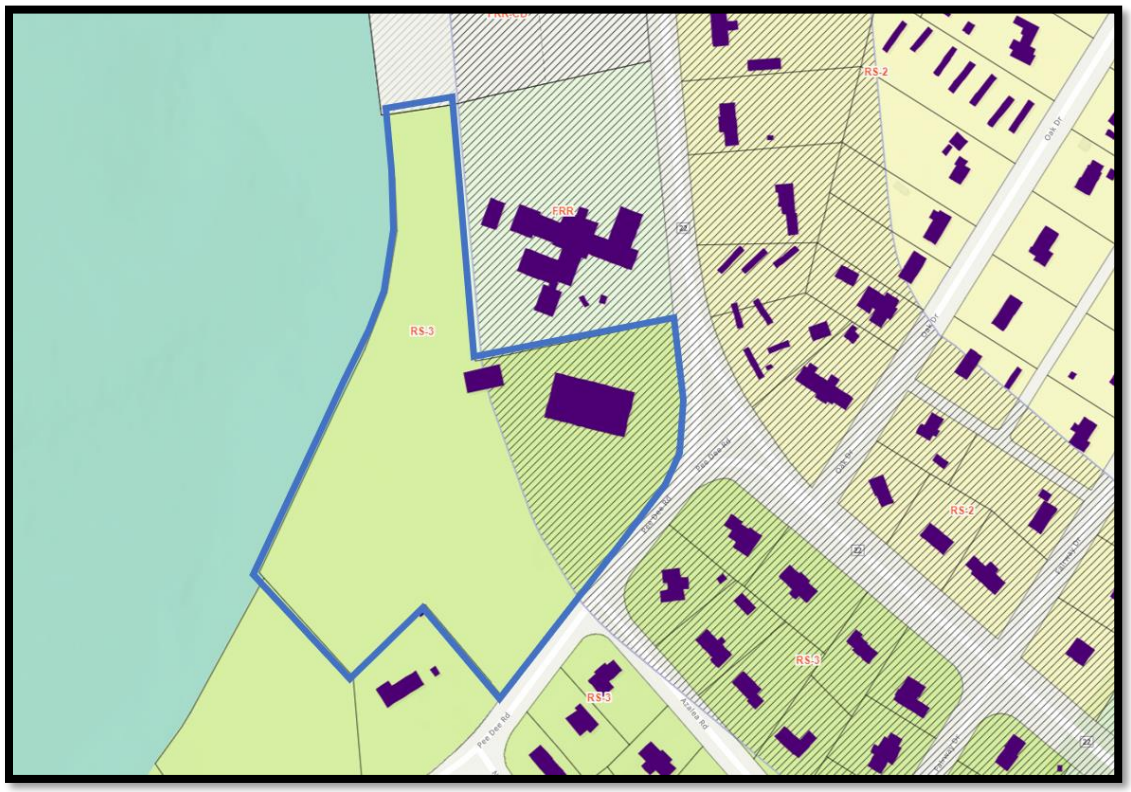


Figure 3. High Quality Watershed

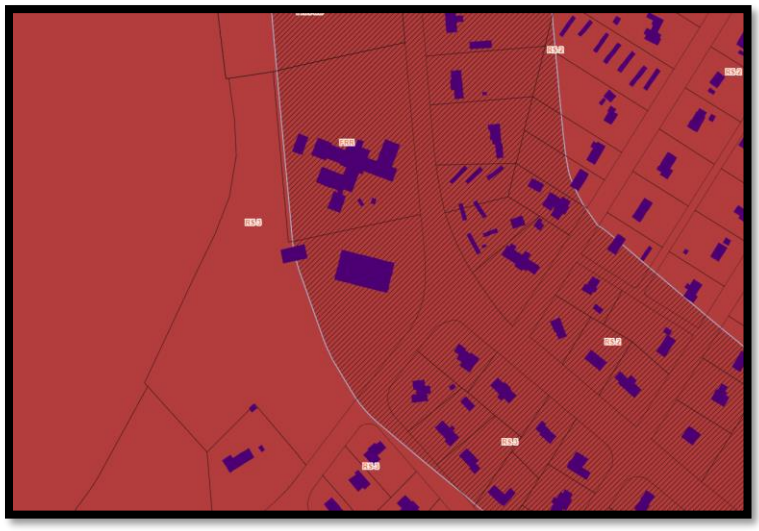


Figure 4. Red Cockaded Woodpecker Survey

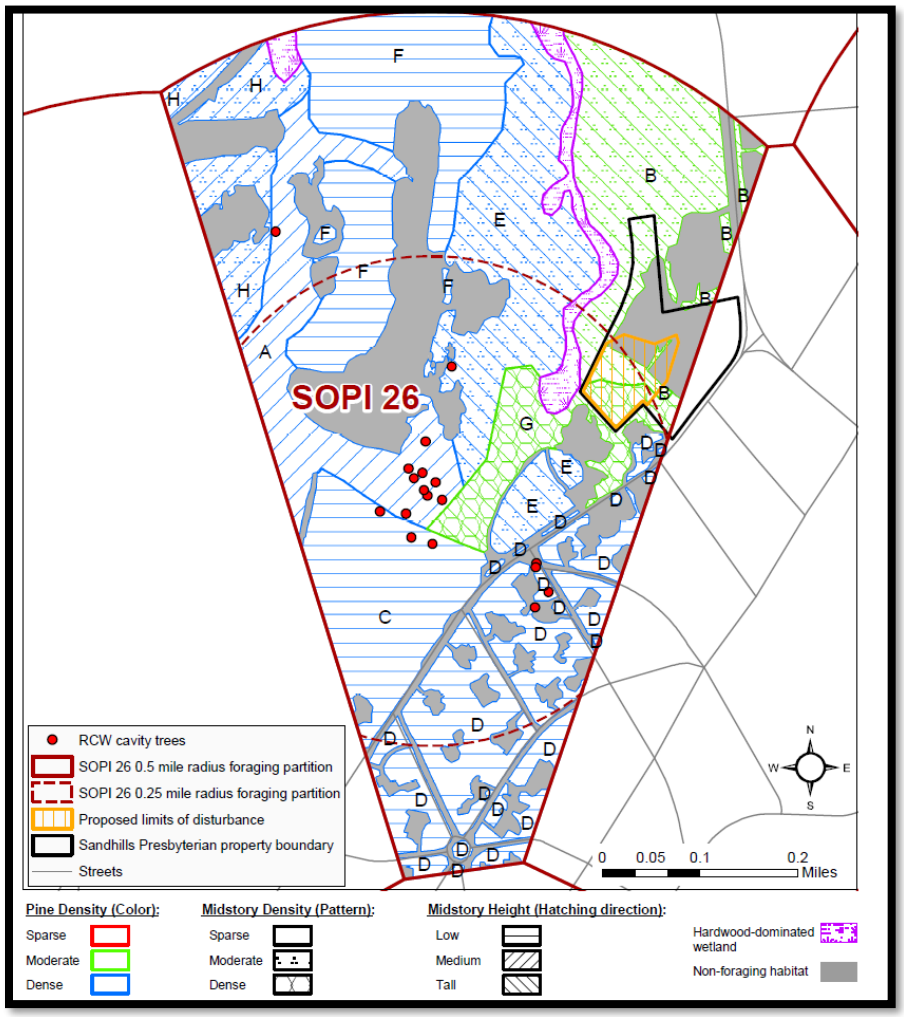


Figure 6. Existing Conditions

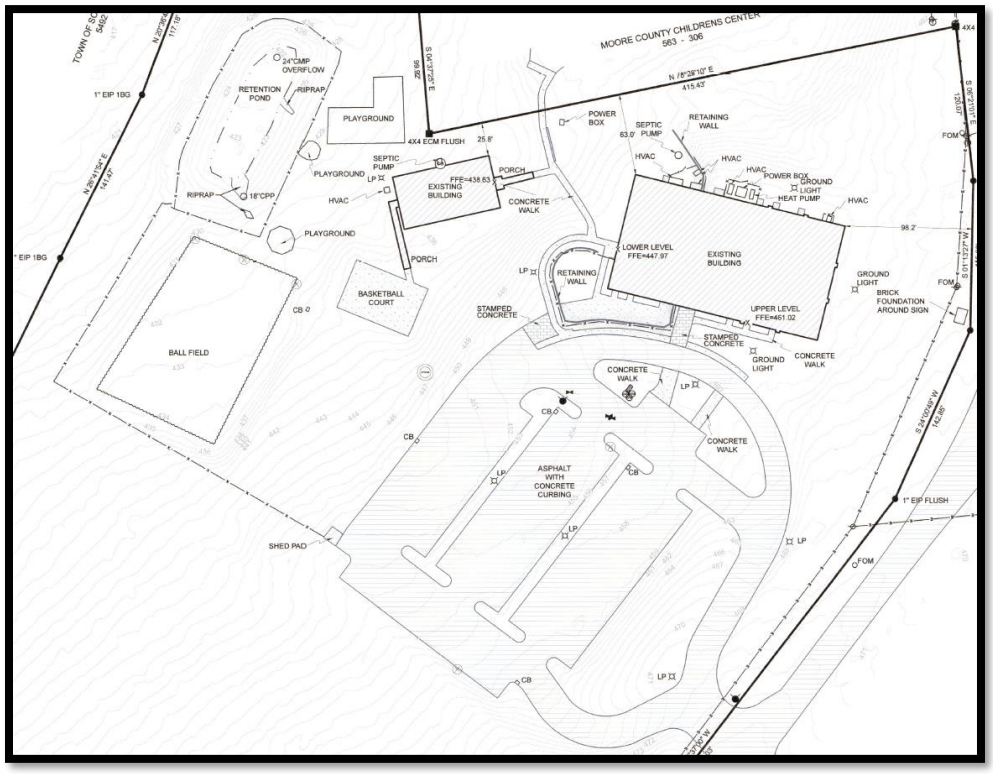


Figure 7. Proposed Development

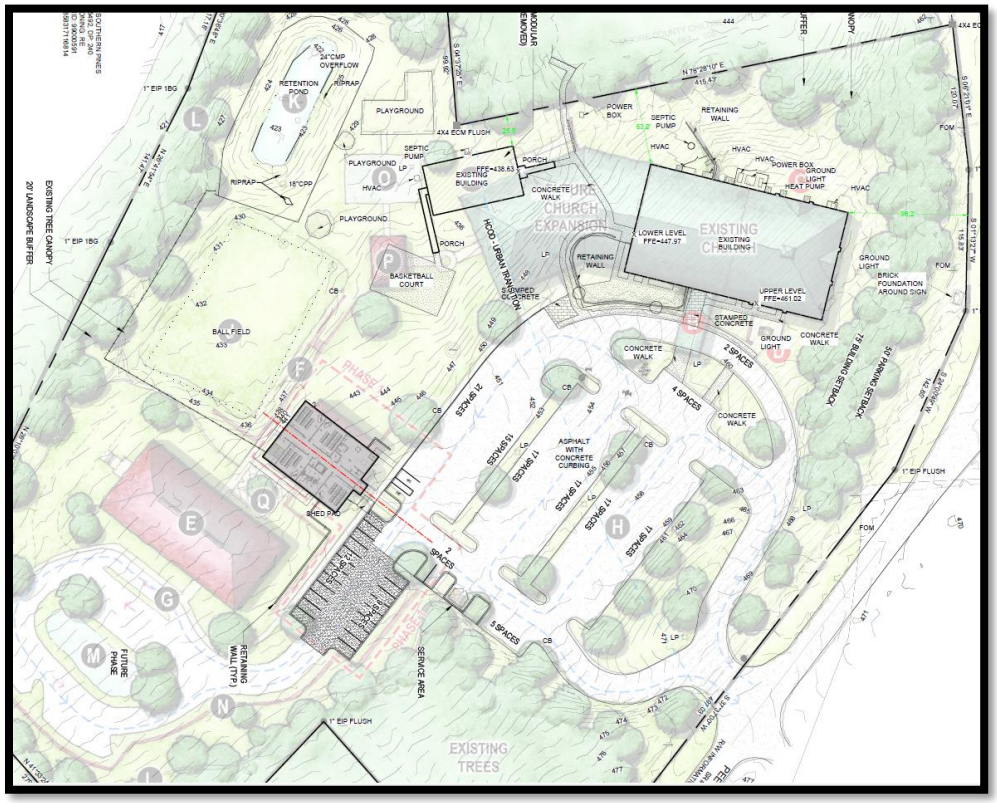
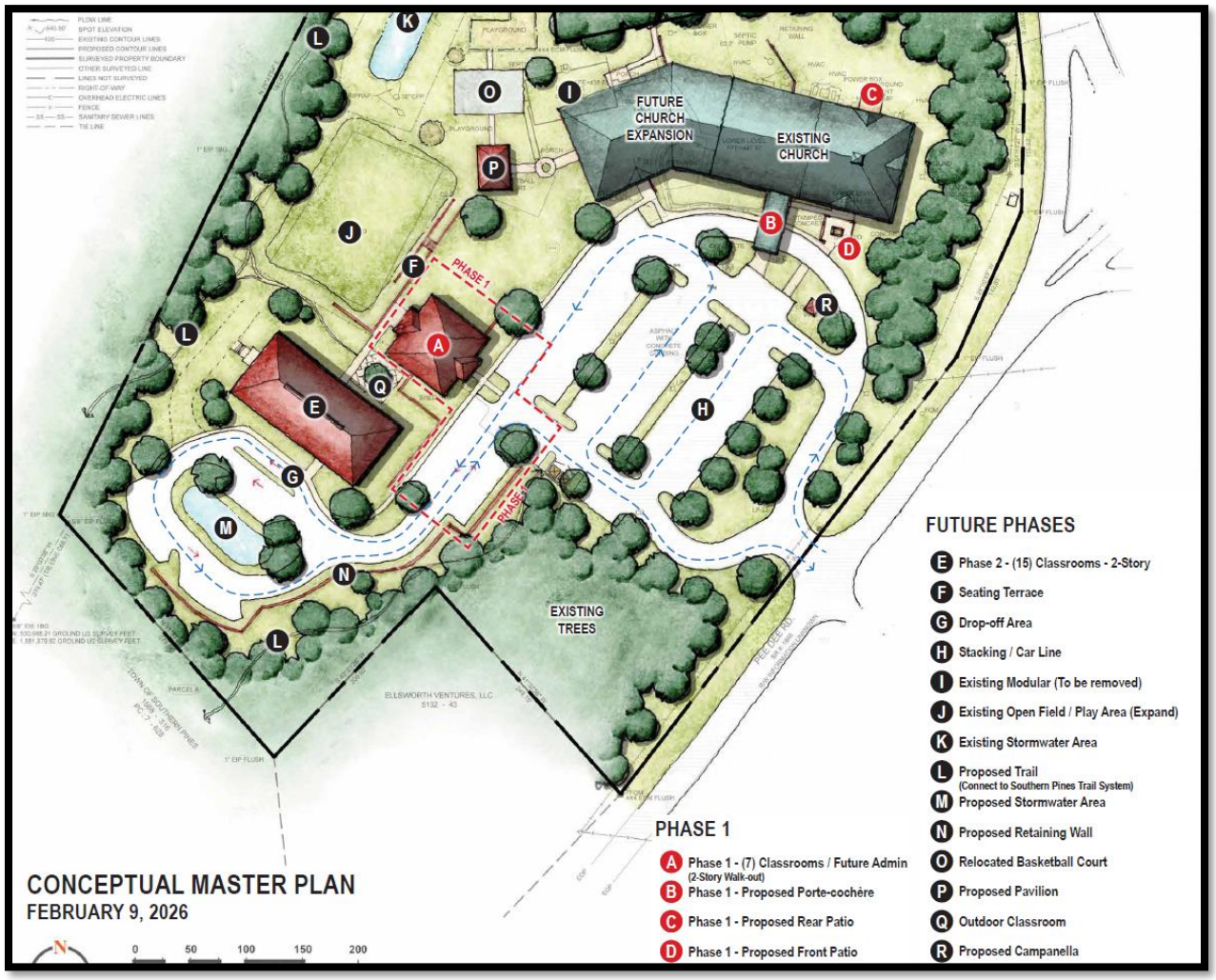


Figure 8. Conceptual Plan (See Full Plan in Attachments).



E. Applicant's Proposed Conditions

1. Land Use
   The proposed land uses are indicated below by LBCS Code:
   a. Religious Institution – Other (more than 250 seats) 6600
   b. Grade School – Elementary (PreK – 8th) 6121
   c. Grade School – Middle or Junior 6122

   The current uses for church and schools are not currently permitted within the RS-3 zoning district. The proposed conditional zoning will bring these uses into conformity with the Town of Southern Pines UDO.

2. Site Access
   a. Main access to the parcel will be provided by the existing access road from Pee Dee Road. All stacking / queueing for the school during drop-off and pick-up will be provided on-site.
3. Landscape / Buffers
   a. All landscaping and buffer requirements set forth in the UDO, including street trees, buffers, landscape screening, and parking / Vehicular Use Areas shall apply.
   b. A portion of the property is located in the Highway Corridor Overlay District – Urban Transition. The standards set forth in 3.6.5 shall apply for this portion of the property.
4. Open Space
   a. The proposed project will meet the required open space requirements per section 4.9 of the Town's UDO
5. Stormwater
   a. The property is located within a state regulated and protected drainage basin (WS-IIIP). There is an existing retention pond that collects stormwater for the existing church and parking areas. All proposed stormwater design will be consistent with all aspects of applicable local and state regulations for stormwater management and watershed protection. This will also include erosion and sedimentation control. Best management practices will be utilized in accordance with NCDEQ and shall be maintained as required. Final design and location of these systems will be completed at site plan review.
6. Utilities (Water / Sewer)
   a. The current property is served by both water and sewer from the Town of Southern Pines and is adequately available for the proposed development. Final layout and design of these utilities will be provided during final site plan approval and will meet all local utility regulations / design requirements.
7. Grading
   a. The overall property has rolling terrain that slopes towards the rear the property. In order to balance the site and maintain existing vegetation (where feasible), low retaining walls will be required. These locations will be determined during final engineering design.
8. Parking
   Off-street parking requirements shall apply for the following:
   a. Religious Institutions
      (1) space for every four seats in the portion of the church Building to be used

for services plus spaces for any residential use as determined in accordance with the parking requirements set forth above for residential uses, plus (1) space for every 200 square feet of Gross Floor Area designed to be used neither for services nor residential purposes.

b. Elementary / Middle Schools
(1.175) spaces per classroom in elementary schools.

9. Pedestrian Connections
    a. A natural trail path (min. 3' wide) will be provided from the project site to Whitehall Park, located west of the existing parcel. The final location will be determined based on coordination with the Town of Southern Pines, as well as final grading and engineering design.
10. Lighting
    a. All lighting on the property will follow the standards set forth in the Town of Southern Pines UDO (Section 4.8). Lighting levels within the parking areas will be provided to meet the UDO standards for safety.
11. Signage
    a. Any proposed signage will be designed in conformance with the Town of Southern Pines UDO (Section 4.6).
12. Site Plan
    a. Phase 1 Site Plan will include the new School Building (±9,000 sf) and associated parking as depicted on S100 (Exhibit C).
    b. Final building layouts / locations for future phases will be determined by engineering design based on architecture, grading, and utilities and shall meet the standards and conditions set forth by this application and the UDO. These future uses / buildings are proposed as depicted on the Overall Master Plan (Exhibit B)
13. Architecture
    a. Per Sections 2.26 and 4.10.4, commercial structures, including religious institutions, must comply with the Architectural Standards set forth in the UDO, and are to be approved via an Architectural Compliance Permit.
    b. All frontage zone requirements per 4.10.5 shall apply.

The applicant proposes to limit land uses to a religious institution and associated school uses, rather than allowing the full range of uses permitted within the General Business district. Through conditional zoning, the proposal brings the existing church and school operations into compliance with the Town's UDO while preventing broader commercial development. Additional conditions address potential impacts by requiring primary access from Pee Dee Road with on-site stacking for school traffic, compliance with open space, landscaping, and buffer standards. The site will utilize existing Town water and sewer infrastructure, meet required parking standards, and provide a pedestrian connection to Whitehall Park. Compliance with UDO standards for lighting, signage, architecture, and site plan review further ensures compatibility with the UDO.

II. STAFF REVIEW

Application Review Dates

1. Pre-Application with the Technical Review Committee: **November 25, 2025**
2. Additional Internal Technical Review Committee Review: **February 24, 2026**
3. Application Submitted**: February 10, 2026**
4. Application Deemed Complete: **February 17, 2026**

March 19, 2026 Planning Board Public Hearing Notice

- Publication: **March 04 & March 11, 2026**
- Mail: **March 03, 2026**
- Signage: **March 04, 2026**
- Internet: **February 25, 2026**

1. Process and Criteria for Review

When reviewing an application for rezoning, the hearing bodies (Planning Board and Town Council) shall consider the criteria as set forth in UDO §2.17.9. Furthermore, additional standards are expected of a Conditional Zoning District—a reclassification of property subject to specific conditions that ensure compatibility of the use with the use and enjoyment of neighboring properties—such as the one being proposed by the applicant. Conditional zoning is voluntary. Additionally, UDO §2.17.11(G) notes that "in approving a petition for the reclassification of property to a Conditional Zoning district, the petitioner, Planning Board and the Council may propose specific conditions to approval of the petition, but only those conditions approved by the Council and consented to by the petitioner in writing may be incorporated into the Conditional Zoning district."

2. Consistency with UDO §2.17.9, Zoning Map Amendment Criteria.

Each criterion is listed below in **bold,** followed by <u>underlined</u> staff comments.

(A) **Consistency.** Rezoning shall be consistent with the adopted Comprehensive Plan.

General Framework Map Designation: Area to Preserve. <u>These areas safeguard rural and environmentally-sensitive lands, protect open space and viewsheds, and limit future development primarily to very low-intensity uses such as large-lot homes, horse farms, park-related activities, and trails or greenways. Areas to Preserve may also include historic or cultural resources where protection of their integrity and context-sensitive development is paramount. The applicant states that the proposed structures will be located toward the rear of the property with building heights consistent with the Comprehensive Plan (recommended two story limit) and that the project will maintain connections to surrounding open space through trail connections to adjacent parks. Staff finds the narrative to be consistent with the intent of protecting the rural character and open space connections identified for Areas to Preserve.</u>

Conservation and Development Map Designation: Rural Living. <u>Rural Living areas are characterized by large lots, significant separation between buildings, and development that is integrated into the natural landscape with minimal grading and tree</u>

removal. Small nodes of commercial or institutional activity may occur at rural crossroads to serve the daily needs of nearby residents, provided they are designed at a small scale and reinforce the surrounding rural character. The applicant notes that the church and school are located at the intersection ('crossroads') of NC 22 and Pee Dee Road, functioning as a local institutional use serving nearby residents, and indicates that building placement and scale will remain compatible with the rural setting. Staff agree with the applicant's narrative, and finds the proposed expansion to be consistent with the Rural Living designation.

Character District Map Designation: Rural Living. The Rural Living Character District is defined by low-intensity development, irregularly shaped lots, large setbacks, and significant separation between buildings, often served by rural roads and private driveways. Homes and other structures are integrated into the landscape with natural features such as trees, pastures, and drainage patterns preserved where possible. The applicant states that new structures will be located toward the rear of the property to maintain large setbacks and will remain within the typical building height range identified in the Comprehensive Plan. Staff again agree with the applicant's narrative and find the proposed expansion to be consistent with the character and development patterns described for the Rural Living Character District.

Staff find that the proposed rezoning from RS-3 to GB-CD is generally consistent with the Southern Pines 2040 Comprehensive Plan. The property lies within the Rural Living Character District and contains an established church and school campus that has operated on the site since 2001 and 2014, respectively. The proposal also supports Comprehensive Plan policies encouraging reinvestment in existing areas and improved connectivity through the proposed trail connection to Whitehall at Reservoir Park.

(B) **Adverse Impacts on Neighboring Lands.** The Hearing Body shall consider the nature and degree of an adverse impact upon neighboring lands. Lots shall not be rezoned in a way that is substantially inconsistent with the uses of the surrounding area, whether more or less restrictive. The Town finds and determines that vast acreages of single-use zoning produces uniformity with adverse consequences, such as traffic congestion, air pollution, and social alienation. Accordingly, rezonings may promote mixed uses subject to a high degree of design control.

The proposed rezoning is unlikely to produce significant adverse impacts. The church campus has existed for more than two decades, and the proposal represents expansion of an existing institutional use rather than the introduction of a new land use. The applicant has included a Traffic Impact Analysis (TIA) which estimates an additional 80 A.M. peak-hour trips and an additional 48 PM peak-hour trips after the site is fully built-out. This represents 2% of traffic at the NC-22 and Pee Dee Road Intersection. The TIA did not recommend that any roadway improvements are warranted as a result of this proposal. Future development will remain subject to site plan review and other applicable regulations, unless otherwise noted in the applicant's list of conditions.

(C) **Suitability as Presently Zoned.** The Hearing Body shall consider the suitability or unsuitability of the Tract for its use as presently zoned. This factor, like the others, should be weighed in relation to the other standards, and instances can exist in which the land may be rezoned to meet public need, to reflect substantially changed conditions in the neighborhood, or to effectuate important goals, objectives and policies of the Comprehensive Plan or UDO.

The property is currently zoned RS-3, which does not permit the Religious Institution land use. Similarly, school uses are currently only permitted through Conditional Zoning Districts. The proposed conditional zoning district would allow these existing uses to remain and expand while bringing the property into compliance with the Unified Development Ordinance.

(D) **Health, Safety, and Welfare.** The amending ordinance must bear a substantial relationship to the public health, safety or general welfare, or protect and preserve historical and cultural places and areas. The rezoning may be justified, however, if a substantial public need or purpose exists, even if the private owner of the Tract will also benefit.

The proposed development will comply with applicable Town regulations related to utilities, stormwater management, building safety, and parking. The rezoning would formalize the existing campus and allow future improvements under current development standards.

(E) **Public Policy.** Certain public policies in favor of the rezoning may be considered. Examples include a need for affordable housing, economic Development, mixed-use Development, or sustainable environmental features, which are consistent with Neighborhood, area, or specific plans.

The proposal supports public policy goals encouraging reinvestment in existing institutional facilities and expanding connections to public open space. The proposed trail connection to Whitehall Park would improve access to the Town's recreational network.

(F) **Size of Tract.** The Hearing Body shall consider the size, shape, and characteristics of the Tract in relation to the affected neighboring lands. Amendatory ordinances shall not rezone a single Lot when there have been no intervening changes or other saving characteristics. Proof that a small Tract is unsuitable for use as zoned, or that there have been substantial changes in the immediate area, may justify ordinance rezoning.

The subject property contains approximately 11.31 acres, which provides sufficient area to accommodate the existing campus and potential future buildings, parking, and stormwater facilities based on staff's review of a conceptual site plan.

(G) **Other Factors.** The Hearing Body may consider any other factors relevant to a rezoning application under state law.

The property is located within the Cape Fear Little River (Intake No. 2) watershed, designated WS-IIIP, which limits built-upon area to 24 percent unless additional allocation is obtained.

Environmental review from J.H. Carter and Associates determined that no Red-cockaded Woodpecker cavity trees are present on the site.

(H) **Applicant Representations.** Except for rezoning requests submitted in accordance with the provisions herein for conditional zoning districts, the Hearing Body shall not consider any representations made by the petitioner that, if the change is granted, the rezoned property will be used for only one of the possible ranges of uses permitted in the requested classification. Rather, the Hearing Body shall consider whether the entire range of permitted uses in the requested classification is more appropriate than the range of uses in the existing classification.

Because the request is for a Conditional Zoning District, the applicant's proposed conditions, site plan, and conceptual plan may be considered as part of the rezoning review and approval process.

3. Agency Comments

Planning staff distributed the rezoning application for review to the following Agencies and Departments on **February 25, 2026:**

The Town of Southern Pines:

- Engineering and Public Works Department
- Utilities Department
- Fire Department
- Parks and Recreation Department

Outside Agencies:

- The Regional Land Use Advisory Commission (RLUAC)
- The United States Fish and Wildlife Services (USFWS)
- The Moore County Airport
- The Moore County Economic Development Partnership (MCEDP)
- The North Carolina Department of Transportation (NCDOT)

The initial pre-application was reviewed by the Technical Review Committee (TRC) on November 25, 2025. The Town's Engineering Department stated that a Traffic Impact Analysis (TIA) would be required. A TIA has been submitted and included with this report. As of the publication of this report, staff received "no comment" from the MCEDP and the comment that the development "may affect, but is not likely to adversely affect the RCW" from USFWS. Any additional comments received following this staff report's publication, but prior to the public hearing, will be shared during staff's presentation.

4. Staff Recommendation

Planning staff recommend approval of the proposed rezoning from RS-3 to GB-CD with the list of conditions as proposed by the applicant. Staff finds the proposal to be consistent with the 2040 Comprehensive Plan, and find that the application satisfies the rezoning criteria of UDO §2.17.9.

III. ATTACHMENTS

The following materials are provided as attachments to this staff memorandum:

1. Draft Planning Board Resolution
2. Application
3. Narrative and Conditions
4. Applicant's Plans
5. Red Cockaded Woodpecker Study
6. Traffic Impact Analysis

Additional documents related to this application including, but not limited to: the full Traffic Impact Analysis (TIA), property deeds, Authorization of Agent forms, email correspondence, meeting minutes, and adjacent property notification records are on file in the Town of Southern Pines Planning Office and available by public information request.

IV. PLANNING BOARD ACTION

The Planning Board shall consider the criteria for zoning map amendments found in UDO §2.17.9, including consistency with the 2040 Comprehensive Plan. Per North Carolina General Statute 160D-604(d), prior to consideration of the proposed map amendment by the Town Council, the Planning Board shall advise and comment on whether the proposed amendments are consistent with the Comprehensive Plan. The Planning Board shall provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendments by the Town Council.

To assist the Planning Board in performing this task, the following draft motions are provided.

* * *

I move that after reviewing the proposed Conditional Zoning District and after considering the criteria for approval of zoning map amendments found in UDO §2.17.9:

1. **The proposed rezoning is reasonable, in the public interest, and consistent with the criteria set forth in the UDO. The application is also consistent with the 2040 Comprehensive Plan for reasons set forth in Attachment One to the staff report.**

2. The proposed amendment to the Town of Southern Pines Zoning Map is reasonable, in the public interest, and generally consistent with the criteria set forth in the Town of Southern Pines Unified Development Ordinance §2.17.9. The application is also generally consistent

with the 2040 Comprehensive Plan for reasons set forth in Attachment A to the staff report. However, the following inconsistencies within the proposed conditions and/or site plan are present and prevent the application from fully complying with the rezoning criteria under UDO §2.17.9 and/or the 2040 Comprehensive Plan:

a.

-OR-

3. The requested rezoning is inconsistent with the 2040 Comprehensive Plan and is not a reasonable request for the reasons set forth in the Planning Board resolution that is attached to the Planning department Staff Report:

    a.

And, therefore, I move to:

1. **Recommend approval of Z-02-26 to the Town Council with the conditions as submitted by the applicant for the GB-CD Conditional Zoning District.**

    -OR-

2. Recommend approve approval of Z-02-26 to the Town Council, subject to a revised conditions list and/or site plan that addresses the issues identified by the planning board and listed in Attachment One.

    _____

    -OR-

3. Recommend denial of Z-02-26 to the Town Council for the following reasons:

    _____

PLANNING BOARD
RESOLUTION TO ADOPT A WRITTEN RECOMMENDATION
FOR ZONING MAP AMENDMENT APPLICATION
FOR A CONDITIONAL ZONING DISTRICT
Z-02-26

WHEREAS, Section 160D-701 of the North Carolina General Statutes specifies that zoning regulations shall be made in accordance with a comprehensive plan and shall be designed to protect the public health, safety and general welfare; and

WHEREAS, Section 160D-604 of the North Carolina General Statutes specifies that the Planning Board shall, with any ordinance amendment or zoning map amendment, advise and comment on whether the proposed action is consistent with the adopted comprehensive plan and on other matters as deemed appropriate by the Planning Board, and that the Planning Board shall provide this in the form of a written recommendation to the Town Council; and

WHEREAS, the Planning Board has reviewed the proposed zoning map amendment—which includes the written staff report and application materials showing the proposed district boundaries, and has conducted a public hearing on March 19, 2026, to listen to public comments, ask questions of the Town's planning staff, and consider zoning map amendment application #Z-02-26.

NOW, THEREFORE BE IT RESOLVED that the Planning Board finds and recommends to the Town Council that the proposed amendment to the Town of Southern Pines Zoning Map is reasonable, in the public interest, and consistent with the criteria set forth in the Town of Southern Pines Unified Development Ordinance §2.17.9. The Planning Board recommends that the Town Council approve the zoning map amendment request for the subject parcel, identified as PIN 858317203682 (PARID 99000100), totaling 11.38 acres, which rezones the property from Residential Single-Family Three (RS-3) to General Business Conditional Zoning District (GB-CD) with the following conditions, to which the applicant has consented:

1. Land Use
   The proposed land uses are indicated below by LBCS Code:
   d. Religious Institution – Other (more than 250 seats) 6600
   e. Grade School – Elementary (PreK – 8th) 6121
   f. Grade School – Middle or Junior 6122

2. Site Access
    a. Main access to the parcel will be provided by the existing access road from Pee Dee Road. All stacking / queueing for the school during drop-off and pick-up will be provided on-site.
3. Landscape / Buffers
    a. All landscaping and buffer requirements set forth in the UDO, including street trees, buffers, landscape screening, and parking / Vehicular Use Areas shall apply.
    b. A portion of the property is located in the Highway Corridor Overlay District – Urban Transition. The standards set forth in 3.6.5 shall apply for this portion of the property.
4. Open Space
    a. The proposed project will meet the required open space requirements per section 4.9 of the Town's UDO
5. Stormwater
    a. The property is located within a state regulated and protected drainage basin (WS-IIIP). There is an existing retention pond that collects stormwater for the existing church and parking areas. All proposed stormwater design will be consistent with all aspects of applicable local and state regulations for stormwater management and watershed protection. This will also include erosion and sedimentation control. Best management practices will be utilized in accordance with NCDEQ and shall be maintained as required. Final design and location of these systems will be completed at site plan review.
6. Utilities (Water / Sewer)
    a. The current property is served by both water and sewer from the Town of Southern Pines and is adequately available for the proposed development. Final layout and design of these utilities will be provided during final site plan approval and will meet all local utility regulations / design requirements.
7. Grading
    a. The overall property has rolling terrain that slopes towards the rear the property. In order to balance the site and maintain existing vegetation (where feasible), low retaining walls will be required. These locations will be determined during final engineering design.
8. Parking

    Off-street parking requirements shall apply for the following:

    a. Religious Institutions

    (1) space for every four seats in the portion of the church Building to be used for services plus spaces for any residential use as determined in accordance with the parking requirements set forth above for residential uses, plus (1) space for every 200 square feet of Gross Floor Area designed to be used neither for services nor residential purposes.

    b. Elementary / Middle Schools

    (1.175) spaces per classroom in elementary schools.

9. Pedestrian Connections
    a. A natural trail path (min. 3' wide) will be provided from the project site to Whitehall Park, located west of the existing parcel. The final location will be determined based on coordination with the Town of Southern Pines, as well as final grading and engineering design.

10. Lighting
    a. All lighting on the property will follow the standards set forth in the Town of Southern Pines UDO (Section 4.8). Lighting levels within the parking areas will be provided to meet the UDO standards for safety.
11. Signage
    a. Any proposed signage will be designed in conformance with the Town of Southern Pines UDO (Section 4.6).
12. Site Plan
    a. Phase 1 Site Plan will include the new School Building (±9,000 sf) and associated parking as depicted on S100 (Exhibit C).
    b. Final building layouts / locations for future phases will be determined by engineering design based on architecture, grading, and utilities and shall meet the standards and conditions set forth by this application and the UDO. These future uses / buildings are proposed as depicted on the Overall Master Plan (Exhibit B)
13. Architecture
    a. Per Sections 2.26 and 4.10.4, commercial structures, including religious institutions, must comply with the Architectural Standards set forth in the UDO, and are to be approved via an Architectural Compliance Permit.
    b. All frontage zone requirements per 4.10.5 shall apply.

ADOPTED this the 19th day of March, 2026.

_____
Matthew Walden, Chair

ATTEST:

_____
Cindy Williams
Secretary to the Planning Board

Southern Pines NORTH CAROLINA

Conditional Zoning District Application

Fee: $1,840.00 Date Received: _____ Case No.: Z-____-____

Project Information:

Street Address: 650 Pee Dee Road

PIN: 858317203682 Parcel ID: 99000100

Site Size: ±11.31 Acres Current Zoning: RS-3

Applicant:

Name(s): Sandhills Presbyterian Church (Scott Boulton)

Email: rscottboulton@gmail.com Phone: (910) 725-7038

Mailing Address: 650 Pee Dee Road, Southern Pines, NC 28387

Authorized Agent, if different from Applicant:

Name(s): Jeremy Sparrow (Longitude Planning Group)

Email: jsparrow@longitudeplanninggroup.com Phone: (734) 478-1917

Mailing Address: PO Box 1466, Southern Pines, NC 28388

Legal Property Owner(s), if different from Applicant:

Name(s): _____

Email: _____ Phone: _____

Mailing Address: _____

12.4.25

TO THE TOWN OF SOUTHERN PINES PLANNING BOARD AND TOWN COUNCIL:

I, the undersigned, do hereby make application to and petition the Planning Board and Town Council to approve a zoning map amendment to GB - Conditional Zoning District per the requirements of the Town of Southern Pines Unified Development Ordinance (UDO) §2.17. The information included is submitted in support of this application. I grant Town of Southern Pines staff, Planning Board and Town Council access to the subject property/properties while this zoning map amendment application is under review.

Date: 2026-02-09

R Scott Braxton, Elder

Applicant

PLANNING DEPARTMENT
TOWN OF SOUTHERN PINES
801 SE Service Road, Southern Pines, NC 28387
plan@southernpines.net **(910) 692-4003** www.southernpines.net

Sandhills Presbyterian Church

Conditional Zoning District Application

Project Narrative and Conditions
February 9, 2026

Project Narrative

Sandhills Presbyterian Church, located at 650 Pee Dee Road, is requesting a Conditional Zoning for the ±11.31 AC parcel (ParID 99000100) from RS-3 (Residential Single-Family) to GB-CZ (General Business – Conditional Zoning) for the use and operation of a church and Covenant Preparatory School (PreK-8). The original church was constructed in 2001 and has grown over the past several years and is currently seeking to expand its current facilities. In 2014, Sandhills Presbyterian commenced operations of Covenant Preparatory School, which currently operates within the existing church facilities and a modular classroom structure.

Covenant Preparatory School (PreK-8) operates out of Sandhills Presbyterian Church three (3) days a week (Monday, Wednesday and Friday) and has a current enrollment of 180 students and 12-15 faculty and staff. The school is looking to increase its enrollment to 220 students and 18-21 faculty and staff.

The overall goal for this application is to provide for future phases / expansion of the existing church, while expanding and bringing the existing school into compliance with the Town of Southern Pine's Unified Development Ordinance (UDO). Below is a summary of the proposed development and phasing of both the church and school, along with the proposed conditions. The future phases / timing of these projects have not yet been determined and will be based on need and funding of the projects.

A. Phase 1 – School Expansion

1. Construction of ±9,000 SF building to have seven (7) classrooms; 2-story walk-out
2. Remove existing modular classroom structure, upon completion of new facility
3. Provide additional parking for the school building
4. Construction of port-cochere at main entrance of church building
5. Construction of front / rear patios at church building
6. Provide service / dumpster / recycle area

B. Future Phases – Church / School Expansion

1. Construction of new 2-story school building (±30,000 SF) to provide additional classroom space and supporting facilities, along with additional parking and drop-off loop; and associated stormwater facilities
2. Convert Phase 1 School Building into administrative offices
3. Expand the existing church facilities with a multi-story structure; size TBD
4. Additional outdoor patio / gathering spaces for the church
5. Trail connections to Whitehall Park, which borders the existing property, will be provided
6. Construction of a campanella (bell tower) structure.

This property is located within the Cape Fear, Little River (Intake No. 2) watershed (WS-IIIP) which is designated as a high-quality watershed (HQW). This limits the proposed development to twenty-four (24) percent built-upon area. If the proposed development exceeds this threshold, the project may apply for the 5/70 exemption. The project has also been reviewed by Dr. J.H. Carter III and Associates and found no RCW cavity trees on the property. However, the proposed development is within 0.25 mile radius of SOPI 26. This information and site plan have been submitted to the USFWS as recommended by Dr. J.H. Carter and Associates (see RCW report / letter provided). There are no floodplains or wetlands located on the property.

The applicant and its design consultants have been working closely with the Town of Southern Pines over the last year, recently meeting on November 25, 2025 to review the proposed expansion project. Per the direction of the Town Planning Staff, we feel this application and the proposed conditional zoning district satisfies the overall goals and objectives of the Town.

A. Consistency

a. The proposed project is consistent with the Southern Pines 2040 Comprehensive Plan. Sandhills Presbyterian Church is located within the Rural Living character district. This district's primary focus is rural residential development, which includes large setbacks and irregularly shaped lots. However, this district also calls for development that meets the needs of local residents at rural crossroads. Sandhills Presbyterian Church stands at the crossroad of Pee Dee Road and Highway 22 (Central Drive), providing a local use as both a church and school ("Institutional" per pg. 77 of the 2040 Comprehensive Plan). The proposed structure(s) will be built towards the rear of the property to keep in line with the character district calling for large setbacks. No proposed building will be larger than the 1-3 stories mentioned on pg. 81 of the 2040 Comprehensive Plan. This development also looks to "capitalize on connections to open space and natural areas" (pg. 34), connecting via trails to the adjoining Whitehall Park and Elizabeth High Rounds Park.

B. Adverse Impacts

a. The proposed project as submitted will not have any adverse impacts on the adjoining properties.

C. Suitability as Presently Zoned

a. The property, as currently zoned, does not permit the use of the church and school. However, these uses have been present on this parcel since 2001 and 2014 respectively and are consistent with the 2040 Comprehensive Plan in the Rural Living Character District.

D. Health, Safety, and Welfare

a. There will be no impact to the health, safety, and welfare of the public based on the proposed development.

E. Public Policy

a. As noted in the Southern Pines 2040 Comprehensive Plan, Policy 4.2 includes development of a more cohesive trail system. "One way to expand the value of the current pedestrian and bicycle network in a cost-effective manner is through greater system connectivity." This plan includes trail connections to the existing Southern Pines trail system at Whitehall Park. Policy 5.2 also states that the Town should "Encourage Infill Development and Redevelopment for Specific Character Districts" which urges Town officials to advocate for infill development projects inside town limits as a way to reinvest in areas with existing infrastructure capacity.

F. Size of Tract

a. The proposed development has a site acreage of ±11.31 acres.

G. Other Factors

a. No other factors at this time.

H. Applicant Representations

a. Below is a list of conditions that are being proposed for the property. Most of the conditions will meet the current standards / requirements as set forth in the Town of Southern Pines UDO (Unified Development Ordinance), including land use, roads, site access, landscape / buffers, open space, stormwater, utilities, parking, pedestrian connections, lighting, signage, and architecture.

Proposed Conditions

Land Use

1. The proposed land uses are indicated below by LBCS Code:
    a. *Religious Institution – Other (more than 250 seats)* *6600*
    b. *Grade School - Elementary (PreK – 8th)* *6121*
    c. *Grade School – Middle or Junior* *6122*

2. *The current uses for church and schools are not currently permitted within the RS-3 zoning district. The proposed conditional zoning will bring these uses into conformity with the Town of Southern Pines UDO.*

Site Access

1. Main access to the parcel will be provided by the existing access road from Pee Dee Road. All stacking / queuing for the school during drop-off and pick-up will be provided on-site.

Landscape / Buffers

1. All landscaping and buffer requirements set forth in the UDO, including street trees, buffers, landscape screening, and parking / Vehicular Use Areas shall apply.
2. A portion of the property is located in the Highway Corridor Overlay District – Urban Transition. The standards set forth in 3.6.5 shall apply for this portion of the property.

Open Space

1. The proposed project will meet the required open space requirements per section 4.9 of the Town's UDO.

Stormwater

1. The property is located within a state regulated and protected drainage basin (WS-IIIP). There is an existing retention pond that collects stormwater for the existing church and parking areas. All proposed stormwater design will be consistent with all aspects of applicable local and state regulations for stormwater management and watershed protection. This will also include erosion and sedimentation control. Best management practices will be utilized in accordance with NCDEQ and shall be maintained as required. Final design and location of these systems will be completed at site plan review.

Utilities (Water / Sewer)

1. The current property is served by both water and sewer from the Town of Southern Pines and is adequately available for the proposed development. Final layout and design of these utilities will be provided during final site plan approval and will meet all local utility regulations / design requirements.

Grading

1. The overall property has rolling terrain that slopes towards the rear of the property. In order to balance the site and maintain existing vegetation (where feasible), low retaining walls will be required. These locations will be determined during final engineering design.

Parking

1. Off-street parking requirements shall apply for the following:
   a. *Religious Institutions*

      (1) space for every four seats in the portion of the church Building to be used for services plus spaces for any residential use as determined in accordance with the parking requirements set forth above for residential uses, plus (1) space for every 200 square feet of Gross Floor Area designed to be used neither for services nor residential purposes.

   b. *Elementary / Middle Schools*

      (1.175) spaces per classroom in elementary schools

Pedestrian Connections

1. A natural trail path (min. 3' wide) will be provided from the project site to Whitehall Park, located west of the existing parcel. The final location will be determined based on coordination with the Town of Southern Pines, as well as final grading and engineering design.

Lighting

1. All lighting on the property will follow the standards set forth in the Town of Southern Pines UDO (Section 4.8). Lighting levels within the parking areas will be provided to meet the UDO standards for safety.

Signage

1. Any proposed signage will be designed in conformance with the Town of Southern Pines UDO (Section 4.6).

Site Plan

1. Phase 1 Site Plan will include the new School Building (±9,000 sf) and associated parking as depicted on S100 (Exhibit C).
2. Final building layouts / locations for future phases will be determined by engineering design based on architecture, grading, and utilities and shall meet the standards and conditions set forth by this application and the UDO. These future uses / buildings are proposed as depicted on the Overall Master Plan (Exhibit B)

Architecture

1. Per Sections 2.26 and 4.10.4, commercial structures, including religious institutions, must comply with the Architectural Standards set forth in the UDO, and are to be approved via an Architectural Compliance Permit.
2. All frontage zone requirements per 4.10.5 shall apply

The descriptions and conditions as described above will apply to the entire project as indicated in the Conditional Zoning District application.

I, JOHN G. MATTHEWS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS/GNSS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:
(1) CLASS OF SURVEY: CLASS A
(2) POSITIONAL ACCURACY: <0.10'
(3) TYPE OF GPS FIELD PROCEDURE: RTK NETWORKS
(4) DATES OF SURVEY: OCTOBER 10, 2022
(5) DATUM/EPOCH: NAD83(2011)
(6) PUBLISHED/FIXED-CONTROL USE: NC CORS
(7) GEOID MODEL: ContinentalUS_NGS2012B
(8) COMBINED GRID FACTOR(S): 0.99986146
(9) UNITS: US SURVEY FEET

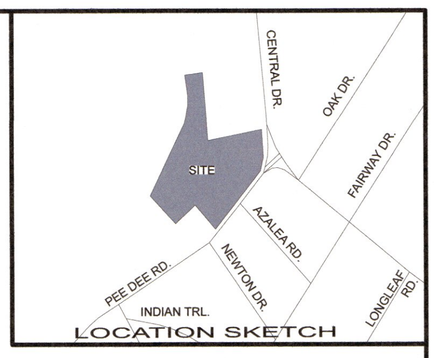
GRID TO GROUND SCALE POINT:
N(y): 530,596.42642355 US SURVEY FEET
E(x): 1,882,362.34227503 US SURVEY FEET

I, JOHN G. MATTHEWS, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN (SEE REFERENCE TABLE); THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN (SEE REFERENCE TABLE); AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600).

THIS 22ND DAY OF FEBRUARY, A.D., 2023.

PROFESSIONAL LAND SURVEYOR, L-5020

NORTH CAROLINA PROFESSIONAL SEAL L-5020 LAND SURVEYOR JOHN G. MATTHEWS



LEGEND OF SYMBOLS & ABBREVIATIONS

LP		LIGHT POLE
CP	△	COMPUTED POINT
EA	●	EXISTING AXLE
ECM	■	EXISTING CONCRETE MONUMENT
EIP	●	EXISTING IRON PIPE
EIS	●	EXISTING IRON STAKE
NIS	○	NEW IRON STAKE
		FIRE HYDRANT
		GAS VALVE
		POWER POLE
		SANITARY SEWER
		STORM MANHOLE
		TELEPHONE PEDESTAL
		CABLE PEDESTAL
		TRANSFORMER
		WATER METER
		WATER VALVE
		IRRIGATION CONTROL VALVE
		PROPOSED HVAC
RPZ		REDUCED PRESSURE ZONE
#AG		(#) INCHES ABOVE GRADE
#BG		(#) INCHES BELOW GRADE
CB		CATCH BASIN
CL		CENTERLINE
CO		CLEAN OUT
CMP		CORRUGATED METAL PIPE
CPP		CORRUGATED PLASTIC PIPE
DI		DROP INLET
EJB		ELECTRIC JUNCTION BOX
EM		ELECTRIC METER
EMN		EXISTING MAG NAIL
EOP		EDGE OF PAVEMENT
EPK		EXISTING PK NAIL
ERRS		EXISTING RAILROAD SPIKE
FOM		FIBER OPTIC MARKER
FL		FLUSH WITH GRADE
ICV		IRRIGATION CONTROL VALVE
MBS		MINIMUM BUILDING SETBACKS
N/F		NOW OR FORMERLY
NMN		NEW MAG NAIL
RCP		REINFORCED CONCRETE PIPE
R/W		RIGHT-OF-WAY
TBC		TOP BACK CURB
TOC		TOE OF CURB
YI		YARD INLET
		FLOW LINE
	540.50'	SPOT ELEVATION
	100	EXISTING CONTOUR LINES
		PROPOSED CONTOUR LINES
		SURVEYED PROPERTY BOUNDARY
		OTHER SURVEYED LINE
		LINES NOT SURVEYED
		RIGHT-OF-WAY
	E	OVERHEAD ELECTRIC LINES
	x	FENCE
	SS	SANITARY SEWER LINES
		TIE LINE

NORTH CAROLINA NAD 83' (2011)

1" EIP 1BG
N: 531,408.51 GROUND US SURVEY FEET
E: 1,882,835.85 GROUND US SURVEY FEET

N 78°29'23" E
412.55' (TIE LINE ONLY)

SANDHILLS CHILDREN'S CENTER 4795 - 319 PC : 7 - 536

4X4 ECM 5AG

N 78°25'24" E
140.99'

1" EIP FLUSH

N 03°21'02" W
86.04'

1" EIP FLUSH

N 03°32'25" W
145.96'

1" EIP FLUSH

N 09°05'43" E
128.66'

1" EIP 5BG

N 20°36'48" E
117.18'

1" EIP 1BG

N 26°41'54" E
141.47'

1" EIP 1BG

N 26°10'02" E
366.52'

1" EIP 5BG

5/8" EIP FLUSH

S 29°03'58" W
319.47' (TIE LINE ONLY)

5/8" EIS 1BG
N: 530,088.21 GROUND US SURVEY FEET
E: 1,881,879.82 GROUND US SURVEY FEET

N 41°33'24" W
279.84'

TOWN OF SOUTHERN PINES
1568 - 316
PC : 7 - 628

PARCEL A

1" EIP FLUSH

S 43°23'26" W
209.82'

ELLSWORTH VENTURES, LLC
5132 - 43

1" EIP FLUSH

N 41°32'26" W
249.75'

FOM
4X4 ECM FLUSH

EOP

EOP

S 04°36'43" E
428.11'

1" EIP 10AG

S 04°37'25" E
99.92'

4X4 ECM FLUSH

25.8'

N 04°55'21" W
527.55' (TIE LINE ONLY)

MOORE COUNTY CHILDRENS CENTER
563 - 306

N 78°28'10" E
415.43'

4X4 ECM FLUSH

S 06°21'01" E
120.07'

FOM

1" EIP FLUSH

S 01°13'27" W
115.83'

1" EIP FLUSH

S 24°09'49" W
142.85'

1" EIP FLUSH

S 37°37'05" W
497.03'

CENTRAL DRIVE
NC HWY 22
R/W INFORMATION UNKNOWN

PEE DEE RD.
SR # 1848
R/W INFORMATION UNKNOWN

TOWN OF SOUTHERN PINES
5492 - 240

16"CMP OUTLET

24"CMP OVERFLOW

RETENTION POND

RIPRAP

PLAYGROUND

RIPRAP

18"CPP

PLAYGROUND

HVAC

LP

SEPTIC PUMP

EXISTING BUILDING
FFE=438.63

PORCH

CONCRETE WALK

PORCH

BASKETBALL COURT

CB

BALL FIELD

SHED PAD

POWER BOX

SEPTIC PUMP
63.0'

RETAINING WALL

HVAC

HVAC

HVAC

POWER BOX

GROUND LIGHT

HEAT PUMP

HVAC

98.2'

LOWER LEVEL
FFE=447.97

EXISTING BUILDING

UPPER LEVEL
FFE=461.02

RETAINING WALL

LP

STAMPED CONCRETE

STAMPED CONCRETE

GROUND LIGHT

CONCRETE WALK

GROUND LIGHT

BRICK FOUNDATION AROUND SIGN

FOM

CONCRETE WALK

LP

CB

CB

CONCRETE WALK

ASPHALT WITH CONCRETE CURBING

CB

LP

LP

LP

FOM

CB

LP

LINE	BEARING	DISTANCE
L1	N 41°58'24" W	10.19'

REVISIONS:
02/21/2023 - LOCATE ADDITIONAL IMPROVEMENTS

NOTES:
1. ACREAGE DETERMINED BY COORDINATE METHOD
2. TAX PARCEL ID: 99000100
3. ZONING: RS-3
4. PUBLIC WATER SUPPLY WATERSHED: WS-IIIP
5. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE SEARCH AND IS SUBJECT TO ANY EASEMENTS OR CONVEYANCES OF RECORD.
6. NO ATTEMPTS MADE TO LOCATE UNDERGROUND UTILITIES
7. CONTOURS ARE GENERATED FROM LIDAR TAKEN FROM SPATIAL DATA DOWNLOAD WEBSITE.

ASBUILT SURVEY FOR:

SANDHILLS PRESBYTERIAN CHURCH

DECEMBER 22, 2022

TOWN OF SOUTHERN PINES
MCNEILL TOWNSHIP
MOORE COUNTY, NORTH CAROLINA

0 50 100 150

SCALE 1"=50'

REFERENCE TABLE:
DEED BOOK 1483, PAGE 100
PLAT CABINET 7, SLIDE 331
MOORE COUNTY REGISTRY

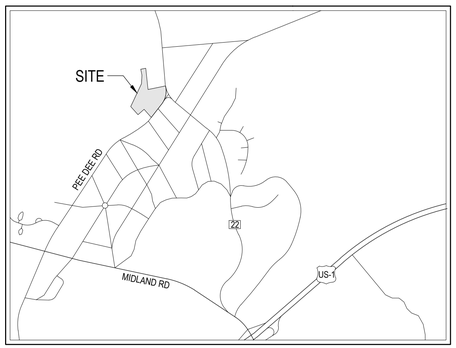
MINIMUM BUILDING SETBACKS PER UDO:
FRONT - 30'
SIDE - 15'
REAR - 30'

PROPERTY ADDRESS:
650 PEE DEE RD.
SOUTHERN PINES, NC 28387

OWNER'S ADDRESS:
SANDHILLS PRESBYTERIAN CHURCH
650 PEE DEE RD
SOUTHERN PINES, NC 28387

MATTHEWS LAND SURVEYING & MAPPING PLLC
FIRM LICENSE: P-1343
10 COURTHOUSE SQUARE
CARTHAGE, NC 28327
910-947-2671

JOB#: 11535



VICINITY MAP
(NOT TO SCALE)

2.0 TREE PROTECTION:

2.1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING DAMAGE TO EXISTING TREES LOCATED ALONG ACCESS AND HAUL ROADS, AND ADJACENT TO, OR WITHIN BUILDING CONSTRUCTION SITES AND MATERIAL AND EQUIPMENT STORAGE AREAS. THOSE TREES TO BE SAVED SHALL BE FLAGGED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

2.2 MATERIALS SHALL NOT BE STORED, NOR VEHICLES PARKED WITHIN THE DRIP-LINE OF THE TREE UNLESS AUTHORIZED BY LANDSCAPE ARCHITECT OR OWNER.

2.3 VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER EXPOSED ROOTS AND ROADS SHALL NOT BE LOCATED WITHIN THE DRIP-LINE OF TREES UNLESS APPROVAL IS OBTAINED FROM THE LANDSCAPE ARCHITECT OR OWNER.

2.4 NO CUTTING OR FILLING OF EXISTING GRADE, TRENCHING OR PRUNING SHALL OCCUR UNLESS SPECIFICALLY DIRECTED BY THE CONSTRUCTION DOCUMENTS, OR WITH WRITTEN CONSENT BY THE LANDSCAPE ARCHITECT OR THE OWNER.

2.5 NO BURNING OF TRASH IS ALLOWED WITHIN 75' OF EXISTING TREES AND CARE SHALL BE TAKEN TO PREVENT ANY SMOKE DAMAGE TO TREES.

LINE	BEARING	DISTANCE
L1	N 41°58'24" W	10.19'

LEGEND:

= PROPERTY BOUNDARY
= EXISTING MAJOR CONTOUR
= EXISTING MINOR CONTOUR
= EXISTING TREE CANOPY

CAUTION

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT DEPICTED ON THESE PLANS. THE LANDSCAPE ARCHITECT AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE PROJECT LIMITS. ALL DAMAGE MADE TO THE EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

CENTRAL DRIVE
NC HWY 22
R/W INFORMATION UNKNOWN

PEE DEE RD.
SR #: 1849
R/W INFORMATION UNKNOWN

SANDHILLS CHILDREN'S CENTER
DB: 649, DP: 282
ZONING: FRR
PARID: 00036871
PIN: 858318216059

SANDHILLS CHILDREN'S CENTER
DB: 4795, DP: 319
ZONING: FRR-CD
PARID: 99000385701
PIN: 858318216456

TOWN OF SOUTHERN PINES
DB: 5492, DP: 240
ZONING: RE
PARID: 99000591
PIN: 858317116814

ELLSWORTH VENTURES, LLC
DB: 5132, DP: 43
ZONING: RS-3
PARID: 00033029
PIN: 858300203172

TOWN OF SOUTHERN PINES
DB: 1568, DP: 316
ZONING: RS-3
PARID: 99000588
PIN: 858317200048

EXISTING TREE CANOPY
25' YARD / BUFFER
EXISTING MODULAR (TO BE REMOVED)
20' LANDSCAPE BUFFER
50' PARKING SETBACK
75' BUILDING SETBACK
SERVICE AREA
RETAINING WALL (TYP.)
FUTURE PHASE
PHASE 1
EXISTING BUILDING
EXISTING CHURCH
CHURCH EXPANSION
EXISTING TREES
PLAYGROUND
BASKETBALL COURT
BALL FIELD
RETENTION POND
SEED PAD
HCOD - URBAN TRANSITIONED CORRIDOR

PROPERTY INFORMATION	
PROPERTY OWNER(S):	
SANDHILLS PRESBYTERIAN CHURCH	
650 PEE DEE ROAD	
SOUTHERN PINES, NC 28387	
APPLICANT:	
SANDHILLS PRESBYTERIAN CHURCH	
650 PEE DEE ROAD	
SOUTHERN PINES, NC 28387	
TOTAL ACREAGE:	
±11.31 ACRES	
PARCEL INFORMATION:	
PARCEL ID:	99000100
PIN:	858317203682
DEED BOOK:	SOS
DEED PAGE:	0429386
EXISTING ZONING:	RS-3

ZONING INFORMATION	
PROPOSED ZONING:	
GB-CZ	
REQUIRED SETBACKS:	
FRONT:	NONE
FRONT: (FROM STREET CENTERLINE)	NONE
EXTERIOR SIDE:	NONE
EXTERIOR SIDE: (FROM STREET CENTERLINE)	NONE
INTERIOR SIDE:	NONE
REAR:	NONE
MAX. BUILT UPON SURFACE (WS-III):	
MAX. BUILT UPON SURFACE:	24%
MAX. BUILDING HEIGHT:	
HEIGHT:	50 FT

OPEN SPACE CALCULATIONS	
AREA OF OPEN SPACE:	± 3.54 AC
DIVIDED BY TOTAL SITE AREA:	± 11.31 AC
EQUALS PERCENT OPEN SPACE:	**31.25%**
MINIMUM OPEN SPACE REQUIRED:	**10.00%**

ADDITIONAL PARKING CALCULATIONS	
NUMBER OF CLASSROOMS	7
MULTIPLY BY 1.175	X1.175
EQUALS NUMBER OF SPACES REQUIRED	**8 SPACES**
NUMBER OF SPACES PROVIDED	**12 SPACES**

HIGHWAY CORRIDOR OVERLAY DISTRICT URBAN TRANSITION	
YARD / BUFFER DIMENSIONS, ROADWAYS:	
BUILDING SETBACK	75 FT
PARKING AREA SETBACK:	50 FT
LANDSCAPE BUFFER:	50 FT
YARD / BUFFER DIMENSIONS, SIDE AND REAR YARDS:	
FROM RESIDENTIAL ZONES:	50 FT
FROM NON-RESIDENTIAL ZONES:	25FT
MAX. BUILT UPON SURFACE:	
MAX. BUILT UPON SURFACE:	65%
MAX BUILDING FOOTPRINT:	30%
MAX. BUILDING HEIGHT:	
HEIGHT:	35 FT

FLOODPLAIN DATA
THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X' (AREAS OF MINIMAL FLOODING)
THE LOCATION OF THE 100-YEAR FLOODPLAIN PER NFIP FIRM COMMUNITY
PANEL(S) NO: 8583
MAP(S): 3710858300J
DATE: OCTOBER 17TH 2006

IMPERVIOUS AREA CALCULATIONS	
EXISTING IMPERVIOUS	
BUILDINGS	±19,260 SF
PARKING	±57,615 SF
SIDEWALKS	±8,012 SF
WALLS	±191 SF
TOTAL AREA IMPERVIOUS	**±85,078 SF**
DIVIDED BY TOTAL SITE AREA	**/±492,871 SF**
EQUALS PERCENT IMPERVIOUS	**17.26%**
PHASE 1 IMPERVIOUS	
BUILDINGS	±33,643 SF
PARKING	±62,679 SF
SIDEWALKS	±8,085 SF
WALLS	±68 SF
TOTAL AREA IMPERVIOUS	**±104,475 SF**
DIVIDED BY TOTAL SITE AREA	**/±492,871 SF**
EQUALS PERCENT IMPERVIOUS	**21.20%**

*FUTURE PHASE WILL REQUIRE A WATERSHED ALLOCATION ABOVE 24%

811 Know what's below. Call before you dig.

SCALE: 1" = 50'-0"

EXHIBIT C

LONGITUDE planning group
10 PARKER LANE (SUITE 3)
PINEHURST, NC 28374
P: 910-420-1146
W: www.longitudeplanning.com

SANDHILLS PRESBYTERIAN CHURCH

650 PEE DEE ROAD
SOUTHERN PINES, NORTH CAROLINA

REVISIONS:

SHEET TITLE:

SITE PLAN (PHASE 1)

DATE: 2026-02-09
DESIGNED BY: JWS
DRAWN BY: TTK

SCALE: 1" = 50'
PROJECT #: LPG2024-0006

SHEET #:

S100

I, JOHN G. MATTHEWS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS/GNSS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:
(1) CLASS OF SURVEY: CLASS A
(2) POSITIONAL ACCURACY: <0.10'
(3) TYPE OF GPS FIELD PROCEDURE: RTK NETWORKS
(4) DATES OF SURVEY: OCTOBER 10, 2022
(5) DATUM/EPOCH: NAD83(2011)
(6) PUBLISHED/FIXED-CONTROL USE: NC CORS
(7) GEOID MODEL: ContinentalUS_NGS2012B
(8) COMBINED GRID FACTOR(S): 0.99986146
(9) UNITS: US SURVEY FEET

GRID TO GROUND SCALE POINT:
N(y): 530,596.42642355 US SURVEY FEET
E(x): 1,882,362.34227503 US SURVEY FEET

I, JOHN G. MATTHEWS, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN (SEE REFERENCE TABLE); THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN (SEE REFERENCE TABLE); AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600).

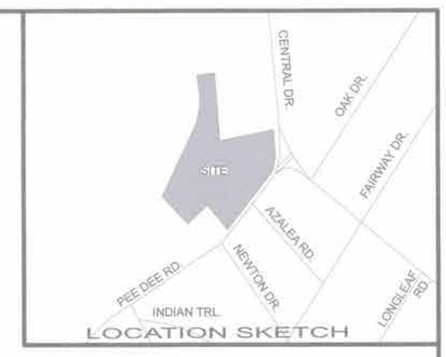
THIS 22ND DAY OF FEBRUARY, A.D., 2023.

PROFESSIONAL LAND SURVEYOR, L-5020

NORTH CAROLINA PROFESSIONAL SEAL L-5020 LAND SURVEYOR JOHN G. MATTHEWS

LEGEND OF SYMBOLS & ABBREVIATIONS

LP		LIGHT POLE
CP	△	COMPUTED POINT
EA	●	EXISTING AXLE
ECM	■	EXISTING CONCRETE MONUMENT
EIP	●	EXISTING IRON PIPE
EIS	●	EXISTING IRON STAKE
NIS	○	NEW IRON STAKE
	●	FIRE HYDRANT
	ⓖ	GAS VALVE
	○	POWER POLE
	Ⓢ	SANITARY SEWER
	Ⓢ	STORM MANHOLE
	Ⓣ	TELEPHONE PEDESTAL
	T	CABLE PEDESTAL
	TR	TRANSFORMER
	WM	WATER METER
	⋈	WATER VALVE
	⊗	IRRIGATION CONTROL VALVE
	H	PROPOSED HVAC
RPZ		REDUCED PRESSURE ZONE
#AG		(#) INCHES ABOVE GRADE
#BG		(#) INCHES BELOW GRADE
CB		CATCH BASIN
CL		CENTERLINE
CO		CLEAN OUT
CMP		CORRUGATED METAL PIPE
CPP		CORRUGATED PLASTIC PIPE
DI		DROP INLET
EJB		ELECTRIC JUNCTION BOX
EM		ELECTRIC METER
EMN		EXISTING MAG NAIL
EOP		EDGE OF PAVEMENT
EPK		EXISTING PK NAIL
ERRS		EXISTING RAILROAD SPIKE
FOM		FIBER OPTIC MARKER
FL		FLUSH WITH GRADE
ICV		IRRIGATION CONTROL VALVE
MBS		MINIMUM BUILDING SETBACKS
N/F		NOW OR FORMERLY
NMN		NEW MAG NAIL
RCP		REINFORCED CONCRETE PIPE
R/W		RIGHT-OF-WAY
TBC		TOP BACK CURB
TOC		TOE OF CURB
YI		YARD INLET
		FLOW LINE
		SPOT ELEVATION
		EXISTING CONTOUR LINES
		PROPOSED CONTOUR LINES
		SURVEYED PROPERTY BOUNDARY
		OTHER SURVEYED LINE
		LINES NOT SURVEYED
		RIGHT-OF-WAY
	E	OVERHEAD ELECTRIC LINES
	X	FENCE
	SS SS	SANITARY SEWER LINES
		TIE LINE



LOCATION SKETCH

CONCEPTUAL MASTER PLAN
FEBRUARY 9, 2026

N

0 50 100 150 200

SCALE: 1" = 50'

DISCLAIMER:
THIS PLAN IS CONCEPTUAL IN NATURE AND IS SUBJECT TO CHANGE BASED ON FINAL DESIGN AND ENGINEERING

PHASE 1

- **A** Phase 1 - (7) Classrooms / Future Admin (2-Story Walk-out)
- **B** Phase 1 - Proposed Porte-cochère
- **C** Phase 1 - Proposed Rear Patio
- **D** Phase 1 - Proposed Front Patio

FUTURE PHASES

- **E** Phase 2 - (15) Classrooms - 2-Story
- **F** Seating Terrace
- **G** Drop-off Area
- **H** Stacking / Car Line
- **I** Existing Modular (To be removed)
- **J** Existing Open Field / Play Area (Expand)
- **K** Existing Stormwater Area
- **L** Proposed Trail (Connect to Southern Pines Trail System)
- **M** Proposed Stormwater Area
- **N** Proposed Retaining Wall
- **O** Relocated Basketball Court
- **P** Proposed Pavilion
- **Q** Outdoor Classroom
- **R** Proposed Campanella

LONGITUDE planning group

EXHIBIT B

RED-COCKADED WOODPECKER FORAGING HABITAT ANALYSIS AND BIOLOGICAL ASSESSMENT FOR IMPROVEMENTS TO SANDHILLS PRESBYTERIAN CHURCH, SOUTHERN PINES, MOORE COUNTY, NORTH CAROLINA

27 January 2025

Prepared By:

Ms. Alicia Jackson and Dr. J.H. Carter III
Dr. J.H. Carter III & Associates, Inc.
Environmental Consultants
515 F Midland Road
Southern Pines, North Carolina 28387

Submitted to:

Mr. R. Scott Boulton
Sandhills Presbyterian Church
650 Pee Dee Road
Southern Pines, NC 28387

RED-COCKADED WOODPECKER
FORAGING HABITAT ANALYSIS AND BIOLOGICAL ASSESSMENT
FOR IMPROVEMENTS TO
SANDHILLS PRESBYTERIAN CHURCH,
SOUTHERN PINES, MOORE COUNTY, NORTH CAROLINA

1. INTRODUCTION

Sandhills Presbyterian Church is proposing to expand their existing church building and construct additional facilities on their 11.38 acre property on Pee Dee Road, Southern Pines, Moore County, North Carolina (NC). The proposed project will impact foraging habitat associated with an active cluster (SOPI 26) of the federally Threatened red-cockaded woodpecker (*Dryobates borealis*) (RCW). This assessment evaluates the impacts of this project on the RCW pursuant to Section 9 of the Endangered Species Act (ESA), as amended.

2. PROJECT AREA

The project is located in the Greater Sandhills of south-central NC (Figure 1), an area characterized by pine-forested, gently rolling topography and sandy soils. Elevations in the immediate project area range from 400-500 feet (ft.) above mean sea level. Upland soils are well drained and consist predominantly of Candor sand and Ailey, Gilead and Vaucluse loamy sands (US Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) 2019). The most widespread wetland soil is Bibb loam. The project area is located in the Cape Fear River Basin. Major hydrological features include Reservoir Park Lake, Mill Creek and unnamed tributaries thereof.

Historically, upland vegetative communities in the project area were predominantly Xeric Sandhill Scrub, Pine-Scrub Oak Sandhill and Mesic Pine Savanna. The most widespread palustrine communities were Streamhead Pocosin and Coastal Plain Small Stream Swamp.

The Xeric Sandhill Scrub community had a longleaf pine (*Pinus palustris*) overstory, turkey oak (*Quercus laevis*) understory and a Carolina wiregrass (*Aristida stricta*) ground cover. It occurred on very dry sandy sites such as ridges. The Pine-Scrub Oak Sandhill community had

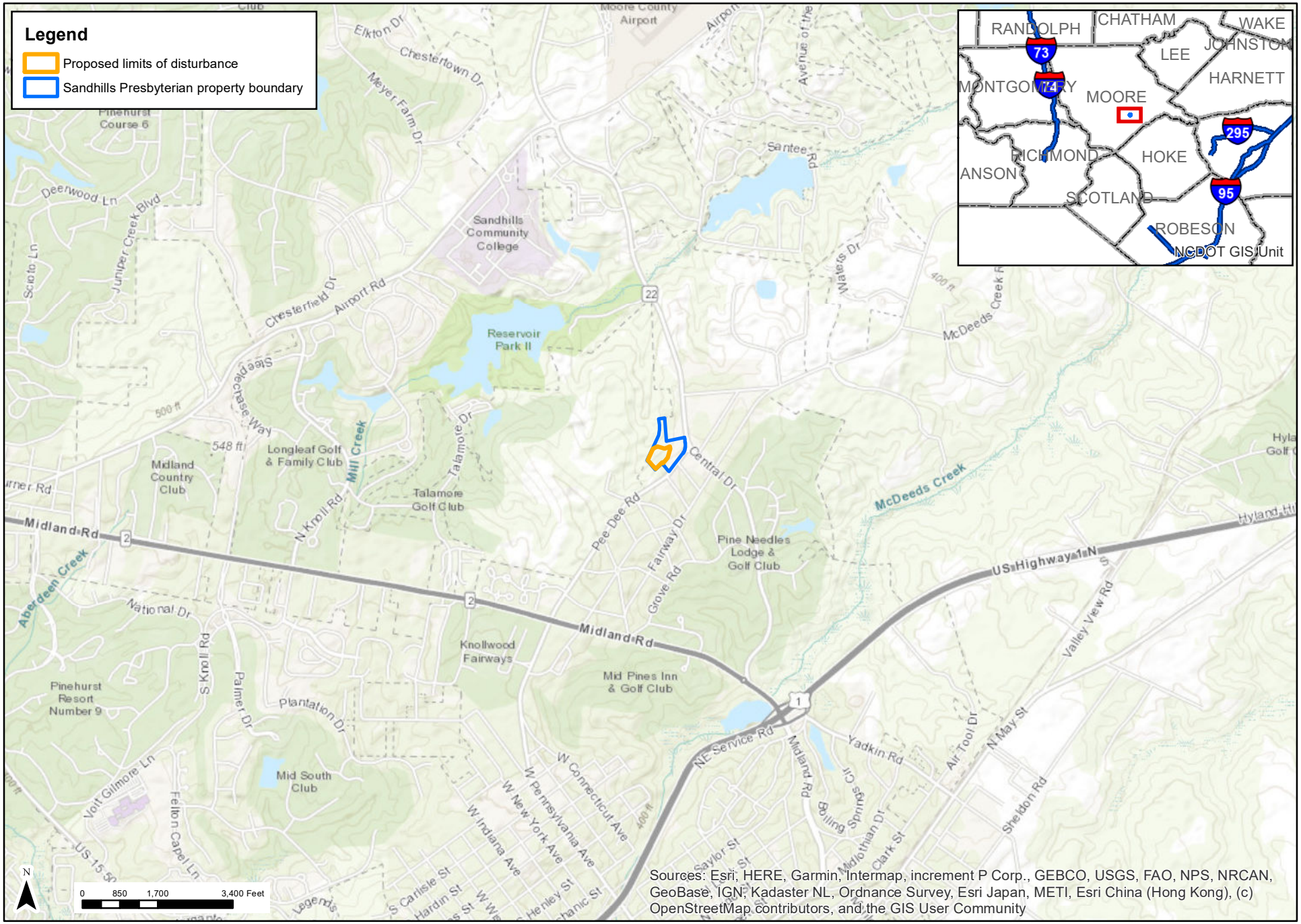


Figure 1. Location of the Sandhills Presbyterian Church, Southern Pines, Moore County, North Carolina.

a longleaf pine overstory, mixed scrub oak (*Quercus* spp.) or xeric hardwood understory and an often-diverse ground cover dominated by Carolina wiregrass.

Mesic Pine Savanna on frequently burned, undisturbed sites typically had a canopy of longleaf pine and an open or sparse midstory of mesic hardwoods, especially sweetgum (*Liquidambar styraciflua*). The ground cover was dominated by Carolina wiregrass and a very diverse assemblage of herbaceous plants. In unburned or rarely burned sites, the midstory was sparse to dense and the ground cover was sparser and less diverse, sometimes dominated by bracken fern (*Pteridium latiusculum*).

Streamhead Pocosins occurred in small drainages, on poorly drained flats and along some of the larger streams. Dense thickets of shrubs and vines characterized this habitat, along with an overstory of pond pine (*P. serotina*), sometimes mixed with loblolly pine (*P. taeda*), tulip poplar (*Liriodendron tulipifera*), swamp blackgum (*Nyssa biflora*) and red maple (*Acer rubrum*). Typical understory vegetation consisted of swamp red bay (*Tamala palustris*), fetterbush (*Lyonia lucida*), sweet gallberry (*Ilex coriacea*), inkberry (*I. glabra*), titi (*Cyrilla racemiflora*), sweet pepperbush (*Clethra alnifolia*), switch cane (*Arundinaria tecta*) and laurel-leaved greenbrier (*Smilax laurifolia*). Cinnamon fern (*Osmundastrum cinnamomeum*) was common in the sparse herb layer. Small stands of Atlantic white cedar (*Chamaecyparis thyoides*) sometimes occurred in these communities.

Coastal Plain Small Stream Swamp communities were found along small to medium-sized streams and were predominantly forested with swamp blackgum, red maple, tulip poplar and pond pine. Midstory species included red maple, sweetbay magnolia (*Magnolia virginiana*) and titi and understory species included coastal fetterbush (*Leucothoe axillaris*), Virginia sweetspire (*Itea virginica*) and yellowroot (*Xanthorhiza simplicissima*). The ground cover was typically sparse with cinnamon fern and netted chain-fern (*Lorinseria areolata*).

The Sandhills area contains the second largest metapopulation of RCWs and is a designated Primary Core Recovery Population (US Fish and Wildlife Service (USFWS) 2003). This metapopulation includes RCWs on the Fort Liberty Military Reservation, Camp Mackall, Sandhills Game Land (SGL), Calloway Tract, McCain Tract, Carver's Creek State Park, Weymouth Woods Sandhills Nature Preserve and private lands around Southern Pines and Pinehurst (SOPI). In 2005, the Sandhills East Primary Core Population, which includes Fort Liberty, reached its population goal of 350 potential breeding groups (pbgs) (USFWS 2006) and

the Sandhills West Essential Support Population, which includes the SGL and Camp Mackall, reached its population goal of 100 pbgs in 2002 (NC Sandhills Conservation Partnership, unpublished data).

3. PROJECT SITE

The project site is located on Pee Dee Road (Rd.) (State Route (SR) 1848) just west of its convergence with NC Highway (Hwy.) 22 in Southern Pines, Moore County, NC (Figure 2). The site is bordered by the Sandhills Children's Center to the north, the Town of Southern Pines' Whitehall at Reservoir Park to the west and southwest, a private parcel to the south and SR 1848 and Hwy. 22 to the east.

4. PROJECT DESCRIPTION

Proposed construction on the Sandhills Presbyterian campus include construction of 2 new buildings with classrooms and administrative offices, expansion of the church and a pavilion (Figure 2). Additional improvements will include a relocated basketball court, a new stormwater pond, new parking areas, an outdoor classroom and a walking trail to connect with the Southern Pines trail system. Construction will be completed in phases, beginning with one classroom building and associated parking.

5. METHODS

Natural vegetative communities were classified according to Schafale (2023) and plant nomenclature follows Weakley et. al (2024).

5.1. RCW Survey

All cavity trees associated with Cluster SOPI 26 were visited by JCA or Sandhills Ecological Institute (SEI) biologists in the spring and summer of 2024 and their activity status and other attributes were updated.

The Sandhills Presbyterian Church property, the adjacent Town of Southern Pines property and additional areas within 0.5 mile of the affected RCW cluster (SOPI 26) were surveyed for RCW cavity trees in October 2024 by a qualified JCA biologist (JCA 2024a, b).

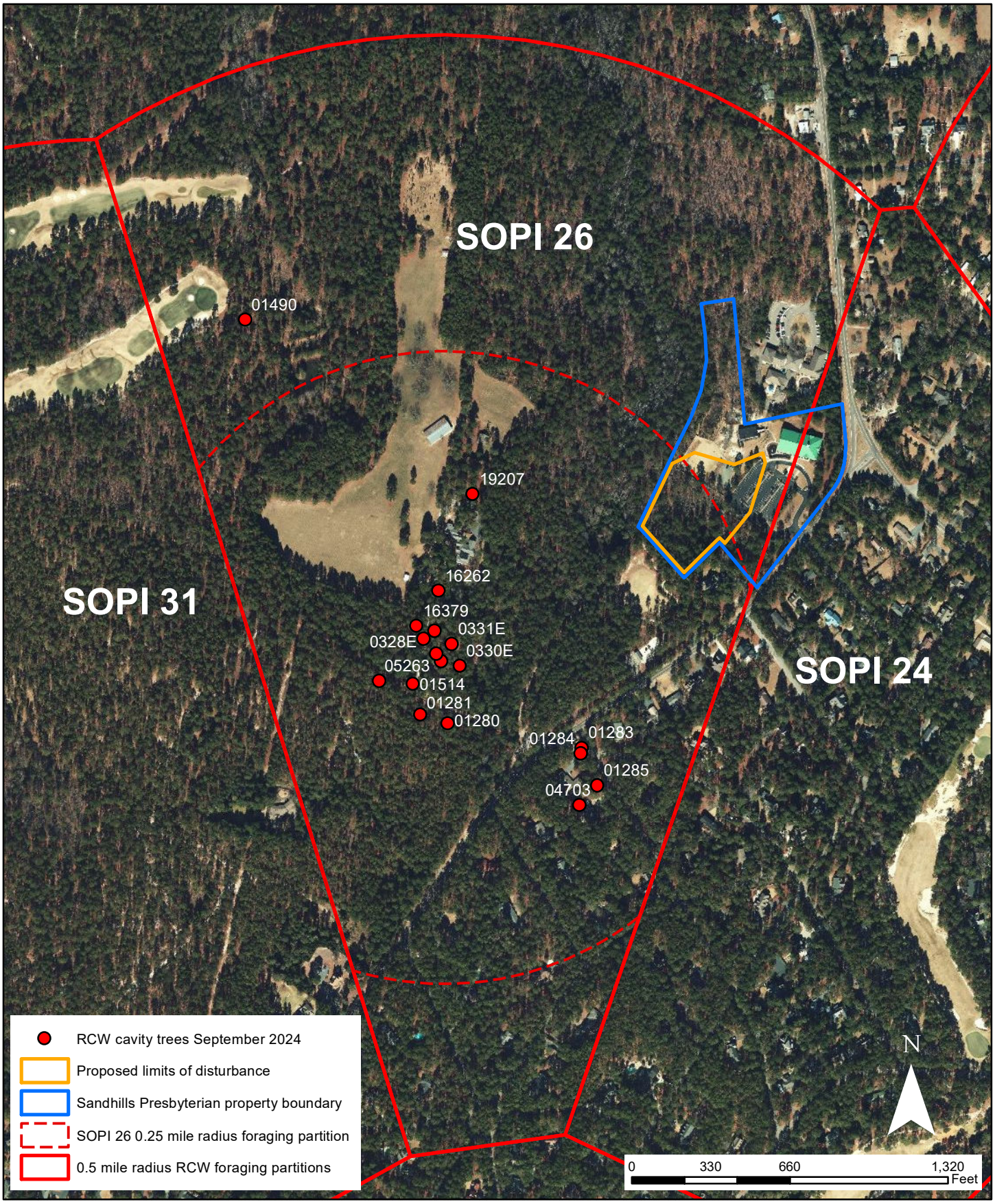


Figure 2. Location of the proposed limits of disturbance for improvements to Sandhills Presbyterian Church, Southern Pines, Moore County, North Carolina. Also shown are cavity trees and the foraging habitat partition associated with red-cockaded woodpecker (*Dryobates borealis*) (RCW) SOPI Cluster 26.

Surveys were conducted and transects spaced so that all potential RCW nesting habitat (defined as pine or pine-hardwood stands potentially containing pines ≥ 60 years old) was viewed at least once (USFWS 2003).

5.2. Foraging Habitat Analysis

A foraging habitat analysis (FHA) was completed for SOPI 26 in October 2024 for an unrelated project (JCA 2024a). North-south transects were plotted on aerial photography 5 chains apart (1 chain = 66 ft.) within the 0.5-mile radius RCW foraging habitat partition. Sample plots were placed 5 chains apart along the transect lines. Foraging substrate was measured with a 10-factor basal area (BA) prism using the prism-plot method. Pine BA, the number of pine stems ≥ 4 inches in diameter at breast height (dbh) in 2-inch diameter classes and the age of a representative dominant pine were obtained in each plot.

Stands were delineated in the field on aerial photographs according to characteristics such as pine age or density. Hardwood encroachment in a given pine stand was assessed by the density and height of the midstory in accordance with the 2003 RCW Recovery Plan (USFWS 2003) and its designation of quality requirements for RCW foraging habitat. Determining midstory density was subjective, but followed these basic criteria: a stand with a sparse hardwood midstory had few or no hardwoods present, a stand with a dense hardwood midstory had limited visibility and movement through the stand was difficult, and a stand with a moderately dense hardwood midstory was intermediate. Each habitat type was further subdivided according to hardwood midstory height. Midstory hardwoods less than 7 ft. in height were considered low, hardwoods 7-15 ft. high were considered medium and hardwoods more than 15 ft. high were considered tall.

Impacts were assessed pursuant to Section 9 of the Endangered Species Act, as amended, using the 2003 RCW Recovery Plan – Standard for Managed Stability (SMS) foraging habitat guidelines (USFWS 2003). The SMS requires a minimum of 3,000 square feet ($ft.^2$) of pine BA in stems ≥ 10 inches dbh on at least 75 acres of good quality foraging habitat as defined below (USFWS 2003).

1. Pine stands must be at least 30 years of age or older.
2. Average BA of pines ≥ 10 inches dbh should be between 40 and 70 $ft.^2$/acre.

3. Average BA of pines < 10 inches dbh should be less than 20 ft.^{2}/acre.
4. No hardwood midstory exists, or if a midstory is present, it must be sparse and less than 7 ft. in height.
5. Total stand BA, including overstory hardwoods, should be < 80 ft.^{2}/acre.

Additionally, it is recommended that all land counted as foraging habitat be within 200 ft. of another foraging stand or the cluster and all stands counted as foraging habitat be within 0.25 mile of the cluster (USFWS 2003).

USFWS guidance (W. McDearman, USFWS, pers. comm.) since the 2003 Recovery Plan has established the following clarifications of the total stand BA requirement:

- Overstory hardwood BA must be ≤ 10 ft.^{2}/acre.
- Total stand BA can exceed 80 ft.^{2}/acre if the maximum limits for overstory hardwood BA and pines < 10 inches dbh are not exceeded, and the BA in pines 10-14 inches dbh is 40-70 ft.^{2}/acre (in other words, the excess BA is comprised of pines ≥14 inches dbh) (W. McDearman, USFWS, personal communication).

Pine stands that met the SMS overstory guidelines and had a sparse midstory, a moderately dense midstory that was low in height or a dense midstory that was low in height were considered "suitable" foraging habitat.

"Potentially suitable habitat" was described as stands that met all minimum requirements, but exceeded the maximum limits for pine BA in certain dbh classes, hardwood midstory density/height and/or overstory hardwood density. These stands have the necessary pine BA and could meet the SMS with midstory removal, prescribed burning and/or thinning. Stands with suitable overstory characteristics containing a moderately dense or dense midstory that was moderate or tall in height were categorized as potentially suitable.

All pine-dominated stands that did not fall into the suitable or potentially suitable categories were classified as "future potential habitat." These stands will require time and management to meet the SMS requirements.

Foraging habitat available for a cluster was first evaluated using a 0.25-mile radius foraging partition. If the minimum SMS requirements were not met within the 0.25-mile radius partition, a 0.50 mile radius partition was used.

RCW foraging habitat separated by more than 200 ft. from other foraging habitat was considered non-contiguous and was not counted as available habitat (USFWS 2003).

The acreage for each stand was calculated using ArcGIS software. These acreages were multiplied by the average pine BA and stems per acre calculated for each stand to determine the total amount of foraging substrate available within the foraging habitat partition.

Foraging habitat impacts within the RCW partition were calculated using project designs and input from Longitude Planning Group, PLLC.

6. RESULTS

6.1. RED-COCKADED WOODPECKER (*DRYOBATES BOREALIS*)

The RCW is a small black and white woodpecker with horizontal bars on its back, spotted flanks and a white belly. The cap and chin stripe are black and the male has a small red spot on each side of the black cap that is difficult to see. RCWs are most easily identified by the large white cheek patch that distinguishes them from similar species (USFWS 2003).

The RCW is endemic to mature, fire-maintained pine forests in the southeastern United States, where it was historically common. Typical nesting habitat includes pine or pine-hardwood stands with a minimum age of 80 to 120 years where the RCW excavates nest and roost cavities in living pines. The RCW requires a large area of pines ≥ 30 years old for foraging habitat with a preference for pine trees ≥ 14 inches dbh (Walters et al. 2002). Logging, fire exclusion and conversion of forestlands to agricultural and other uses have destroyed most of this species' habitat.

6.2. RCW CLUSTERS IMPACTED BY THE PROJECT

No previously undocumented RCW cavity trees were found during ground surveys of the project site or within the SOPI Cluster 26 0.5-mile foraging partition in October 2024 (JCA 2024a, b).

In 2024, SOPI 26 contained 18 trees with RCW cavities in various stages of completion and suitability. Three cavities were active and 3 cavities were possibly active. SOPI Cluster 26 has been active for over 20 years and the group successfully nested and fledged 3 young in 2024 (Sandhills Ecological Institute, unpublished data).

6.3. FORAGING HABITAT ANALYSIS

Foraging habitat analyses using the SMS for SOPI Cluster 26 are summarized below.

6.3.1. 0.25 mile radius foraging habitat totals

Within the 0.25 mile radius foraging habitat partition for SOPI Cluster 26, the pre-project SMS foraging habitat totals were 6,649.91 ft^2 of pine BA on 50.56 acres of suitable habitat and 2,552.77 ft^2 of pine BA on 23.81 acres of potentially suitable habitat (Figure 3, Table 1).

The proposed improvements to the Sandhills Presbyterian Church will remove 42.37 ft^2 of pine BA on 2.06 acres of potentially suitable habitat within the 0.25-mile radius foraging partition (Table 1).

The post-project SMS foraging habitat totals are 6,649.91 ft^2 of pine BA on 50.56 acres of suitable habitat and 2,510.40 ft^2 of pine BA on 21.75 acres of potentially suitable habitat (Figure 3, Table 1). This cluster will not meet the SMS requirements post-project within a 0.25-mile radius foraging partition due to a lack of acreage (deficient by 2.69 acres, using suitable and potentially suitable acreage).

6.3.2. 0.5 mile radius foraging habitat totals

Within the 0.5 mile radius foraging habitat partition for SOPI Cluster 26, the pre-project SMS foraging habitat totals were 10,391.21 ft^2 of pine BA on 89.76 acres of suitable habitat and 4,788.10 ft^2 of pine BA on 68.66 acres of potentially suitable habitat (Figure 3, Table 2).

The proposed improvements to the Sandhills Presbyterian Church will remove 124.58 ft^2 of pine BA on 2.44 acres of potentially suitable habitat (Table 2).

The post-project SMS foraging habitat totals are 10,391.21 ft^2 of pine BA on 89.76 acres of suitable habitat and 4,663.52 ft^2 of pine BA on 66.22 acres of potentially suitable habitat (Figure 3, Table 2). This cluster will meet the SMS requirements post-project within the 0.5 mile radius foraging partition.

7. BIOLOGICAL CONCLUSION

The proposed driveway and parking lot project will remove approximately 2.44 acres of potentially suitable RCW foraging habitat from the foraging partition associated with active SOPI Cluster 26. This cluster meets the SMS guidelines post-project using suitable habitat

Table 1. Red-cockaded woodpecker (*Dryobates borealis*) (RCW) foraging habitat totals using the Standard for Managed Stability (USFWS 2003) within the 0.25 mile radius foraging habitat partition for SOPI Cluster 26, Southern Pines, Moore County, North Carolina. Habitat impacts assessed for proposed improvements to Sandhills Presbyterian Church, January 2025.

Stand ID	Forested Habitat (acres)	Avg. Stand Age (years)	4.0-9.9 inches dbh		10-13.9 inches dbh		≥ 14.0 inches dbh		≥ 10.0 inches dbh		Overstory Hardwood BA	Pine Density ≥10 in. dbh	Hardwood Midstory Density	Hardwood Midstory Height	Suitable Habitat				Potentially Suitable Habitat				Future Potential Habitat			
															Pre-project		Removals		Pre-project		Removals		Pre-project		Removals	
			Avg. Stems	Avg. BA	Avg. Stems	Avg. BA	Avg. Stems	Avg. BA	Avg. Stems	Avg. BA					Acres	BA	Acres	BA	Acres	BA	Acres	BA	Acres	BA	Acres	BA
A	12.51	95	59.01	17.78	59.71	46.67	28.79	47.78	88.50	94.44	0.00	Dense	Sparse	Moderate	12.51	1509.21										
														Sub-total	**12.51**	**1,509.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
B	1.89	116	19.19	4.00	3.36	2.50	24.96	46.50	28.32	49.00	0.00	Moderate	Moderate	Tall					1.89	931.00	0.86	42.37				
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**1.89**	**931.00**	**0.86**	**42.37**	**0.00**	**0.00**	**0.00**	**0.00**
C	17.29	102	5.66	2.50	23.59	21.25	74.08	113.75	97.67	135.00	0.00	Dense	Sparse	Low	17.29	2,332.80										
														Sub-total	**17.29**	**2,332.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
D	15.63	95	7.55	3.33	58.55	50.00	65.70	93.33	124.50	143.33	0.00	Dense	Sparse	Low	15.63	2,269.25										
														Sub-total	**15.63**	**2,269.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
E	12.59	106	12.98	4.55	32.71	26.36	36.83	61.36	69.54	87.73	0.00	Dense	Moderate	Tall					12.59	1,127.28						
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**12.59**	**1,127.28**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
F	5.13	99	49.33	15.00	49.10	36.67	33.12	55.00	82.22	91.67	0.00	Dense	Sparse	Low	5.13	538.65										
														Sub-total	**5.13**	**538.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
G	9.32	94	0.00	0.00	11.49	9.00	23.60	44.00	35.09	53.00	0.00	Moderate	Dense	Tall					9.33	494.49	1.19					
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**9.33**	**494.49**	**1.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**74.36**														**50.56**	**6,649.91**	**0.00**	**0.00**	**23.81**	**2,552.77**	**2.06**	**42.37**	**0.00**	**0.00**	**0.00**	**0.00**

BA = basal area
dbh = diameter at breast height
S&P = Suitable + Potentially Suitable habitat
Value does not meet Standard for Managed Stability requirements.
Dense pine stands with a BA of >80 ft^2/acre were counted as suitable only if the excess BA was in pines >14 inches dbh (USFWS personal communication).

Stand Descriptions

Stand A - Dense, approximately 95 year old, longleaf pine habitat.
Stand B - Moderately dense 116 year old longleaf pine habitat with a moderately dense, tall midstory.
Stand C - Dense 102 year old longleaf pine habitat with a sparse, low midstory.
Stand D - Dense 95 year old longleaf pine habitat in a residential area.
Stand E - Dense 106 year old longleaf pine habitat with a moderately dense, tall midstory.
Stand F - Dense 99 year old longleaf pine habitat with a sparse, low midstory.
Stand G - Moderately dense 94 year old longleaf pine habitat with a dense, tall midstory.

Acreage	Suitable	Potential	Future	Totals	Total S&P
Total Pre-Project	50.56	23.81	0.00	74.37	**74.37**
Total Removals	0.00	2.06	0.00	2.06	**2.06**
Total Post-Project	50.56	21.75	0.00	72.31	**72.31**
BA					
Total Pre-Project	6,649.91	2,552.77	0.00	9,202.68	**9,202.68**
Total Removals	0.00	42.37	0.00	42.37	**42.37**
Total Post-Project	6,649.91	2,510.40	0.00	9,160.31	**9,160.31**

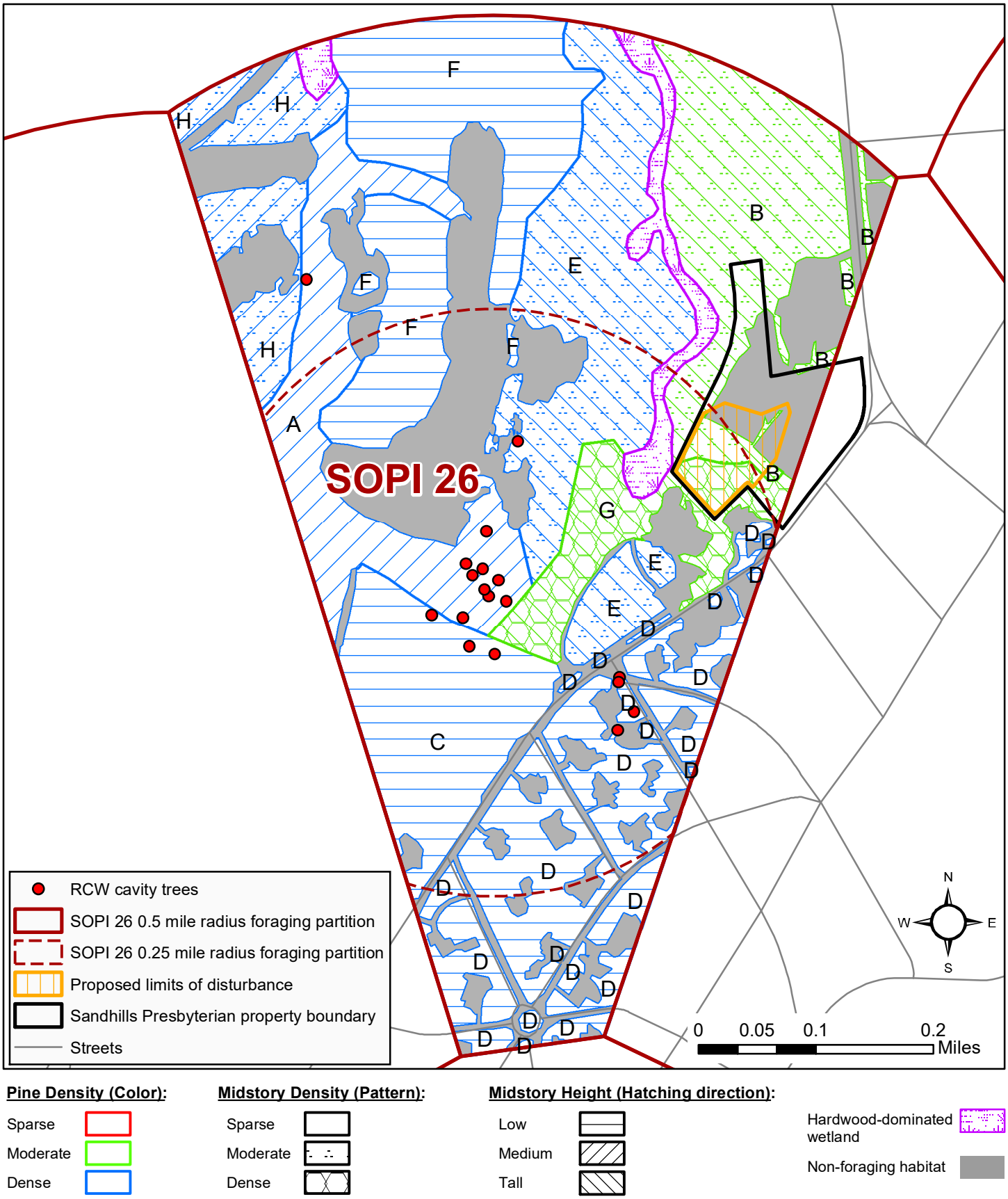


Figure 3. Red-cockaded woodpecker *(Dryobates borealis)* (RCW) habitat within the 0.25- and 0.5-mile radius foraging habitat partitions for SOPI Cluster 26, Southern Pines, Moore County, North Carolina. Also shown are the limits of disturbance for proposed improvements at Sandhills Presbyterian Church.

Table 2. Red-cockaded woodpecker (*Dryobates borealis*) (RCW) foraging habitat totals using the Standard for Managed Stability (USFWS 2003) within the 0.5 mile radius foraging habitat partition for Cluster SOPI 26, Southern Pines, Moore County, North Carolina. Habitat impacts assessed for proposed improvements to Sandhills Presbyterian Church, January 2025.

Stand ID	Forested Habitat (acres)	Avg. Stand Age (years)	4.0-9.9 inches dbh		10-13.9 inches dbh		≥ 14.0 inches dbh		≥ 10.0 inches dbh		Overstory Hardwood BA	Pine Density ≥10 in. dbh	Hardwood Midstory Density	Hardwood Midstory Height	Suitable Habitat				Potentially Suitable Habitat				Future Potential Habitat			
															Pre-project		Removals		Pre-project		Removals		Pre-project		Removals	
			Avg. Stems	Avg. BA	Avg. Stems	Avg. BA	Avg. Stems	Avg. BA	Avg. Stems	Avg. BA					Acres	BA	Acres	BA	Acres	BA	Acres	BA	Acres	BA	Acres	BA
A	19.04	90	59.01	17.78	59.71	46.67	28.79	47.78	88.50	94.44	0.00	Dense	Sparse	Moderate	19.04	1798.24										
														Sub-total	**19.04**	**1,798.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
B	22.04	103	19.19	4.00	3.36	2.50	24.96	46.50	28.32	49.00	0.00	Moderate	Moderate	Tall					22.04	1,080.16	1.22	59.84				
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**22.04**	**1,080.16**	**1.22**	**59.84**	**0.00**	**0.00**	**0.00**	**0.00**
C	17.36	100	5.66	2.50	23.59	21.25	74.08	113.75	97.67	135.00	0.00	Dense	Sparse	Low	17.36	2,343.07										
														Sub-total	**17.36**	**2,343.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
D	26.28	96	7.55	3.33	58.55	50.00	65.70	93.33	124.50	143.33	0.00	Dense	Sparse	Low	26.28	3,767.14										
														Sub-total	**26.28**	**3,767.14**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
E	27.45	106	12.98	4.55	32.71	26.36	36.83	61.36	69.54	87.73	0.00	Dense	Moderate	Tall					27.45	2,408.62		0.00				
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**27.45**	**2,408.62**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
F	27.08	97	49.33	15.00	49.10	36.67	33.12	55.00	82.22	91.67	0.00	Dense	Sparse	Low	27.08	2,482.76										
														Sub-total	**27.08**	**2,482.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
G	9.80	94	0.00	0.00	11.49	9.00	23.60	44.00	35.09	53.00	0.00	Moderate	Dense	Tall					9.80	519.31	1.22	64.74				
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**9.80**	**519.31**	**1.22**	**64.74**	**0.00**	**0.00**	**0.00**	**0.00**
H	9.36	95	49.39	10.00	38.66	31.67	27.89	51.67	66.55	83.33	0.00	Dense	Moderate	Moderate					9.36	780.01						
														Sub-total	**0.00**	**0.00**	**0.00**	**0.00**	**9.36**	**780.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**158.42**														**89.76**	**10,391.21**	**0.00**	**0.00**	**68.66**	**4,788.10**	**2.44**	**124.58**	**0.00**	**0.00**	**0.00**	**0.00**

BA = basal area
dbh = diameter at breast height
S&P = Suitable + Potentially Suitable habitat
Value does not meet Standard for Managed Stability requirements.
Dense pine stands with a BA of >80 ft^2/acre were counted as suitable only if the excess BA was in pines >14 inches dbh (USFWS personal communication).

Stand Descriptions

Stand A - Dense, approximately 90 year old, longleaf pine habitat.
Stand B - Moderately dense 103 year old longleaf pine habitat with a moderately dense, tall midstory.
Stand C - Dense 100 year old longleaf pine habitat with a sparse, low midstory.
Stand D - Dense 96 year old longleaf pine habitat in a residential area.
Stand E - Dense 106 year old longleaf pine habitat with a moderately dense, tall midstory.
Stand F - Dense 97 year old longleaf pine habitat with a sparse, low midstory.
Stand G - Moderately dense 94 year old longleaf pine habitat with a dense, tall midstory.
Stand H - Dense, approximately 95 year old, pine-scrub oak habitat.

Acreage	Suitable	Potential	Future	Totals	Total S&P
Total Pre-Project	89.76	68.66	0.00	158.42	158.42
Total Removals	0.00	2.44	0.00	2.44	2.44
Total Post-Project	89.76	66.22	0.00	155.98	155.98
BA					
Total Pre-Project	10,391.21	4,788.10	0.00	15,179.31	15,179.31
Total Removals	0.00	124.58	0.00	124.58	124.58
Total Post-Project	10,391.21	4,663.52	0.00	15,054.73	15,054.73

within its 0.5 mile radius foraging habitat partition. No disturbance or clearing within 50 ft. of cavity trees will occur.

Biological Determination: May Affect, Not Likely to Adversely Affect

8. LITERATURE CITED

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Traffic Impact Analysis

Sandhills Presbyterian
Southern Pines, NC

Prepared for:

Longitude Planning Group, PLLC

Kimley»Horn

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Traffic Impact Analysis for

Sandhills Presbyterian

Southern Pines, North Carolina

Prepared for:

Longitude Planning Group, PLLC
Southern Pines, North Carolina

Prepared by:

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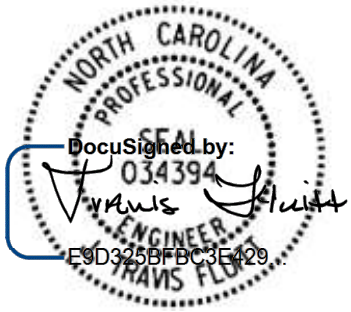
Raleigh, NC 27601
(919) 677-2000



1/28/2026

January 2026

015153000

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis for the proposed expansion of Sandhills Presbyterian Church and of Covenant Preparatory School, located on the northwest quadrant NC 22 (Central Drive) and Pee Dee Road in Southern Pines, NC. The church is proposing to expand their existing fellowship hall. Covenant Preparatory School currently operates out of the existing fellowship hall with approximately 140 students in grades K-8. The proposed expansion will happen in two phases. The first phase will add a new building on the west side of campus with Covenant Preparatory School relocating to this building with no increase in enrollment. The second phase will include a second larger building and increase enrollment to 220 students in grades K-8. As there is no change in enrollment with the first phase, no analysis was prepared for that scenario. The site is currently accessed via a full movement driveway along Pee Dee Road, and no changes to site access are proposed with the expansion. Build-out of the development is anticipated by the year 2030.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2025) traffic condition and the projected (2030) background and build-out traffic conditions. The weekday AM and school PM peak hours were studied.

Study Intersections

The following study intersections were included in this analysis:

- NC 22 (Central Drive) at Pee Dee Road
- Pee Dee Road at Azalea Road/Existing Site Access

Existing Traffic Data

Weekday AM (7:00 – 9:00am) and school PM (2:00 – 4:00pm) peak hour turning movement counts were collected at each of the existing study intersections on February 26, 2025, while Moore County schools and Covenant Preparatory School were in session.

Background Traffic Data

To calculate projected (2030) traffic volumes, a 1.5% annual growth rate was applied to the existing traffic volumes up to the build-out year of 2030. Based on coordination with the North Carolina Department of Transportation (NCDOT) and Town of Southern Pines (Town) staff, no approved developments were included in this analysis.

Trip Generation

The traffic generation potential of the proposed expansion was determined using the NCDOT Municipal and School Transportation Assistance (MSTA) Private/Non-Urban Charter School Traffic Calculator. As currently envisioned, the proposed expansion is expected to increase enrollment by approximately 80 students.

Table ES-1 Trip Generation (Vehicles)						
Condition	**Intensity**		**AM Peak Hour**		**School PM Peak Hour**	
			In	**Out**	**In**	**Out**
Grades K-8 (Existing)	140	students	85	65	45	65
Grades K-8 (Proposed)	220	students	130	100	64	94
Proposed Increase	***80***	***students***	***45***	***35***	***19***	***29***

Table ES-1 shows that the proposed expansion of the development has the potential to generate 80 new trips during the AM peak hour and 48 new trips during the school PM peak hour.

Capacity Analysis

Capacity analyses were performed using Synchro Version 12 software. For purposes of this analysis, NC 22 was assumed to run east/west, and Pee Dee Road was assumed to run north/south. Due to the configuration of the intersection of NC 22 at Pee Dee Road, multiple nodes were used to model the intersection in Synchro as follows:

- Node 1
  - NC 22 eastbound through movement (*free-flow*)
  - NC 22 westbound left-turn (*yield to eastbound through*) and through movement (*free-flow*)
  - Pee Dee Road northbound left-turn (*stop-control*)
- Node 102
  - Pee Dee Road northbound through movement (*free-flow*) and right-turn (*free-flow*)
  - NC 22 eastbound right-turn (*free-flow*)
  - Pee Dee Road southbound through movement (*yield to eastbound right-turn*)
- Node 103
  - NC 22 eastbound through movement (*free-flow*)
  - NC 22 westbound through movement (*free-flow*)
  - Pee Dee Road northbound right-turn (*stop-control*)

Table ES-2 summarizes the operation of the study intersections for the AM and school PM peak hour traffic conditions.

Table ES-2 - Level of Service Summary								
Intersection and Approach/Movement	Traffic Control	Synchro Node Number	Existing (2025) Traffic		Background (2030) Traffic		Build-out (2030) Traffic	
			AM	PM	AM	PM	AM	PM
NC 22 (Central Drive) at Pee Dee Road	**Unsignalized**	**1**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
Northbound			F (76.6)	F (61.4)	F (129.2)	F (98.9)	F (167.5)	F (118.8)
Westbound Left			A (8.9)	A (8.6)	A (9.1)	A (8.7)	A (9.2)	A (8.7)
NC 22 (Central Drive) at Pee Dee Road	**Unsignalized**	**102**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
Southbound			A (5.6)	A (3.2)	A (5.6)	A (3.2)	A (5.8)	A (3.7)
NC 22 (Central Drive) at Pee Dee Road	**Unsignalized**	**103**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
Northbound			B (12.2)	B (11.6)	B (12.7)	B (12.0)	B (12.9)	B (12.1)
Pee Dee Road at Azalea Road/Existing Site Access	**Unsignalized**	**2**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**	**- (-)**
Eastbound			C (15.1)	B (13.0)	C (16.0)	B (13.4)	C (18.4)	B (14.2)
Westbound			B (14.6)	B (13.4)	C (15.4)	B (14.0)	C (17.3)	B (14.6)
Northbound Left			A (8.7)	A (8.0)	A (8.8)	A (8.1)	A (9.0)	A (8.2)
Southbound Left			A (7.5)	A (7.8)	A (7.6)	A (7.8)	A (7.6)	A (7.8)

On-Site Vehicular Operations

The current enrollment of Covenant Preparatory School is 140 students in one academic building. For the given student capacity, MSTA calculations state that the school should provide enough storage to accommodate an average queue length of 466 feet and a high demand queue length of 607 feet. The current site layout provides approximately 350 feet of single-lane queue for the school.

The first phase of the proposed expansion is expected to add a new building to the west side of the campus with the school relocating to this building. This relocation is expected to provide an additional 300 feet of queue length for a total of approximately 650 feet, satisfying MSTA requirements. With the second phase of the proposed expansion, enrollment is expected to increase to 220 students. Based on this enrollment, MSTA calculations state that the school should provide enough storage to accommodate an average queue length of 596 feet and a high demand queue length of 774 feet. The proposed site layout and circulation provides approximately 950 feet of queue for the school, exceeding the MSTA required high demand length.

Conclusions

The intersection of NC 22 (Central Drive) at Pee Dee Road currently operates with long delays for the northbound left-turn from Pee Dee Road onto NC 22. This minor street approach is expected to continue to operate with long delays in both peak hours. While the proposed expansion is expected to account for only approximately 2% of the projected build-out traffic volumes, projected delays at this intersection are expected to increase by more than 10% at this minor street approach from background to build-out traffic conditions. Per the Town of Southern Pines Unified Development Ordinance (UDO), improvements must be identified to mitigate this increase in delay. The only feasible improvement to achieve an acceptable level of service at this intersection is the installation of a traffic signal. Therefore, it is recommended that this intersection be monitored for signalization.

All other approaches and intersections are expected to operate at acceptable levels-of-service and no queuing issues at project build-out. Therefore, no additional improvements are recommended with the proposed church and school expansions.

Planning Staff Report

To: Planning Board
From: Gene Ruiz, Planner II
Date: March 19, 2026
Item: **File #PD-07-25** Review of a Planned Development District Preliminary Development Plan (PDP) for Mavis Tire in MPS

EXECUTIVE SUMMARY

The applicant has submitted a Preliminary Development Plan (PDP) in accordance with UDO §2.18, which outlines the two-step review process for Planned Development (PD) districts consisting of a Conceptual Development Plan (CDP), and Preliminary Development Plan (PDP). The CDP for this site was approved on September 29, 2021, and this request represents the PDP stage of review.

The proposed use, classified as LBCS 2117 – Automotive Repair and Maintenance (including tire sales), is permitted within the retail/office land use category identified for Phase 3 of the approved CDP (PD-08-21). The site is also designated as a Retail Center and Community Activity Center in the 2040 Comprehensive Plan, making the proposed use consistent with the Comprehensive Plan for this location.

Staff identified several issues related to total parking quantity, parking location, and building orientation that must be addressed for full compliance with the CDP and the Unified Development Ordinance (UDO). Staff support a 20% administrative reduction in parking, resulting in a minimum of 28 spaces, but do not support the requested 25% reduction. Additionally, the parking layout must be revised to locate parking to the side or rear of the building, and the primary building entrance should face the future Old Morganton Road extension in accordance with UDO standards.

Staff recommend approval of the Preliminary Development Plan provided that the applicant revise all applicable plans and documents to reflect the CDP approved by the Town Council. Upon incorporation of these corrections, the PDP will be consistent with the approved CDP, meet the applicable standards of the UDO, and satisfy the required findings for approval.

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II. PROJECT INFORMATION

A. Property Owner:
MSP Outlots, LLC

B. Applicant & Authorized Agent:
Kristen Morse, Mavis Tire and Andy Mueller, BL Companies

C. Subject Property Description:
The subject property is located in Lot 4 of Phase 4 of the Morganton Park South Planned Development

D. Current Zoning: Planned Development (PD)
Overlays: Planned Development. Urban Village Highway Corridor Overlay & Morganton Road Overlay

Figure 1: Vicinity Arial Image Conditions

Figure 2: Vicinity Zoning Map

Figure 3: Site from Intersection of W. Morganton Road and Northern Rd.

Figure 4: Portion of Major Subdivision Preliminary Plat (MAPP-04-24)

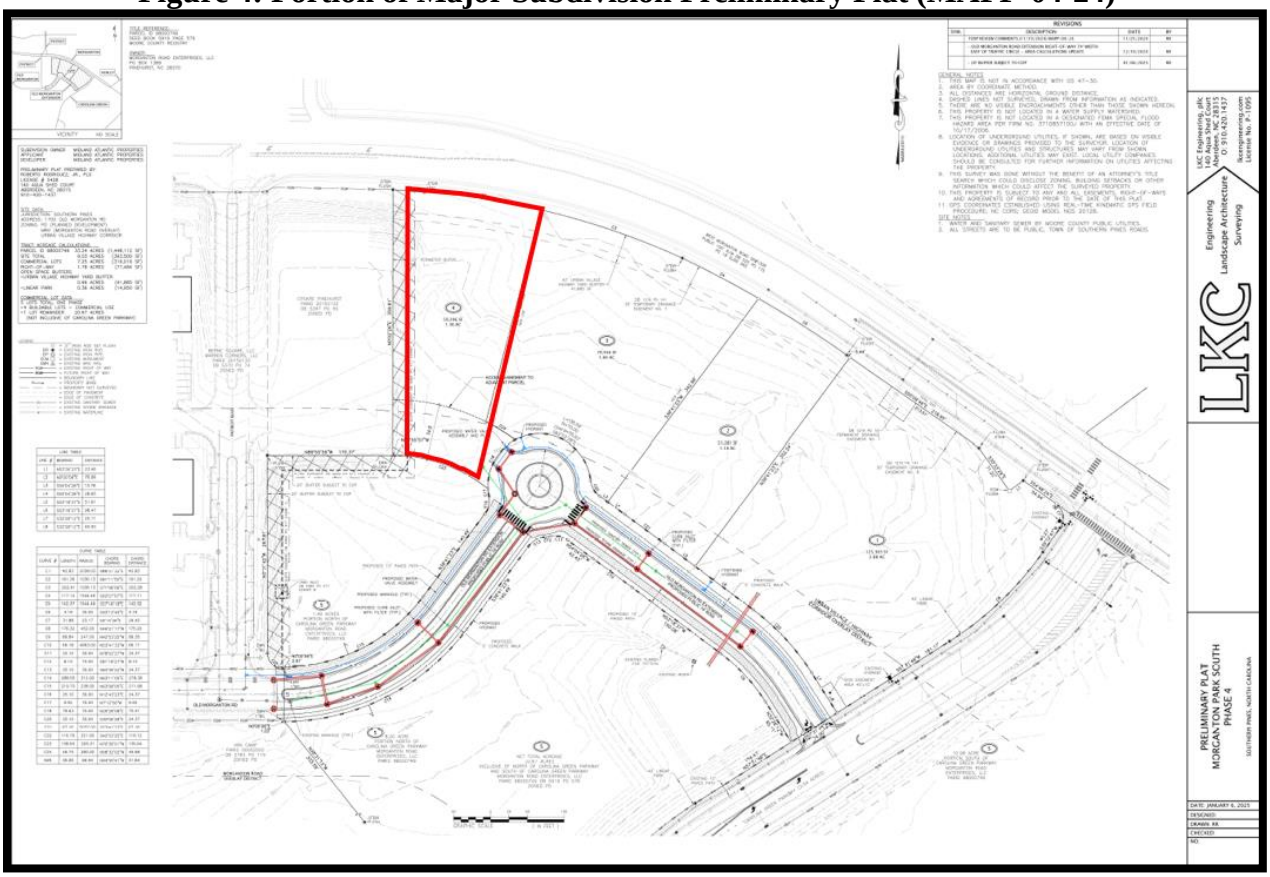


Figure 5: CDP Land-Uses (PD-08-21)

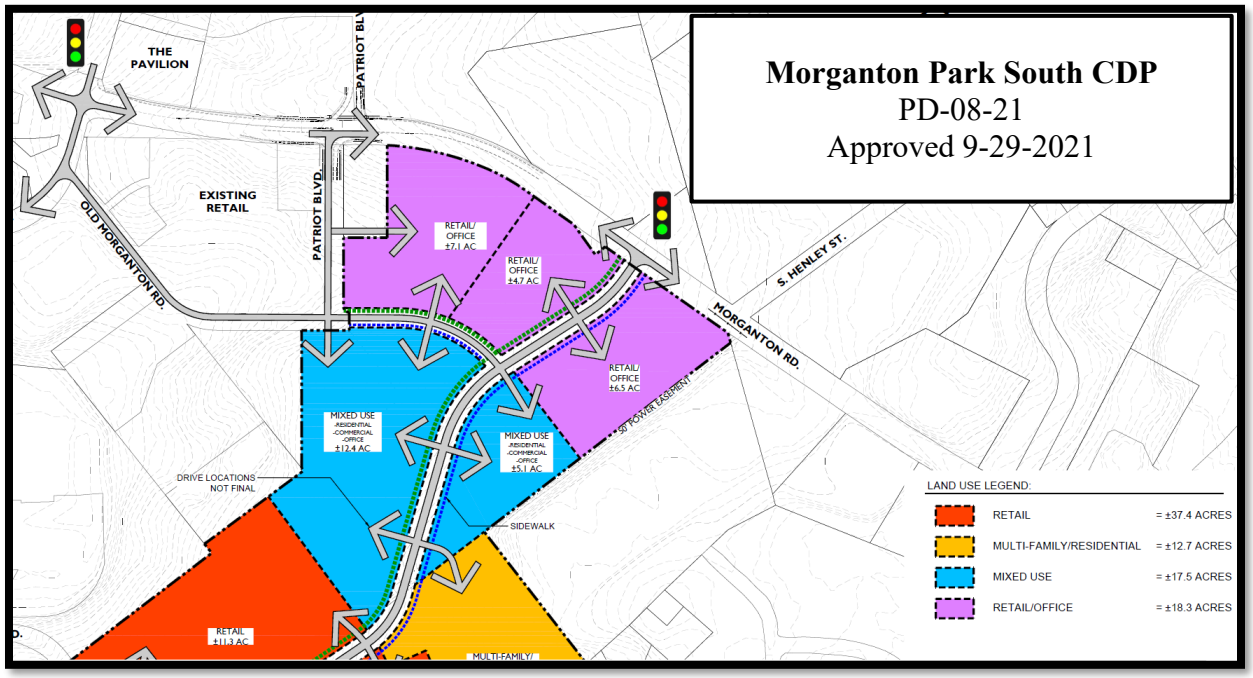
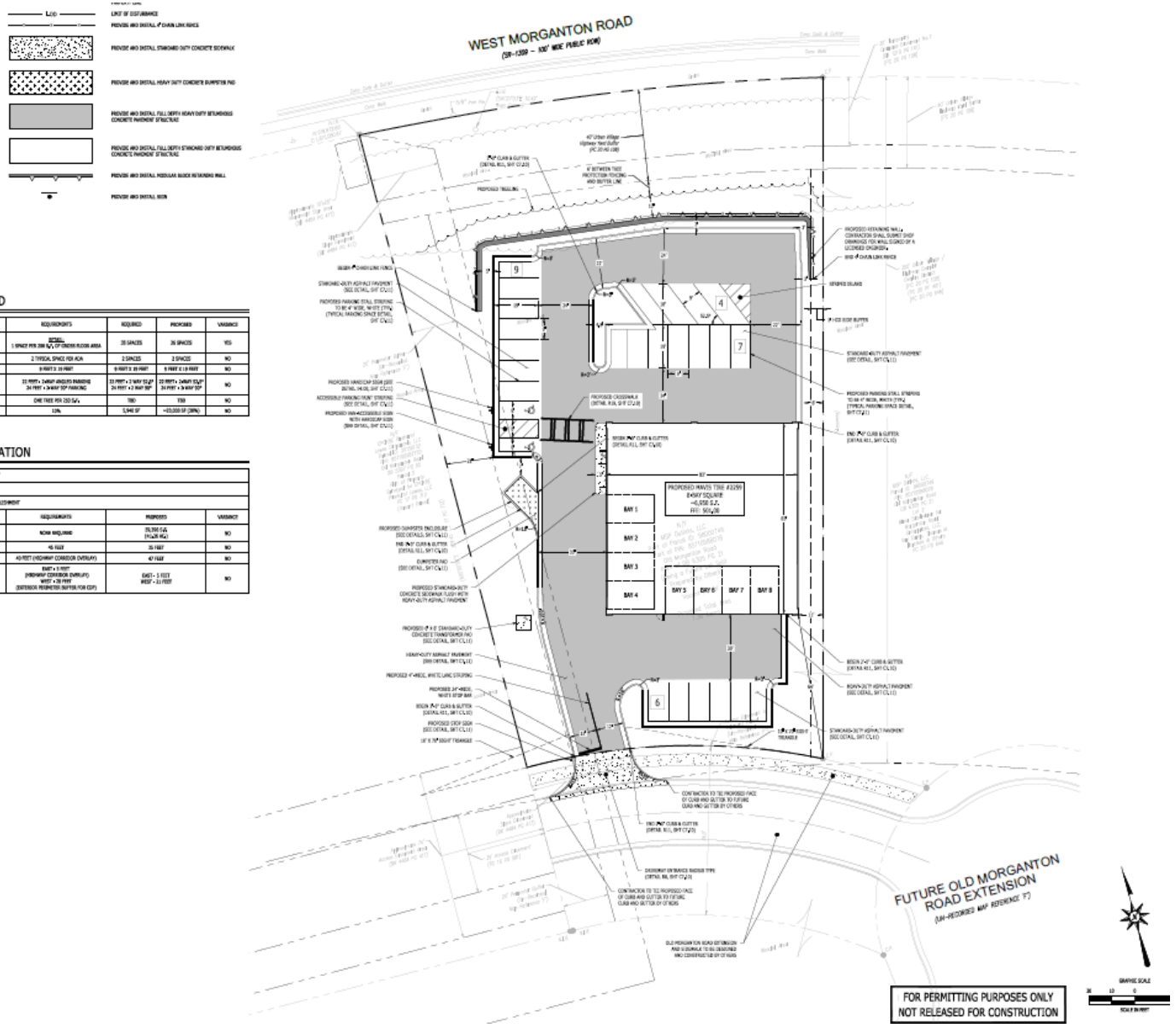


Figure 6: Proposed Plan Layout of Lot 4 (Full PDP Plan Attached to this Report)



SITE PLAN LEGEND

ITEM	REQUIREMENTS	REQUIRED	PROVIDED	VARIANCE
PARKING REQUIRED	1 SPACE PER 200 SQ. FT. OF GROSS FLOOR AREA	35 SPACES	36 SPACES	YES
MINIMUM ADA PARKING SPACES REQUIRED	2 TYPICAL SPACE PER ADA	2 SPACES	3 SPACES	NO
MINIMUM PARKING DIMENSIONS	9 FEET X 18 FEET	9 FEET X 18 FEET	9 FEET X 18 FEET	NO
MINIMUM AISLE WIDTH	22 FEET • 2-WAY ANGLED PARKING 24 FEET • 2-WAY 90° PARKING	22 FEET • 2-WAY 52.5° 24 FEET • 2-WAY 90°	22 FEET • 2-WAY 52.5° 24 FEET • 2-WAY 90°	NO
MINIMUM INTERIOR LANDSCAPING	ONE TREE PER 250 SF.	7180	7310	NO
OPEN SPACE	10%	3,940 SF	+20,000 SF (38%)	NO

PARKING INFORMATION

LOCATION: SOUTHERN PINES, MOORE COUNTY

ZONE: PD (PLANNED DEVELOPMENT)

USE: AUTOMOBILE SALES AND SERVICE ESTABLISHMENT

ITEM	REQUIREMENTS	PROPOSED	VARIANCE
MINIMUM LOT AREA	NONE REQUIRED	78,390 S.F. (1.8 AC +/-)	NO
MAXIMUM BUILDING HEIGHT	45 FEET	35 FEET	NO
FRONT LANDSCAPE BUFFER	40 FEET (HIGHWAY CORRIDOR OVERLAY)	47 FEET	NO
EAST LANDSCAPE BUFFER	EAST = 5 FEET (HIGHWAY CORRIDOR OVERLAY) WEST = 20 FEET (EXTERIOR PERIMETER BUFFER FOR CUP)	EAST - 5 FEET WEST - 21 FEET	NO

III. STAFF REVIEW

A. Application Review Dates

- Conceptual Development Plan Approved: **29 September 2021**
- Approval of MAPP-04-24: **25 January 2025**
- Preliminary Development Plan Application Submitted: **December 24, 2025**
- Application Deemed Complete: **January 6, 2026**
- Application Continued: **February 11, 2026**
    - Comments Requested from Outside Agencies: **January 30, 2025**
- Notice of **January 18, 2025**, Planning Board Meeting:
    - Posted On-site: **February 25, 2026**
    - Mailed: **March 3, 2026**
    - Internet: **February 25, 2026**
    - Published: **January 30, and February 11, 2026**

B. Process and Standards for Review

Applications for a Planned Development District (PD) are reviewed in accordance with UDO §2.18. Creating a Planned Development District is a three-step process including Conceptual Development Plan (CDP), Preliminary Development Plan (PDP), and Final Development Plan (FDP). This application is for a PDP.

C. Applicable Criteria for Review

The criteria for review and approval of a PDP are found in Chapter 2, §2.18.5(H), of the Town of Southern Pines Unified Development Ordinance. The applicants have provided a narrative addressing the purpose of a Planned Development per UDO §2.18.5(A), and addressing the criteria for a PDP per UDO §2.18.5(H). Copies of the applicant's narrative documents containing their descriptions of the project's alignment with applicable criteria are attached to this staff report. Staff analysis of how the application addresses these four (4) criteria begins below:

Preliminary Development Plan - UDO §2.18.5(H)

1. **The application demonstrates that it will achieve the purposes of the PD and this section.**
   Pursuant to UDO §3.5.14 (PD – Planned Development), the Preliminary Development Plan (PDP) demonstrates consistency with the stated purposes of the Planned Development (PD) district as outlined in the Town's Unified Development Ordinance. The PDP achieves this by promoting a coordinated development pattern that integrates a mix of uses, including residential, office, and commercial components.

2. **The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of this UDO;**
   The Preliminary Development Plan (PDP) is generally consistent with the approved Conceptual Development Plan (CDP) (PD-08-21) with respect to land uses. However, several variations between the PDP and the UDO have been identified and are outlined below. Pending resolution of these outstanding items, the Preliminary Development Plan (PDP) contains inconsistencies with the approved Conceptual Development Plan (CDP) and does not fully comply with applicable requirements of the Unified Development Ordinance (UDO). The applicant is requesting several deviations that do not align with the established zoning

framework or the development standards governing the site.

In order to meet the applicable standards of the Conceptual Development Plan (CDP) and the Unified Development Ordinance (UDO), and satisfy this criterion, the following items must be addressed.

1. Parking Max regulated by Highway Corridor- UDO §3.6.5 and Minimum UDO §4.5 Exhibit 4-6.
   This site is subject to both minimum and maximum parking standards. The Highway Corridor Overlay establishes a maximum of 35 parking spaces (5 spaces per 1,000 sq. ft. of building area). The minimum parking requirement, pursuant to UDO §4.5.3(B), Exhibit 4-6, is one space per 200 sq. ft. of gross floor area, also resulting in 35 required spaces.

   The applicant had requested administrative relief for a 20% reduction in the minimum parking requirement under UDO §2.46.3(D), which staff find reasonable. This reduction lowers the required minimum to 28 spaces.

   However, the applicant is now requesting two additional spaces below the reduced minimum, resulting in a 25% total reduction. Staff do not support the additional reduction and believe the 20% administrative reduction is sufficient. Staff recommend the site provide parking at the reduced minimum of 28 spaces.

   Staff notes a concern regarding the potential for parking overflow based on observations of similar automotive service uses within the Town. For reference, Black's Tire & Auto Service operates in a building of approximately 7,100 square feet and provides 22 parking spaces. Staff conducted site observations on February 18 and March 5, 2026, and observed parking demand exceeding the paved parking supply, with additional employee and customer vehicles utilizing a gravel area located behind the building. These observations indicate that comparable automotive service uses may experience parking demand beyond the minimum parking provided.

   Unlike this example, the proposed Mavis Tire development does not include a designated overflow parking area or any contingency to address potential parking demand beyond the spaces provided on the site plan. During the review process, the applicant asked staff to consider whether the service bays could be counted toward the Town's required parking spaces. However, pursuant to the Town's parking standards, service bays cannot be counted as parking spaces.

   As part of the development review process, staff's responsibility is to identify potential operational issues early—particularly those that may result in parking conflicts, spillover onto adjacent properties or rights-of-way, and future complaints to the Town. While staff is supportive of the proposed use in this location, staff recommends that the development not reduce parking below the already reduced parking allocation in order to help minimize the potential for future overflow parking conditions.

2. Parking Standards – CDP PD-08-21 §5.5.1 Parking & UDO §3.6.6(F)(2)
   Planning staff find that the proposed parking configuration is not consistent with the approved Conceptual Development Plan (CDP) or the requirements of the Unified Development Ordinance (UDO). The UDO permits parking to be located between the building and the street only for large-scale retail developments. Smaller mixed-use, office, and retail developments must locate parking in accordance with UDO §3.6.6(F)(2), which regulates the placement of parking areas relative to buildings and street frontages.

   The proposed plan places a portion of the parking between the building and the street, rather than locating it to the side or rear of the building (on the north side parallel to Morganton Rd.) as required by the CDP and UDO. Even with the applicant's requested 20% administrative parking reduction, or the proposed 25% total reduction, the location of the parking remains inconsistent with these standards. Based on these requirements, the proposed parking layout does not comply with the applicable provisions of the CDP and UDO.

3. Building Orientation – UDO §4.10.4(A)
   Planning staff find that, pursuant to the UDO Building Orientation and Entry standards, the primary customer entrance is required to face and be accessible from the future Northern Rd (or facing south). The applicant indicates that, due to the size and configuration of the site, the proposed building orientation reflects the only Mavis Tire building design prototype in their inventory that can reasonably fit on the parcel. As a result, the primary building entrance is proposed to be located at the northwest corner of the building, rather than directly facing the future roadway.

   Planning staff can only support building orientation so that the primary entrance faces the future Northern Road extension in a manner consistent with the UDO and the Town's adopted design standards. The Town has consistently emphasized the importance of design that meets the adopted regulations and responds to the surrounding street network and pedestrian environment, and requests for deviations related to standardized or prototype corporate building layouts have historically received limited support when they conflict with these adopted standards. Staff therefore recommend that the building orientation be revised to better align with the UDO's building orientation requirements and the Town's expectations for development along future street frontages.

3. The proposed Development is located in an area of the Town that is appropriate; and;

The proposed development is located in an area of Southern Pines that is appropriate for the proposed use. The 2040 Comprehensive Plan designates this area as both a Retail Center and a Community Activity Center, and the Planned Development (PD) zoning allows for a wide range of commercial uses. The proposed Preliminary Development Plan (PDP) generally aligns with the broader development framework established in the approved Conceptual Development Plan (CDP) by contributing to the site's role within a connected commercial corridor.

The proposed use is classified under LBCS 2117: Automotive Repair and Maintenance, which includes tire sales. Within the approved CDP, the Phase 3 area is described as accommodating retail and office space, and the LBCS 2117 land use was explicitly identified as a permitted use within that retail/office category. As such, the proposed use is consistent with the land use framework established in the CDP.

4. **The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services.**
   As stated in Section 4.2.3 and further detailed in Section 5.5.5 of the CDP, all necessary utility infrastructure including water, sewer, electric, gas, and communications, is either already available or will be extended by the developer. The PDP narrative confirms that water and sewer utilities will be readily available upon the completion of the Northern Rd.

IV. AGENCY REVIEW AND COMENTS

A request for comments was emailed to agencies on January 30, 2026. Agencies notified include Town of Southern Pines Streets, Utilities, Fire, Recreation and Parks, and Engineering departments, the Regional Land Use Advisory Commission, U.S. Fish and Wildlife Service, Moore County Airport and the North Carolina Department of Transportation.

- The Town's Engineering Department formally responded with "no issues" regarding the Traffic Design Analysis.
- The U.S. Fish and Wildlife Service (USFWS) Raleigh Field Office reviewed the proposal and noted that the site is located just outside the Moore County red-cockaded woodpecker (RCW) red zone. The nearest active RCW cluster is approximately 0.9 miles away, with the edge of the active partition about 0.3 miles from the site. Because the property is outside the red zone, a survey is not required. However, USFWS recommends that a qualified environmental consultant conduct a cavity tree survey prior to removing pine trees greater than 10 inches DBH to ensure no cavity trees are inadvertently removed. If no trees exceed 10 inches DBH, a survey is not necessary. USFWS indicated it has no further comments on the project.
- NCDOT commented if any utility connections are proposed within the W. Morganton Road right-of-way, an encroachment agreement/permit from NCDOT will be required for that work. Plans do not propose any utility connections on Morganton Road.
- No additional comments have been received as of the publication of this staff report. Any additional agency comments received will be presented at the public meeting.

V. STAFF RECOMMENDATION

Staff recommends approval of the Preliminary Development Plan (PDP) provided that the applicant revise all applicable plans and supporting documents to reflect the Conceptual Development Plan (CDP) approved by the Town Council and address the following conditions:

1. Provide a minimum of 28 parking spaces, consistent with the 20% administrative reduction permitted under UDO §2.46.3(D), rather than the requested 25% reduction;
2. Revise the parking layout so that parking is located to the side or rear of the building, consistent with the CDP and UDO parking location standards; and
3. Reorient the building entrance so that it faces and is accessible from the future Northern Road extension, consistent with UDO §4.10.4(A).

If these issues are satisfactorily addressed, planning staff find that the proposed PDP would be generally consistent with the approved CDP and the applicable standards of the Unified Development Ordinance, and staff could support approval of the plan.

VI. ATTACHMENTS

The following materials have been provided as attachments to this staff report:

1. Application
2. Deed
3. Narrative (dated 03-04-26)
4. TIA analysis (as of 3-12-26)
5. Concept Plan
6. Preliminary Development Plan
7. Executed Slope Easement Letter Agreement (as of 3-12-26)

Additional documents related to this application including, but not limited to: application, property deeds, Authorization of Agent forms, email correspondence, meeting minutes, and adjacent property notification records are on file in the Town of Southern Pines Planning Office and available for public inspections during normal business hours.

VII. PLANNING BOARD ACTION

Pursuant to North Carolina General Statute §160D-301(b)(6) and Unified Development Ordinance §2.5.2, the Planning Board may hold a Preliminary Forum on a matter requiring a quasi-judicial decision by the Town Council. However, no part of the forum or any recommendation may be used as a basis for the deciding board. Therefore, the Planning Board may wish to use the following motion to identify issues to bring to the attention of the Town Council at the evidentiary hearing, or any modified motion.

I move to transmit the following list of issues to the Town Council as a result of the March 19, 2026 Preliminary Forum on application PD-07-25:

1.

Planned Development District - Preliminary Development Plan Application

REQUIRED APPLICATION MATERIALS:

- ✓ **Application fee** in the amount of **$2,210.00 plus $30.00 per lot with a preliminary plat.**
- ✓ **Completed Application** for a Planned Development District - Preliminary Development Plan signed by the applicant.
- ✓ **Appointment of Agent**, if applicable, signed by the property owner(s) and the agent.
- ✓ **List of Adjacent Property Owners:** Please list all properties that are that are within two hundred (200) feet of the outermost boundaries of the subject property **(not counting streets, railroads or other transportation corridors)**. Attach additional pages if needed. No fewer than ten (10) property owners shall be notified by mail.
- ✓ **Written narrative** describing the application's consistency with the Conceptual Development Plan, the UDO, and any other applicable regulations.
- N/A **Neighborhood meeting records** if not provided in conjunction with an application for Conceptual Development Plan approval or if additional meetings have been held.
- N/A **Additional documentation:** Additional text and/or maps to demonstrate consistency with **UDO §2.18.5(H) Criteria (1) through (4)**.
- ✓ **PDD Preliminary Development Plan:** One (1) full-size copy of a preliminary plat or scaled drawings of the entire tract to be subdivided. Please refer to the **UDO Appendices** for plan requirements.
- ✓ **Drainage concept plan** if applicable.
- N/A **Traffic Impact Analysis** if applicable.
- ✓ **Electronic copy (PDF) of all application materials** submitted to plan@southernpines.net.

REVIEW AND APPROVAL:

1. **Staff review**: Planning staff will review the application and notify the applicant if additional information or materials are needed.
2. **Public hearing**: The applicant is expected to attend a public hearing on the application before the Town Council at its regular monthly meeting. (Please refer to the **Application Processing Timeline** to determine the hearing date.) The Town Council will consider evidence and testimony presented and may approve, conditionally approve or deny the request.
3. **Approval**: Please refer to UDO **§2.18.5(I) Effect of Approval**.

7.22.25

Planned Development District - Preliminary Development Plan

Fee: $_____ Date Received: _____ Case No.: PD-____-____

Project Information:

Project Name: Mavis Tires 2354

Physical Address: 540 Northern Road, Southern Pines, NC

PIN: 85710588078 Parcel ID: 98000749

Site Size: 1.36 ac Zoning: PD with an approved CDP PD-08-21

Applicant:

Name(s): Mavis Tire - Kristen Morse

Email: kmorse@mavis.com Phone: 570.337.9919

Mailing Address: 100 Hillside Ave White Plains, NY 10603

Authorized Agent, if different from Applicant:

Name(s): Andy Mueller

Email: amueller@blcompanies.com Phone: 704.851.7102

Mailing Address: 3240 Torringdon Way, Suite 210, Charlotte, NC 28277

Legal Property Owner(s), if different from Applicant:

Name(s): MSP Outlots, LLC

Email: wmees@midlandatlantic.com Phone: (513) 792-5000

Mailing Address: 8044 Montgomery Road, Suite 370, Cincinnati, OH 45236

7.22.25

TO THE TOWN OF SOUTHERN PINES PLANNING BOARD AND TOWN COUNCIL:

I, the undersigned, do hereby make application to and petition the Planning Board and Town Council for approval of a Planned Development District – Preliminary Development Plan as required by the Town of Southern Pines Zoning Ordinance. The following information is submitted in support of this application:

The property which is the subject of this application is located on the North side of Northern (St./Ave.), between Old Morganton Rd (St./Ave.) and Carolina Green Pkwy (St./Ave.). The property has a frontage of 140 feet and a depth of 370 feet.

The request is based upon **Section 2.18.5** of the **Town of Southern Pines Unified Development Ordinance**. The proposed use of the property is as follows:

Minor Auto Repair

Date: 12/18/2025

Kristen N. Morse

Applicant

PLANNING DEPARTMENT
TOWN OF SOUTHERN PINES
801 SE Service Road, Southern Pines, NC 28387
plan@southernpines.net (910) 692-4003 www.southernpines.net

APPOINTMENT OF AGENT

The undersigned owner(s), MSP Outlots, LLC, hereby appoint(s) Mavis Tire as the exclusive agent for the purpose of making an application to the Town of Southern Pines for the approval of the Planned Development District – Preliminary Development Plan described in the attached application. The owner(s) hereby agree(s) that this agent has the authority to act for and on behalf of the owner(s) as follows:

1. to submit an application and required supplemental materials;

2. to appear at public meetings and give representation and comments on behalf of the owner(s);

3. to accept conditions or recommendations made by the Town of Southern Pines Town Council for the approval of a Planned Development District – Preliminary Development Plan; and

4. to act on behalf of the property owner(s) without limitations with regard to any and all things directly or indirectly connected with or arising out of any application for a Planned Development District -Preliminary Development Plan under the Southern Pines Unified Development Ordinance.

This Appointment of Agent shall remain in effect until final resolution of the attached application.

Signed this 18TH day of DECEMBER, 2025.

MSP OUTLOTS, LLC

Property Owner

WILLIAM M. MEEKS, JR.
DIRECTOR OF DEVELOPMENT

Property Owner

Agent

7.22.25

UDO §2.18 Planned Development

§2.18.5(H) Preliminary Development Plan Criteria

(1) The application demonstrates that it will achieve the purposes of the PDD and this section;

(2) The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of this UDO;

(3) The proposed Development is located in an area of the Town that is appropriate; and

(4) The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services.

For Registration Register of Deeds
Judy D. Martin

Moore County, NC
Electronically Recorded
September 29, 2022 4:21:05 PM
Book: 5919 Page: 576 - 579 #Pages: 4

Fee: $26.00 NC Rev Stamp: $0.00

Instrument # 2022016570

NON-WARRANTY DEED

THIS INSTRUMENT PREPARED BY:

Richard Lee Yelverton III, Esq.
Van Camp, Meacham & Newman, PLLC
2 Regional Circle (28374)
P.O. Box 1389
Pinehurst, North Carolina 28370

TO BE RECORDED IN THE
DEED RECORDS OF
MOORE COUNTY, NC

Excise Tax: $ 0.00

THIS DEED made this 29th day of September, 2022, by and between:

GRANTOR	GRANTEE
EPISCOPAL DAY SCHOOL, INC., a North Carolina non-profit corporation, as to any 4% interest	**ROBERT W. VAN CAMP, AND JULIE M. VAN CAMP, TRUSTEES OF THE ROBERT W. AND JULIE M. VAN CAMP LIVING TRUST UNDER AGREEMENT DATED DECEMBER 22, 1998** Mailing Address: 1680 Midland Road Southern Pines, NC 28387

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, the Grantor, for valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land (referred to in the singular, whether one or more) situated in the Town of Southern Pines, Sandhills Township, Moore County, North Carolina, and more particularly described as follows:

Submitted electronically by "Van Camp, Meacham & Newman, PLLC"
in compliance with North Carolina statutes governing recordable documents
and the terms of the submitter agreement with the Moore County Register of Deeds.

See Exhibit A attached hereto.

And being the same property conveyed to Grantor in instrument recorded in Book 2149, Page 348, and Book 4484, Page 395, in the Moore County, North Carolina, Register of Deeds. The attorney preparing this instrument has not searched the title to the real property hereby conveyed and makes no opinion relative to the status of the title to the real property hereby conveyed.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

The Grantor makes no warranty, express or implied concerning title to this property.

IN WITNESS WHEREOF, the said Grantor has hereunto set his hand and seal the day and year first above written.

[SIGNATURES AND NOTARY ACKNOWLEDGMENT ON FOLLOWING PAGE]

EPISCOPAL DAY SCHOOL, INC.

_____(SEAL)

By: **Charles Murphy Paderick, Chairman**

STATE OF NORTH CAROLINA

COUNTY OF MOORE

I, Richard Lee Yelverton III, a Notary Public of the County and State aforesaid, certify that Charles Murphy Paderick, either being personally known to me or proven by satisfactory evidence (said evidence being _____), personally appeared before me this day and acknowledged that s/he is Chairman of the Board of Trustees of Episcopal Day School, Inc., a North Carolina non-profit corporation, and that s/he, as Chairman, being authorized to do so, voluntarily executed the foregoing on behalf of the corporation for the purposes stated therein

.

WITNESS my hand and official stamp or seal, this 29th day of September, 2022.

_____

Notary Public

My Commission Expires: 02.23.2025

RICHARD LEE YELVERTON III
Notary Public, North Carolina
Moore County
My Commission Expires
_____

EXHIBIT "A"

Being all of that certain tract or parcel of land lying and being in the extraterritorial jurisdiction of Southern Pines, Moore County, North Carolina, and more particularly described as follows:

BEING all of Recombined Tract 2, containing ± 52.0012 acres, as shown on that certain plat entitled "Recombination Plat of 84.2457 acres, Tax Parcels #98000750, #980000749, #00052502, #20050319, #20060576 & #00052504" recorded April 24, 2015 in Plat Cabinet 16 at Slides 581 through 583 in the Office of the Register of Deeds for Moore County, North Carolina, reference to which is hereby made for a more particular description.

March 4, 2026

Planning Department
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387

Re: Mavis Tires #2254 – Preliminary Development Plan
PIN: 085710588078
Address: 540 E. Morganton Rd

Dear Sir or Madam:

On behalf of our client Mavis Tire, LLC we are hereby submitting our preliminary Development Plan for a Mavis Tire store at 540 E. Morganton Rd as part of the Morganton Park South Planned Development District. The site is consistent with the Conceptual Development Plan approved on 9-29-2021 as described below.

The proposed project meets the criteria listed in Section 2.18.5(H) as follows:

1. The application demonstrates that it will achieve the purposes of Preliminary Development by being an acceptable use and meeting the conditions of the PD.

2. The plan is consistent with the CDP and meets all provisions of the plan.

3. The proposed development is located within a commercial center and is an appropriate use.

4. The proposed development will not cause need for inefficient extensions and expansions od public utilities and services as it will use the already proposed utilities and services and infrastructure from the overall development center.

The project is within multiple overlays including the Urban Village Highway Corridor Overlay and Morganton Park Overlay. Site design will follow the requirements of all applicable overlays and ordinances.

1. **Zoning and Land Use**

   The Morganton Park South CDP calls for a mixed-use development to include Multi-family, Residential, commercial and office use. The commercial nature of the Mavis Tire fits within that intention. An auto parts, accessories or tire facility allowed per the land use table in exhibit 7.2 of the CDP.

2. **Architectural Standards**

   The architectural standards of the project will be in accordance with Section 4.10.4 of the Southern Pine UDO.

3. **Site Design and Infrastructure**

   The project will provide stormwater management in accordance with the Southern Pines Stormwater Management Ordinance and regulation of the NCDEQ. An underground SWM BMP will be provided to the treat the 1" storm water quality storm and reduce the runoff from the 2- and 10-year storms.

   A parking deviation will be requested for the site to reduce the required parking by greater 20% in accordance with the Southern Pines UDO. Vehicular circulation will be via a driveway entrance to the extension of Old Morganton Rd. A requested cross connection to the property to the west will not be installed as the adjacent owner was not required to provide such a connection.

   Landscaping will be provided that meets or exceeds the requirements of Section 3.5.14(H) of the Southern Pines UDO. Open space will be provided per the UDO and all vegetation buffers and overlay requirements will be provided.

   Utilities will be installed to connect to the utility system for Morganton Park South in compliance with Southern Pines and NCDEQ regulations.

As part of the Planned Development Plan, we are requesting the following Deviations from the Southern Pine Unified Development Ordinance.

1. Deviation from Front of site parking requirement: In order to increase available parking on the site, we are requesting to be allowed to provide parking at the front of the building which is internal the overall development.

2. Relief from parking requirements. Per the Urban Highway Overlay ordinance a total of 35 parking spaces are required for a retail building of 6,950 sf (1 per 200 sf). Due to the shape and size of the site and tree buffer requirements to the north side and fire department circulation requirements we are only able to provide 26 parking spaces for this site and hereby request a deviation from the requirements.

3. Building orientation; Per the UDO the building should be oriented such that the front doors face the main street. Due to the size and shape of the site, the shown building orientation is the only prototype that will fit on the site. As such the building entrance needs to be at the northwest corner of the building.

Should you require additional information, feel free to contact me at 704-851-7102.

Sincerely,

Andrew Mueller, P.E.
Project Manager II

From: James Michel
To: Mueller, Andrew, PE; Gene Ruiz
Cc: BJ Grieve
Subject: RE: PD-07-25 Mavis Tire PDP
Date: Thursday, March 12, 2026 2:28:32 PM
Attachments: image010.png
image013.png
image014.png
image017.png

Would have helped had I scrolled down on the email. I read Gene's email as it was attached and didn't see it there.

We are good.

James Michel, PE, MBA
Town Engineer/Asst. Public Works Director
801 SE Service Road
Southern Pines, NC 28387
(910)692-1983

From: Mueller, Andrew, PE <amueller@blcompanies.com>
Sent: Thursday, March 12, 2026 2:20 PM
To: Gene Ruiz <GRuiz@southernpines.net>; James Michel <JMichel@southernpines.net>
Cc: BJ Grieve <BJGrieve@southernpines.net>
Subject: RE: PD-07-25 Mavis Tire PDP

James attached is the original TIA. The email Gene shared was meant to supplement the original report to update it for our parcel's actual use which as discussed in the memo is a minimal change.

Andy Mueller, P.E.
Project Manager II
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3420 Toringdon Way, Suite 210 Charlotte, NC 28277
tel: 704.565.7070 | direct: 704.851.7102
fax: 203.630.2615
www.blcompanies.com

From: Gene Ruiz <GRuiz@southernpines.net>
Sent: Thursday, March 12, 2026 8:33 AM
To: James Michel <JMichel@southernpines.net>; Mueller, Andrew, PE <amueller@blcompanies.com>
Cc: BJ Grieve <BJGrieve@southernpines.net>
Subject: RE: PD-07-25 Mavis Tire PDP

James,

The email below is the only information I have received from the applicant to date. If this is not sufficient for your review, please let us know specifically what additional information or documentation is required so we can relay that clearly.

My assumption is that you are looking for a complete supporting document similar to the previous study—one that includes the full methodology, calculations, and analysis that support the summary table provided below. However, I would prefer to have that confirmed by you so the applicant can provide exactly what is needed.

I have copied the applicant on this email so they can hear directly from Town Engineering regarding the specific materials required to satisfy your review and move the process forward.

Thank you both for your coordination on this.

Best regards,

Gene R. Ruiz, CZO
Planner II
Planning Department
Town of Southern Pines
801 SE Service Road, Southern Pines, NC 28387
(910) 692-4003 Ext: 7235

From: James Michel <JMichel@southernpines.net>
Sent: Thursday, March 12, 2026 8:05 AM
To: Gene Ruiz <GRuiz@southernpines.net>
Subject: RE: PD-07-25 Mavis Tire PDP

There is no TIA attached?

James Michel, PE, MBA
Town Engineer/Asst. Public Works Director
801 SE Service Road
Southern Pines, NC 28387
(910)692-1983

From: Gene Ruiz <GRuiz@southernpines.net>
Sent: Tuesday, March 10, 2026 8:28 AM
To: James Michel <JMichel@southernpines.net>; Ken Skipper <KSkipper@southernpines.net>; Louie Blanchard <Blanchard@southernpines.net>; David Byrd <DByrd@southernpines.net>
Subject: FW: PD-07-25 Mavis Tire PDP

Good morning Gents,

Please see the submitted **Traffic Impact Analysis (TIA)** for the proposed **Mavis Tire development on Old Morganton Road**, located adjacent to **Tommy's Car Wash**.

For your reference, I have attached the **submitted site plan** along with the **TIA email and supporting materials** included in this email chain.

Please review and let me know if the information provided adequately addresses the areas within your respective disciplines, or if any additional information or clarification is needed.

Thank you for your time and assistance.

Best regards,

Gene R. Ruiz, CZO
Planner II
Planning Department
Town of Southern Pines
801 SE Service Road, Southern Pines, NC 28387
(910) 692-4003 Ext: 7235

From: Mueller, Andrew, PE <amueller@blcompanies.com>
Sent: Tuesday, March 10, 2026 7:55 AM
To: Gene Ruiz <GRuiz@southernpines.net>
Subject: RE: PD-07-25 Mavis Tire PDP

Good Morning Gene

This is form the Traffic Engineer that did the original study. Please let me know if it will satisfy the concern.

A 6,500 SF tire store is expected to generate 186 daily trips, 17 AM peak hour trips, and 25 PM peak hour trips. This is 12 more daily trips, 2 more AM peak hour trips, and 3 more PM peak hour trips than the 2,500 SF quick lube that was analyzed in the TIA. Those increases represent an increase of less than 1% of the total Morganton Park South Phase 4 site traffic from the November 2024 TIA and would represent an imperceptible change in traffic versus the TIA. The difference is shown in the table below:

Land Use		Intensity		Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
941	Quick Lubrication Vehicle Shop	2.500	s.f.	174	87	87	15	11	4	22	9	13
848	Tire Store	6.500	s.f.	186	93	93	17	11	6	25	11	14
Difference				**12**	**6**	**6**	**2**	**0**	**2**	**3**	**2**	**1**

However, even if the development is held to the total trip generation from the November 2024 TIA, the MPS Phase 4 development would still have a remaining trip budget of 6,520 net new daily trips, 427 net new AM peak hour trips, and 356 net new PM peak hour trips for the other outparcels as shown below:

Land Use		Intensity		Daily			AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out	Total	In	Out
848	Tire Store	6,500	s.f.	186	93	93	17	11	6	25	11	14
Total Net New External Trips From TIA				6,706	3,353	3,353	444	228	216	381	188	193
Remaining MPS Phase 4 Trip Budget				***6,520***	***3,260***	***3,260***	***427***	***217***	***210***	***356***	***177***	***179***

Let me know if you need anything else on this.

Regards,
Travis Fluitt, P.E.
Kimley-Horn | 421 Fayetteville Street, Suite 600, Raleigh, NC 27601
Direct: 919-653-2948 | Mobile: 919-649-0759 | Main: 919-677-2000

Andy Mueller, P.E.
Project Manager II
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3420 Toringdon Way, Suite 210 Charlotte, NC 28277
tel: 704.565.7070 | direct: 704.851.7102
fax: 203.630.2615
www.blcompanies.com

From: Gene Ruiz <GRuiz@southernpines.net>
Sent: Monday, March 9, 2026 7:57 PM
To: Mueller, Andrew, PE <amueller@blcompanies.com>
Subject: RE: PD-07-25 Mavis Tire PDP

Andrew,

Do you have the updated TIA, the previously submitted did not address Mavis Tires specifically?

Gene R. Ruiz, CZO
Planner II
Planning Department
Town of Southern Pines
801 SE Service Road, Southern Pines, NC 28387
(910) 692-4003 Ext: 7235
Southern Pines NORTH CAROLINA

From: Mueller, Andrew, PE <amueller@blcompanies.com>
Sent: Wednesday, March 4, 2026 1:40 PM
To: Cindy Williams <CWilliams@southernpines.net>
Cc: Gene Ruiz <GRuiz@southernpines.net>
Subject: RE: PD-07-25 Mavis Tire PDP

Thank you I think I knew that.

Andy Mueller, P.E.
Project Manager II
BL Companies | Employee owned. Client driven.

Architecture Engineering Environmental Land Surveying
Companies

Proud to be named to
Inc. Best Workplaces 2025

3420 Toringdon Way, Suite 210 Charlotte, NC 28277
tel: 704.565.7070 | direct: 704.851.7102
fax: 203.630.2615
www.blcompanies.com

From: Cindy Williams <CWilliams@southernpines.net>
Sent: Wednesday, March 4, 2026 1:36 PM
To: Mueller, Andrew, PE <amueller@blcompanies.com>
Cc: Gene Ruiz <GRuiz@southernpines.net>
Subject: PD-07-25 Mavis Tire PDP

Good afternoon Mr. Mueller,

Gene is out of the office today but will in tomorrow. I wanted to make you aware that the Planning Board meeting is on March 19th – not on the 12th.

Sincerely,

Cindy Williams
Planning Department
Town of Southern Pines
801 SE Service Rd.
Southern Pines, NC 28387
(910) 692-4003

From: Mueller, Andrew, PE <amueller@blcompanies.com>
Sent: Wednesday, March 4, 2026 1:08 PM
To: Plan <plan@southernpines.net>
Subject: FW: PA-23-25 Mavis Tire

From: Mueller, Andrew, PE
Sent: Wednesday, March 4, 2026 1:02 PM
To: Gene Ruiz <GRuiz@southernpines.net>
Subject: RE: PA-23-25 Mavis Tire

Good Afternoon Gene

Here is our final site plan that address all of staffs concerns and a narrative that outlines our deviation requests.. Please review and confirm staff can support this plan and what else you need from us, to have this on the 3/12 planning board.

Thank You
Andy

Andy Mueller, P.E.
Project Manager II
BL Companies | Employee owned. Client driven.

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fax: 203.630.2615
www.blcompanies.com

From: Gene Ruiz <GRuiz@southernpines.net>
Sent: Tuesday, March 3, 2026 11:10 AM
To: Mueller, Andrew, PE <amueller@blcompanies.com>
Subject: RE: PA-23-25 Mavis Tire

Good morning Andrew,

I'm following up with urgency, as we need your cooperation to get this application in front of the Planning Board with all outstanding issues resolved. Several of the items below are critical for compliance and for ensuring the Town of Southern Pines can confidently move this project forward.
As previously noted, the site falls within both the HCO and Urban Village HC overlays, which requires staff to apply the more restrictive standards. Because the majority of your parking area is located within the Urban Village HC Overlay, the Urban Village parking, buffering, and design criteria must be applied. Only in cases where parking areas fall outside of the overlay boundaries could MRO standards be considered—but that is not the case for this site.
To move this forward, we urgently need an updated narrative that addresses all open issues, along with clarification on any deviations you intend to request so staff can evaluate them and prepare accurate recommendations for the Planning Board and ultimately the Town Council.
Below is a consolidated list of open items requiring resolution (all previously identified through email and RFIs):

Fire Department

The current layout does not provide a reliable fire apparatus turnaround. The rear area functions as a dead-end, and maneuverability cannot rely on unobstructed parking spaces.

- Please provide a dedicated turnaround design or turning-radius exhibit showing compliant apparatus movement without entering occupied parking spaces. Updated TIA required — the version submitted did not include the Mavis traffic projections.

Public Works

- As reiterated in the pre-application meeting and again today, Mavis is responsible for extending the roadway from the traffic circle to your lot. Please ensure your team is actively addressing this requirement.

Planning Department

The 40' Urban Village Highway Yard Buffer must be labeled as undisturbed, consistent with MAPP-04-24 Conditions #1 and #2. This ties directly to the required 6-foot separation between tree protection fencing and the buffer line.
Please identify and calculate the required open space/green space. Commercial sites require 10% minimum, and PD-08-21 requires 20% overall for the development. The conceptual plan must clearly demonstrate compliance.
The current layout does not meet the frontage requirement:

- "The front of buildings shall face, and have the primary customer entry facing, the street."
- If you are requesting a deviation, please confirm and provide justification so it may be evaluated and included in the staff report.
- Please submit the parking reduction request as part of the PDP so it can be reviewed and acted on concurrently.
- Portions of the driveway, dumpster enclosure, and west-side parking appear to lie within the slope easement.
- Please confirm rights/limitations associated with this easement and whether these improvements may legally encroach.
- The retaining wall in the northwest corner appears extremely close to the required 6-foot separation for tree protection. Depending on height, it may conflict with MAPP-04-24 Condition #2.
- Provide wall details so staff can verify compliance.
- Staff also needs confirmation that the site can adequately support employee and customer parking. Eight service bays plus a front desk will likely require around 10 employee spaces, leaving only about 14 customer spaces.
- Documented counts and justification are required for any deviation; without this, staff cannot recommend approval.

Andrew, we need these items addressed as soon as possible so staff can complete our analysis, prepare accurate recommendations, and avoid delays at both the Planning Board and Town Council levels. Your prompt cooperation is essential to producing a complete, compliant PDP package.
Please let me know if you need clarification on any item—we are ready to assist, but we must receive the corrected materials to keep this project moving.

Thank you.

Gene R. Ruiz, CZO
Planner II
Planning Department
Town of Southern Pines
801 SE Service Road, Southern Pines, NC 28387
(910) 692-4003 Ext: 7235

From: Mueller, Andrew, PE <amueller@blcompanies.com>
Sent: Monday, March 2, 2026 2:44 PM
To: Gene Ruiz <GRuiz@southernpines.net>
Subject: PA-23-25 Mavis Tire

Good Afternoon Gene

It pears we are going to be able to get the developer to agree to remove the slope easement allowing us to put more parking on the west side of the site. The attached version shows 29 spaces with parking in front of the building. If staff/council are not able approve front parking we would be down to 23 spaces. Would this be an acceptable number of spaces?

Another related question: the overall developer brough to our attention additional parking requirements that he apparently discussed with staff at some point in the past. Per the Morganton Rd Overlay the parking

> (4) The number of required parking spaces shall be a minimum of one (1) space per four hundred (400) square feet of Gross Floor Area with a maximum (exclusive of on-street spaces) of one (1) space per two hundred fifty (250) square feet of Gross Floor Area. If parking is created through vertical means (including grade decks), up to one (1) space per one hundred seventy-five (175) square feet of Gross Floor Area may be provided.

This would put our parking at a minimum of 18 and a maximum of 28. Why does the Urban Highway Overlay supersede the Morganton Road Overlay?

Thanks for all your help,
Andy

Andy Mueller, P.E.
Project Manager II

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January 6, 2025

Planning Department
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387

Re: Mavis Tires #2254 – Preliminary Development Plan
PIN: 085710588078
Address: 540 E. Morganton Rd

Dear Sir or Madam:

The Traffic Impact Analysis prepared by Kimley Horn in November 2024 adequately accounts for the proposed development of the Mavis Tire Store.

Should you require additional information, feel free to contact me at 704-851-7102.

Sincerely,

Andrew Mueller, P.E.
Project Manager II

Traffic Impact Analysis

Morganton Park South Phase 4

Southern Pines, NC

Prepared for:

Midland Atlantic Properties

Kimley»Horn

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Traffic Impact Analysis for

Morganton Park South Phase 4

Southern Pines, North Carolina

Prepared for:

Midland Atlantic Properties

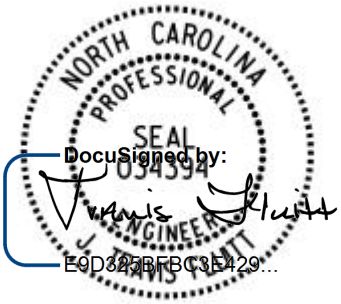
Cincinnati, OH

Prepared by:

Kimley-Horn and Associates, Inc.
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

November 2024

011820005



11/21/2024

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Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis (TIA) for the proposed Phase 4 of the Morganton Park South development to be located south of Morganton Road and west of Carolina Green Pkwy in Southern Pines, NC. The site is currently vacant. As currently envisioned, the site will consist of 4 outparcels. Build-out of the development is anticipated in 2027. Access will be provided by the extension of Old Morganton Road to Carolina Green Parkway. All access to the proposed outparcels will be off Old Morganton Road.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development. The Town of Southern Pines' Unified Development Ordinance (UDO) requires the study of the build-out traffic conditions for both the site build-out and 10-year projections. Therefore, the traffic conditions studied include the existing (2027) and projected (2027 and 2034) background and build-out traffic conditions for the AM and PM peak hours.

While the uses for the outparcels have not been finalized, for purposes of this analysis, they were assumed to consist of a gas station with convenience store (Lot 1), drive-in bank (Lot 2), a car wash (Lot 3), and a quick lube (Lot 4). As shown in Table ES-1, the site has the potential to generate approximately 6,706 net new external daily trips, 444 net new external trips during the AM peak hour, and 381 net new external trips during the PM peak hour.

Table ES-1
ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily Total	AM Peak Hour		PM Peak Hour	
					In	Out	In	Out
912	Drive-In-Bank	3,500	s.f	352	20	15	37	37
941	Quick Lubrication Vehicle Shop	2,500	s.f.	174	11	4	9	13
945	Convenience Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	274	274	237	237
948	Automated Car Wash	1	tunnel	780	20	19	39	39
Subtotal				9,006	325	312	322	326
Pass-By Reduction				*2,300*	*97*	*96*	*134*	*133*
Total Net New External Trips				**6,706**	**228**	**216**	**188**	**193**

Intersection capacity analyses were performed using Synchro/SimTraffic Version 12 software. Table ES-2 summarizes the operation of the overall study intersections for the AM and PM peak hours.

Table ES-2 Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Old Morganton Road at Brucewood Road (Unsignalized)		
Existing (2027) Traffic	EB – B (10.6) WB – A (9.6) NBL – A (7.6) SBL – A (7.5)	EB – C (17.3) WB – B (13.5) NBL – A (8.0) SBL – A (8.3)
Background (2027) Traffic	EB – B (11.2) WB – A (9.8) NBL – A (7.7) SBL – A (7.6)	EB – C (20.3) WB – B (14.7) NBL – A (8.2) SBL – A (8.5)
Build-out (2027) Traffic	EB – B (11.8) WB – A (9.9) NBL – A (7.7) SBL – A (7.6)	EB – C (23.4) WB – C (15.2) NBL – A (8.2) SBL – A (8.6)
Background (2034) Traffic	EB – B (11.8) WB – B (10.2) NBL – A (7.7) SBL – A (7.7)	EB – D (27.3) WB – C (18.3) NBL – A (8.4) SBL – A (8.8)
Build-out (2034) Traffic	EB – B (12.5) WB – B (10.3) NBL – A (7.7) SBL – A (7.8)	EB – D (32.6) WB – C (18.5) NBL – A (8.4) SBL – A (8.8)
Old Morganton Road at Patriot Boulevard (Unsignalized)		
Build-out (2027) Traffic	SB – A (9.8) EBL – A (9.5)	SB – B (10.3) EBL – A (7.6)
Background (2034) Traffic	SB – A (8.7) EBL – A (7.3)	SB – A (9.1) EBL – A (7.4)
Build-out (2034) Traffic	SB – A (9.8) EBL – A (7.6)	SB – B (10.4) EBL – A (7.7)
Morganton Road at Patriot Boulevard (Unsignalized)		
Existing (2027) Traffic	NB – B (10.7) SB – B (11.5) WBL – A (9.1)	NB – B (14.7) SB – B (11.7) WBL – B (11.5)
Background (2027) Traffic	NB – B (11.0) SB – B (11.5) WBL – A (9.4)	NB – C (16.2) SB – B (13.0) WBL – B (12.5)
Build-out (2027) Traffic	NB – B (11.2) SB – B (11.5) WBL – A (9.7)	NB – C (16.5) SB – B (12.8) WBL – B (12.8)
Background (2034) Traffic	NB – B (11.4) SB – B (12.3) WBL – A (9.8)	NB – C (19.2) SB – C (18.4) WBL – B (14.5)
Build-out (2034) Traffic	NB – B (11.6 SB – B (12.1) WBL – B (10.0)	NB – C (19.7) SB – C (17.6) WBL – B (14.9)

Table ES-2 (cont.) Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Morganton Road at Carolina Green Parkway (Signalized)		
Existing (2027) Traffic	Overall - A (4.1) EB – A (7.5) WB – A (1.7) NB – A (8.5)	Overall – B (11.4) EB – B (15.3) WB – A (5.1) NB – B (17.9)
Background (2027) Traffic	Overall - A (5.7) EB – A (9.3) WB – A (3.0) NB – A (9.2)	Overall – B (14.5) EB – B (18.7) WB – A (7.1) NB – C (22.7)
Build-out (2027) Traffic	Overall - A (6.3) EB – B (10.7) WB – A (3.1) NB – A (8.0)	Overall – B (18.6) EB – C (24.2) WB – A (9.3) NB – C (26.4)
Background (2034) Traffic	Overall - A (7.5) EB – B (11.9) WB – A (4.4) NB – A (9.9)	Overall – B (18.1) EB – C (22.4) WB – A (8.8) NB – C (31.1)
Build-out (2034) Traffic	Overall - A (7.9) EB – B (12.9) WB – A (4.6) NB – A (9.3)	Overall – C (23.0) EB – C (28.7) WB – B (12.1) NB – C (33.8)
Morganton Road at Henley Street (Unsignalized)		
Existing (2027) Traffic	SB – C (15.5) EBL – B (10.4)	SB – C (19.0) EBL – B (10.9)
Background (2027) Traffic	SB – C (16.9) EBL – B (11.1)	SB – C (22.0) EBL – B (11.9)
Build-out (2027) Traffic	SB – C (17.2) EBL – B (11.5)	SB – C (22.7) EBL – B (12.3)
Background (2034) Traffic	SB – C (19.1) EBL – B (12.3)	SB – D (27.2) EBL – B (13.3)
Build-out (2034) Traffic	SB – C (19.7) EBL – B (12.8)	SB – D (28.5) EBL – B (13.8)

Table ES-2 (cont.) Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Morganton Road at Fire Lane (Signalized)		
Existing (2027) Traffic	Overall - A (5.5) EB – A (4.8) WB – A (5.5) NB – B (13.8) SB – B (14.8)	Overall - A (7.3) EB – A (8.3) WB – A (5.6) NB – B (17.4) SB – B (20.0)
Background (2027) Traffic	Overall - A (5.4) EB – A (4.6) WB – A (5.4) NB – B (15.0) SB – B (16.3)	Overall - A (7.4) EB – A (8.4) WB – A (5.5) NB – B (19.4) SB – B (22.4)
Build-out (2027) Traffic	Overall - A (6.4) EB – A (5.5) WB – A (6.5) NB – B (16.4) SB – B (17.3)	Overall - A (7.4) EB – A (8.4) WB – A (5.5) NB – B (19.9) SB – B (22.7)
Background (2034) Traffic	Overall - A (6.4) EB – A (5.3) WB – A (6.6) NB – B (17.7) SB – B (18.8)	Overall - A (8.2) EB – A (9.7) WB – A (5.7) NB – C (21.8) SB – C (23.8)
Build-out (2034) Traffic	Overall - A (6.3) EB – A (5.3) WB – A (6.6) NB – B (18.5) SB – B (19.7)	Overall - A (8.5) EB – B (10.1) WB – A (5.8) NB – C (21.8) SB – C (23.8)
Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments (Unsignalized)		
Background (2027) Traffic	WB – A (9.6) SBL – A (7.5)	WB – B (12.4) SBL – A (8.3)
Build-out (2027) Traffic	WB – B (13.3) SBL – A (8.9)	WB – C (22.3) SBL – B (12.2)
Background (2034) Traffic	EB – B (11.1) WB – B (11.5) NBL – A (7.8) SBL – A (7.7)	EB – C (16.5) WB – C (18.8) NBL – A (8.4) SBL – A (8.6)
Build-out (2034) Traffic	EB – B (16.4) WB – C (18.0) NBL – A (7.9) SBL – A (9.6)	EB – D (33.0) WB – E (40.4) NBL – A (8.6) SBL – B (13.2)

Table ES-2 (cont.) Level-of-Service Summary		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Carolina Green Parkway at Old Morganton Road/Pod 3 Driveway (Unsignalized)		
Build-out (2027) Traffic	EB – B (11.3) NBL – A (8.4)	EB – B (13.5) NBL – A (9.2)
Background (2034) Traffic	EB – A (9.0) WB – A (9.1) NBL – A (8.2) SBL – A (7.8)	EB – A (8.9) WB – A (9.0) NBL – A (8.2) SBL – A (7.6)
Build-out (2034) Traffic	EB – B (11.6) WB – A (9.6) NBL – A (9.7) SBL – A (8.2)	EB – B (14.0) WB – B (11.0) NBL – B (12.5) SBL – A (9.0)
Old Morganton Road at Lot 1 Driveway (Unsignalized)		
Build-out (2027) Traffic	SB – B (13.5) EBL – A (8.0)	SB – B (14.8) EBL – A (8.1)
Build-out (2034) Traffic	SB – B (13.8) EBL – A (8.0)	SB – C (15.6) EBL – A (8.2)
Old Morganton Road at Lot 2 Driveway/Pod 2 Apartments (Unsignalized)		
Build-out (2027) Traffic	SB – A (9.9) EBL – A (7.6)	SB – B (10.2) EBL – A (7.7)
Background (2034) Traffic	NB – A (8.6) WBL – A (7.3)	NB – A (8.9) WBL – A (7.4)
Build-out (2034) Traffic	NB – A (9.8) SB – B (10.4) EBL – A (9.8) WBL – A (7.4)	NB – B (10.4) SB – B (11.2) EBL – B (10.4) WBL – B (11.2)
Old Morganton Road at Lot 3 Driveway/Lot 4 Driveway (Roundabout)		
Build-out (2027) Traffic	A (3.6) V/C = 0.13	A (3.8) V/C = 0.16
Build-out (2034) Traffic	A (3.6) V/C = 0.14	A (3.8) V/C = 0.17

The following improvements are recommended with the proposed Phase 4 of the Morganton Park South development:

Carlina Green Parkway at Old Morganton Road/Pod 3 Driveway:

- Construct a northbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper
- Construct this intersection as a directional crossover (left-in/right-in/right-out)

The following improvements are anticipated to be required of and performed by other developments in the study area and were included in the 2034 background and build-out traffic conditions. These improvements would only be constructed if the associated developments move forward and the driveway connections are made:

Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments *(with Pod 2 Apartments)*:

- Construct a northbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

Carlina Green Parkway at Old Morganton Road/Pod 3 Driveway *(with Pod 3)*:

- Construct a southbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

Right-turn volumes were reviewed at several locations, but right-turn lanes are not recommended for several reasons. First, there are no right-turn lanes along Carolina Green Parkway, so they would be inconsistent with the character of the roadway. Second, all subject intersections operate acceptably without them, and with Carolina Green Parkway in particular being a 4-lane road with ample capacity, through vehicles can stay in the left lane to avoid right-turn vehicles. Third, right-turn lanes create additional conflicts and increased crossing distances for pedestrians.

With the recommended laneage in place, all study intersections are expected to operate acceptably at project build-out in 2027 and in the year 2034 with full build-out of Morganton Park South. While the minor street approaches of the intersection of Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments are expected to operate with moderate delays in the PM peak hour in the year 2034, SimTraffic simulations show no queuing issues on any approach, and both apartment developments have alternate means of ingress and egress.

SimTraffic simulations also show no queuing issues or conflicts at the site driveways along the Old Morganton Road extension or at Carolina Green Parkway. The locations of proposed driveways along Old Morganton Road are appropriate for the proposed uses and the character of this roadway.

The recommended build-out laneage is shown on **Figure ES-1**.

NOT TO SCALE

MORGANTON ROAD

PATRIOT BLVD

BRUCEWOOD ROAD

SITE

MATCHLINE

MATCHLINE

LOT 4 DWY

LOT 3 DWY

LOT 2 DWY

LOT 1 DWY

POD 3 DWY

POD 2 APTS DWY

HENSLEY STREET

FIRE LANE

PINE RIDGE APTS

CAROLINA GREEN PKWY

200’

225’

225’

150’

50’

50’

150’

100’

100’

100’

100’

50’

125’

100’

LEGEND

- EXISTING LANE
- XX’ STORAGE LENGTH
- EXISTING STOP SIGN
- EXISTING TRAFFIC SIGNAL
- RECOMMENDED LANE
- RECOMMENDED STOP SIGN
- RECOMMENDED ROUNDABOUT
- RECOMMENDED LANE (BY OTHERS)

FIGURE ES–1

RECOMMENDED ROADWAY LANEAGE

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

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1.0 Introduction

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis (TIA) for the proposed Phase 4 of the Morganton Park South development to be located south of Morganton Road and west of Carolina Green Pkwy in Southern Pines, NC. The site is currently vacant. As currently envisioned, the site will consist of 4 outparcels. Build-out of the development is anticipated in 2027. Access will be provided by the extension of Old Morganton Road to Carolina Green Parkway. All access to the proposed outparcels will be off Old Morganton Road.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development. The Town of Southern Pines' Unified Development Ordinance (UDO) requires the study of the build-out traffic conditions for both the site build-out and 10-year projections. Therefore, the traffic conditions studied include the existing (2027) and projected (2027 and 2034) background and build-out traffic conditions for the AM and PM peak hours.

Town of Southern Pines staff was consulted regarding the elements to be covered in this analysis.

2.0 Inventory

2.1 Study Area

The study area includes the following intersections:

- Brucewood Road at Old Morganton Road
- Old Morganton Road at Patriot Blvd
- Morganton Road at Patriot Blvd
- Morganton Road at Carolina Green Pkwy
- Morganton Road at Henley Street
- Morganton Road at Fire Lane
- Carolina Green Pkwy at Pine Ridge Apartments/Pod 2 Apartments
- Carolina Green Pkwy at Old Morganton Road/Pod 3 Driveway
- Old Morganton Road at Lot 1 Driveway
- Old Morganton Road at Lot 2 Driveway/Pod 2 Apartments
- Old Morganton Road at Lot 3 Driveway/Lot 4 Driveway

Figure 2.1 shows the site location. The conceptual site plan is shown on **Figure 2.2**.

2.2 Existing Conditions

Phase 4 of the Morganton Park South development is proposed to be located south of Morganton Road and west of Carolina Green Pkwy in Southern Pines, North Carolina. Major roadways in the study area include Morganton Road, Brucewood Road, Carolina Green Parkway, Old Morganton Road, Patriot Boulevard, Henley Street, and Fire Lane. The existing roadway laneage is shown on **Figure 2.3**.

Morganton Road is a 4-lane divided roadway with a posted speed of 45 mph in the vicinity of the site. The NCDOT reported 2023 daily volume on Morganton Road was approximately 18,500 vehicles per day (vpd) west of Brucewood Road.

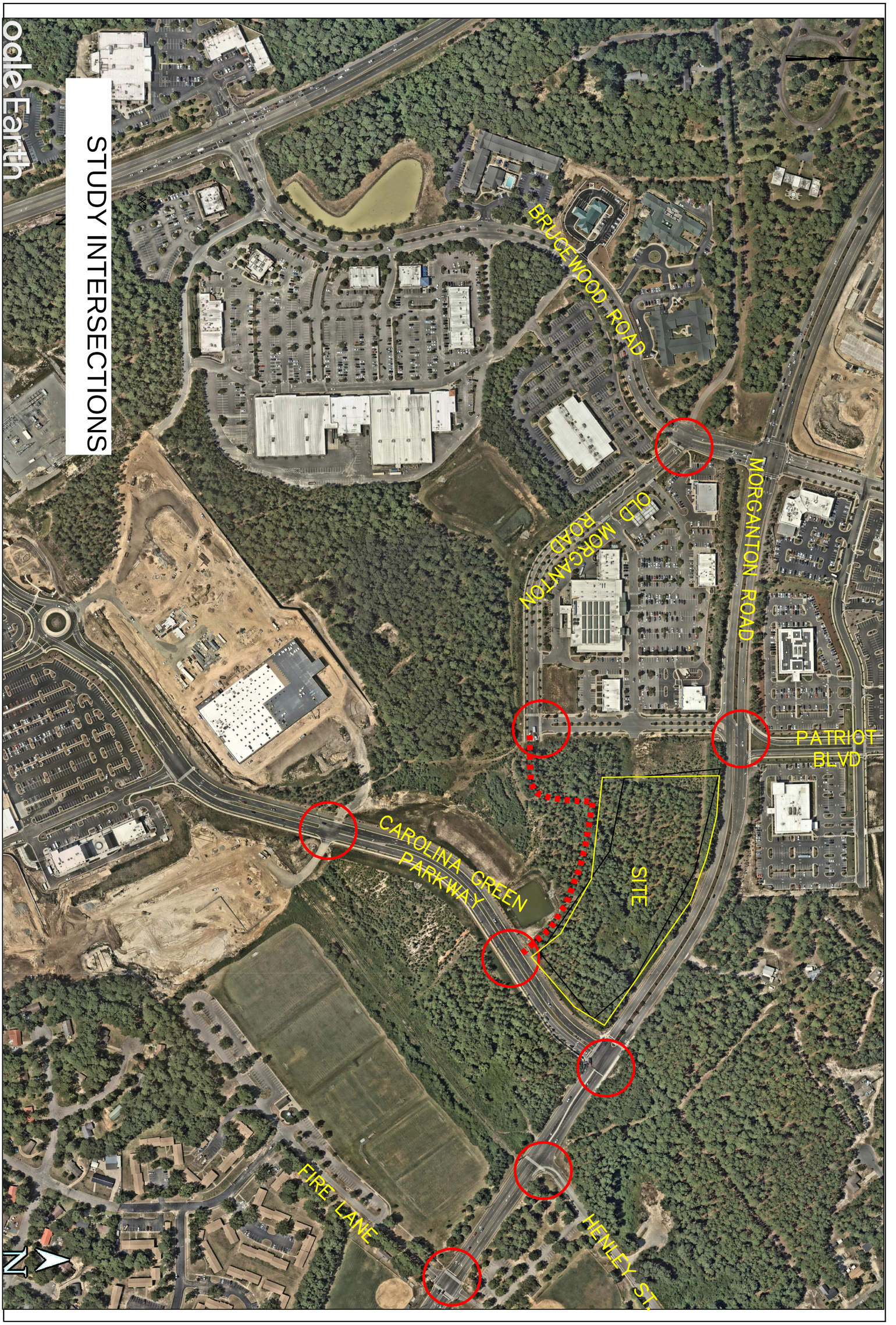
Brucewood Road is a 4-lane divided section with a posted speed limit of 35 mph between US 15/501 and Morganton Road. The estimated 2024 daily volume is approximately 6,000 vpd at Old Morganton Road.

Carolina Green Parkway is a 4-lane divided section with a posted speed limit of 35 mph between US 15/501 and Morganton Road. The estimated 2024 daily volume is approximately 3,500 vpd.

Old Morganton Road and Patriot Boulevard are both 2-lane divided roadways with no posted speed in the vicinity of the site. The estimated 2024 daily volume on Old Morganton Road ranges from approximately 2,500 vpd at Brucewood Road to less than 500 vpd at Patriot Boulevard. The estimated 2024 daily volume on Patriot Boulevard ranges from approximately 2,000 vpd at Morganton Road to less than 500 vpd at Old Morganton Road.

Henley Street is a 2-lane undivided roadway with a posted speed of 35 mph in the vicinity of Morganton Road. The estimated 2024 daily volume is approximately 1,000 vpd.

Fire Lane is a 2-lane undivided roadway with a speed of 20 mph in the vicinity of Morganton Road. The estimated 2024 daily volume is less than 1,000 vpd.



Kimley»Horn	MORGANTON PARK SOUTH PHASE 4 SOUTHERN PINES, NC TRAFFIC IMPACT ANALYSIS	SITE LOCATION	FIGURE 2.1

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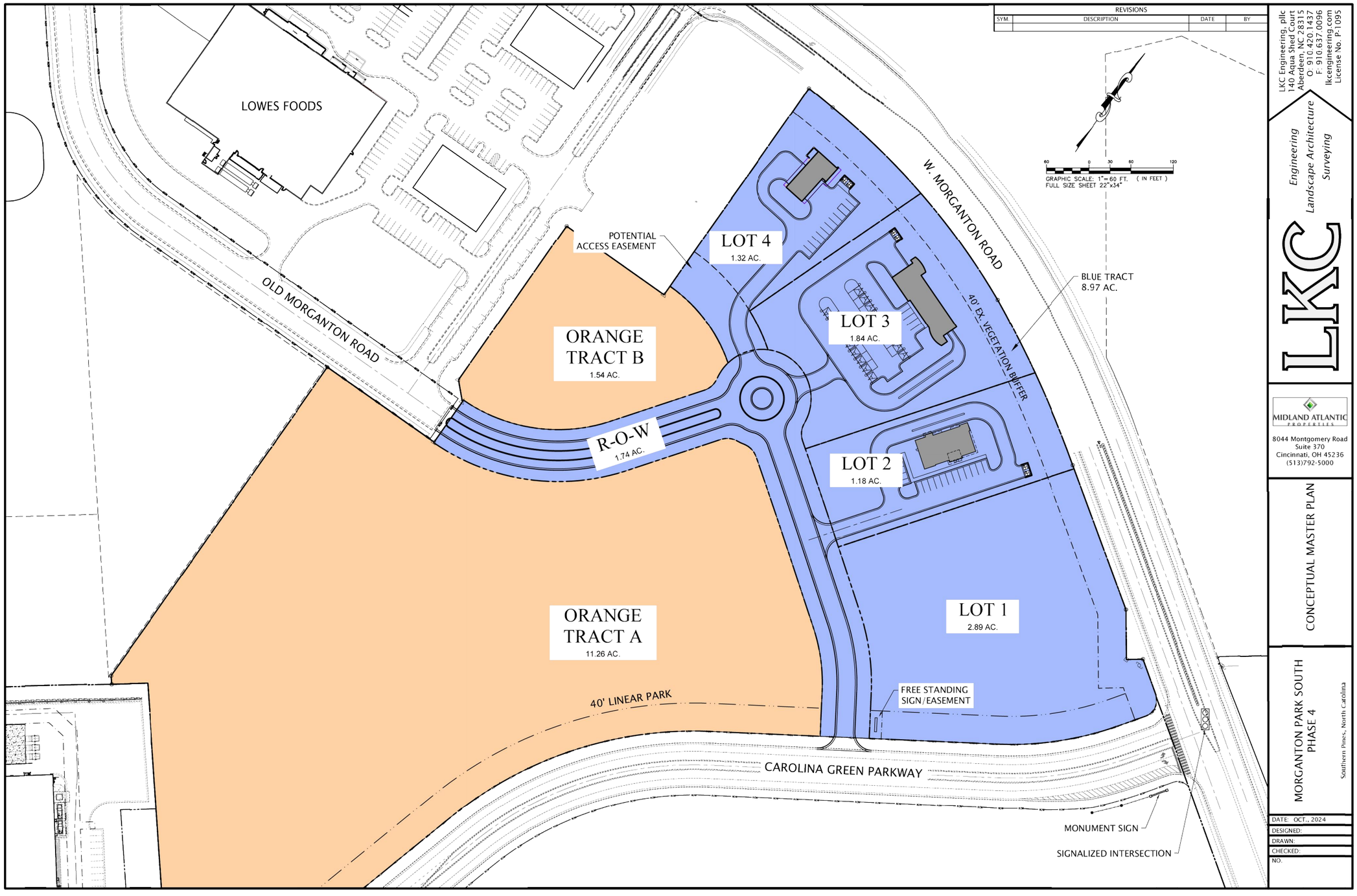

REVISIONS

SYM.	DESCRIPTION	DATE	BY

LKC Engineering, pllc
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MIDLAND ATLANTIC PROPERTIES
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Suite 370
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(513)792-5000

CONCEPTUAL MASTER PLAN

MORGANTON PARK SOUTH
PHASE 4
Southern Pines, North Carolina

DATE: OCT., 2024
DESIGNED:
DRAWN:
CHECKED:
NO.

FIGURE 2.2

SITE PLAN

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

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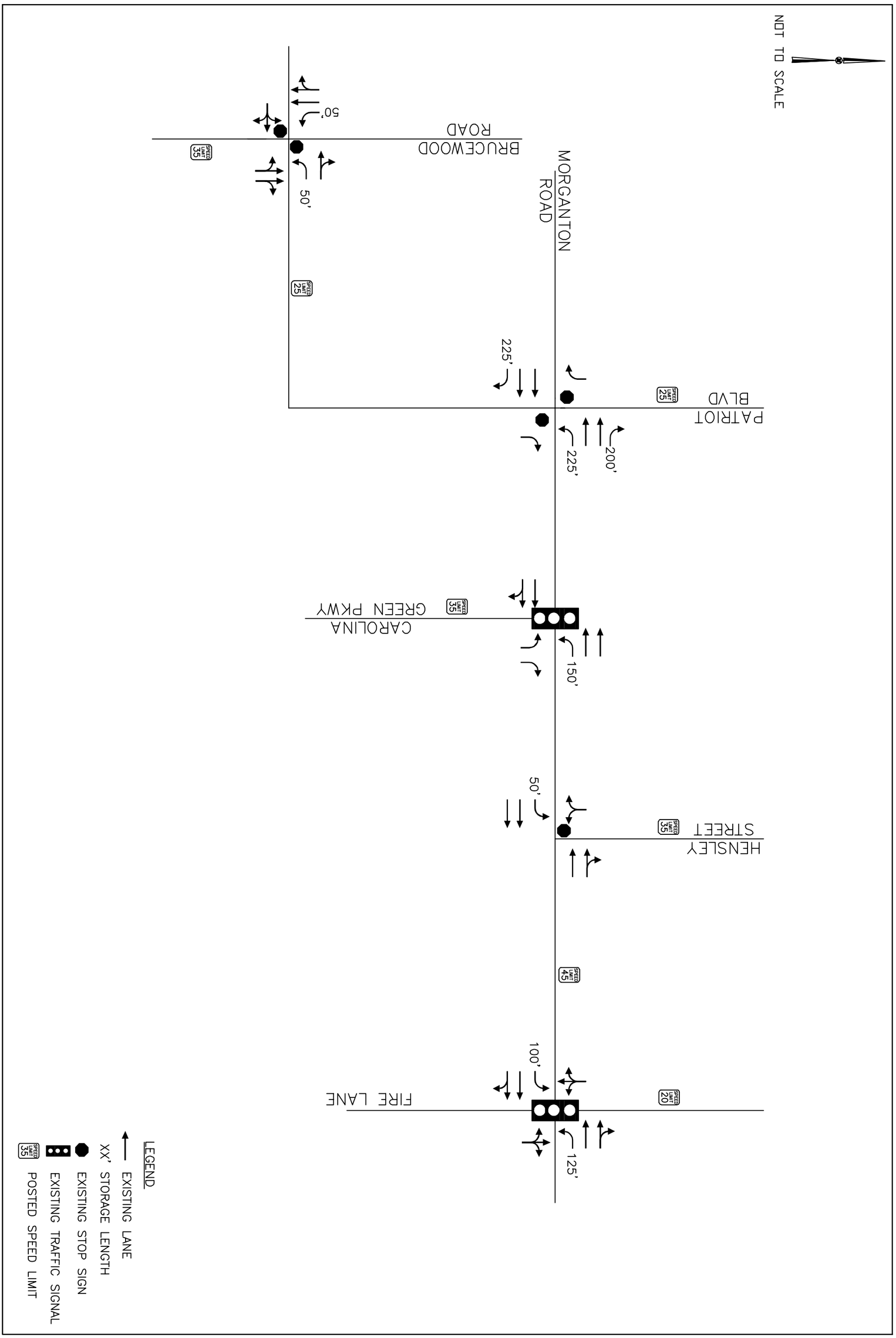

Kimley»Horn	MORGANTON PARK SOUTH PHASE 4 SOUTHERN PINES, NC TRAFFIC IMPACT ANALYSIS	EXISTING ROADWAY LANEAGE	FIGURE 2.3

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3.0 Traffic Generation

The traffic generation potential for the development was determined using traffic generation rates and equations published in *Trip Generation* (Institute of Transportation Engineers, 11th Edition, 2021). While the uses for the outparcels have not been finalized, for purposes of this analysis, they were assumed to consist of gas station with convenience store (Lot 1), drive-in bank (Lot 2), a car wash (Lot 3), and a quick lube (Lot 4). Table 3.1 summarizes the estimated traffic generation for the development.

Table 3.1
ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily Total	AM Peak Hour		PM Peak Hour	
					In	Out	In	Out
912	Drive-In-Bank	3,500	s.f	352	20	15	37	37
941	Quick Lubrication Vehicle Shop	2,500	s.f.	174	11	4	9	13
945	Convenience Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	274	274	237	237
948	Automated Car Wash	1	tunnel	780	20	19	39	39
Subtotal				9,006	325	312	322	326
Pass-By Reduction				*2,300*	*97*	*96*	*134*	*133*
Total Net New External Trips				**6,706**	**228**	**216**	**188**	**193**

As shown in Table 3.1, the MPS Phase 4 Development has the potential to generate approximately 6,706 net new daily trips, 444 net new external trips during the AM peak hour, and 381 net new external trips during the PM peak hour.

Pass-by trips are trips already on the roadway network that will visit the site as they pass by on the adjacent street. Pass-by trips were accounted for per ITE methodology and assigned based on existing and projected travel patterns. Pass-by capture was capped at 10% of the background traffic volumes at the intersection of Morganton Road at Carolina Green Parkway. If should be noted that as the background traffic volumes are higher in the year 2034 than in 2027, the pass-by capture cap is higher, which results in more pass-by capture trips and fewer total net new external trips in the 2034 analyses.

While no internal capture was applied to the site traffic, consistent with the *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021) a 20% reduction in AM peak hour trips and a 30% reduction in PM peak hour trips was applied to all new Morganton Park South traffic to account for interaction between pods within the overall development. These reductions were applied at external intersections only with no reductions applied at the intersections along Carolina Green Parkway and Old Morganton Road.

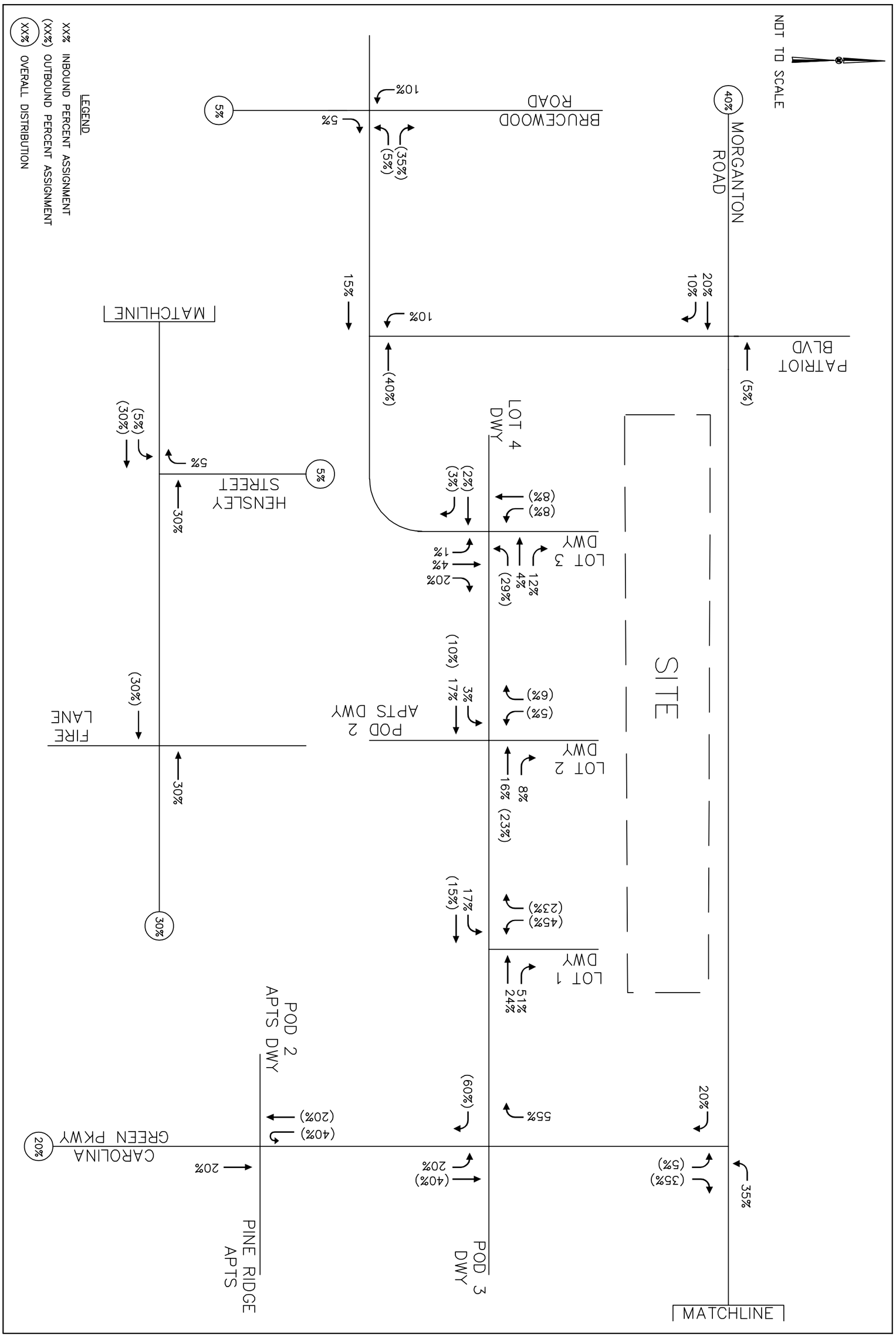
Detailed trip generation calculations are included in the Appendix of this report.

4.0 Site Traffic Distribution

The proposed site generated trips were assigned to the surrounding roadway network. The directional distribution and assignment were based on a review of surrounding land uses and traffic patterns and generally consistent with the overall site trip distribution from the *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021). The following overall distribution was used for new external site trips:

- 20% to/from the south on Carolina Green Pkwy
- 30 % to/from the east on Morganton Road
- 35% to/from the west on Morganton Road
- 5% to/from the north on S Henley Street
- 5% to/from the south on Brucewood Road
- 5% to/from the north on Brucewood Road

The site traffic distribution and percent assignment are shown on **Figure 4.1**.



Kimley»Horn	MORGANTON PARK SOUTH PHASE 4 SOUTHERN PINES, NC TRAFFIC IMPACT ANALYSIS	SITE TRAFFIC DISTRIBUTION AND PERCENT ASSIGNMENT	FIGURE 4.1

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5.0 Projected Traffic Volumes

5.1 Existing Traffic

AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movement counts were performed at the following intersections on Wednesday, October 30, 2024 when Moore County schools were in session:

- Brucewood Road at Old Morganton Road
- Old Morganton Road at Patriot Blvd
- Morganton Road at Patriot Blvd
- Morganton Road at Carolina Green Pkwy
- Morganton Road at Henley Street
- Morganton Road at Fire Lane

The existing AM peak hour traffic volumes are shown on **Figures 5.1**, and the existing PM peak hour traffic volumes are shown on **Figures 5.2**. The traffic count data are included in the Appendix of this report.

5.2 Historic Growth Traffic

Historic growth traffic is the increase in traffic due to usage increases and non-specific growth throughout the area. Based on historic ADT volumes in the area, an annual growth rate of 2% per year was applied to existing (2024) volumes up to the projected (2027) build-out year, and a 1% annual growth rate was applied to the 2027 background traffic volumes up to the future study year 2034. Background growth calculations are detailed on intersection spreadsheets in the Appendix of this report. Background traffic volumes for the year 2027 are shown on **Figures 5.1** and **5.2** for the AM and PM peak hours, respectively. Background traffic volumes for the year 2034 are shown on **Figures 5.3** and **5.4** for the AM and PM peak hours, respectively.

5.3 Approved Development Traffic

Approved development traffic is generated by approved, but not yet constructed, projects in the vicinity of the proposed project. The following developments were identified for inclusion as part of the background conditions of this analysis.

- Morganton Park North Site 3
    - 68,000 SF medical office building on the northwest corner of Patriot Boulevard at Pavilion Way
    - Traffic was obtained from *Morganton Park North Site 3 Medical Office Building TIA* (Kimley-Horn, December 2021)
    - As the site appears to be approximately 50% occupied, half of the site traffic was assigned to the network

- Morganton Park North Apartments
  - Up to 300 apartment units and 20,000 SF of commercial space on the northwest corner of the intersection of Morganton Road at Brucewood Road
  - Traffic was obtained from *Morganton Park North Apartments TIA* (Kimley-Horn, June 2022)

- Morganton Park North Site 4N
  - Traffic was obtained from *Morganton Park North Site 4N TIA* (Kimley-Horn, November 2023)
  - Phase 1 (20,000 SF of medical office space) site traffic was applied for the year 2027 analyses
  - Full build-out (160,000 SF of medical office space) site traffic was applied for the year 2034 analyses

- Morganton Park South Master Plan:
  - Pine Ridge Apartments
    - Up to 260 apartments on the east side of Carolina Green Parkway north of the Target shopping center
    - Site trip generation was obtained from the *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021)
  - BJ's/Starbucks
    - 100,000 square foot discount store and 2,500 SF coffee shop on the west side of Carolina Green Parkway at Southern Road
    - Site trip generation was obtained from the *Morganton Park South Parcel 10 – Trip Generation Analysis* (Kimley-Horn, July 2023)
  - Pod 2 Apartments
    - 214 apartments on the west side of Carolina Green Parkway south of Old Morganton Road
    - Site traffic was generated using ITE trip generation rates
  - Pod 3
    - Assumed to consist of up to 40,000 SF of office space, 10,000 SF of retail space, a 3,500 SF sit-down restaurant, and a 3,500 SF fast food restaurant east of Carolina Green Parkway at Old Morganton Road
    - Site traffic was generated using ITE trip generation rates

Trips were assigned to the network using the overall distribution from the *Pine Ridge Commercial TIA*. To account for interaction between uses within the Morganton Park South development and consistent with the *Pine Ridge Commercial TIA*, a 20% reduction in AM peak hour trips and a 30% reduction in PM peak hour trips was applied to Morganton Park South traffic at external intersections only. No reductions were applied at the intersections along Carolina Green Parkway and Old Morganton Road. Detailed trip generation and traffic assignment for this development are included in the Appendix.

Projected (2027) background traffic volumes consisting of existing, historic growth, traffic diversions, and approved development traffic are shown on **Figures 5.1** and **5.2** for the AM and PM peak hours, respectively.

Projected (2034) background traffic volumes consisting of existing, historic growth, traffic diversions, and approved development traffic are shown on **Figures 5.3** and **5.4** for the AM and PM peak hours, respectively.

5.4 Old Morganton Road Traffic Diversion

It is anticipated that some amount of existing and background traffic (will use the extension of Old Morganton Road to Carolina Green Parkway to get to/from US 15-501. Therefore, traffic was added to the intersections along both of these roadways in the 2027 build-out condition and the 2034 background and build-out conditions to account for this. However, no reductions were applied to any existing intersections to present a conservative analysis. The diverted traffic volumes are shown on **Figures 5.3 – 5.6**.

5.5 Site Traffic

The projected site traffic was generated and assigned to the adjacent roadway network according to the distribution discussed previously in Section 4.0 for the build-out scenarios. The AM peak hour site traffic volumes for the years 2027 and 2034 are shown on **Figures 5.5** and **5.7**, respectively. The PM peak hour site traffic volumes for the years 2027 and 2034 are shown on **Figures 5.6** and **5.8**, respectively.

5.6 Build-Out Traffic

To obtain the projected build-out traffic volumes, the projected site traffic was added to the projected background traffic for each scenario. Traffic volume calculations are detailed in intersection spreadsheets in the Appendix of this report. **Figures 5.5** and **5.6** show the projected (2027) AM and PM peak hour build-out traffic volumes, respectively. **Figures 5.7** and **5.8** show the projected (2034) AM and PM peak hour build-out traffic volumes, respectively.

NOT TO SCALE

MORGANTON ROAD

PATRIOT BLVD

HENSLEY STREET

FIRE LANE

BRUCEWOOD ROAD

CAROLINA GREEN PKWY

PINE RIDGE APARTMENTS

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LEGEND

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(XX) BACKGROUND GROWTH

<XX> APPROVED DEVELOPMENT TRAFFIC

[XX] TOTAL BACKGROUND TRAFFIC

FIGURE 5.1

EXISTING (2024) AND PROJECTED (2027) BACKGROUND AM PEAK HOUR VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

MORGANTON ROAD

PATRIOT BLVD

HENSLEY STREET

FIRE LANE

BRUCEWOOD ROAD

CAROLINA GREEN PKWY

PINE RIDGE APARTMENTS

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LEGEND

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(XX) BACKGROUND GROWTH

<XX> APPROVED DEVELOPMENT TRAFFIC

[XX] TOTAL BACKGROUND TRAFFIC

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FIGURE 5.2

EXISTING (2024) AND PROJECTED (2027) BACKGROUND PM PEAK HOUR VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

PATRIOT BLVD

MORGANTON ROAD

BRUCEWOOD ROAD

HENSLEY STREET

POD 2 APTS DWY

POD 3 DWY

POD 2 APTS DWY

PINE RIDGE APTS

CAROLINA GREEN PKWY

FIRE LANE

MATCHLINE

MATCHLINE

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LEGEND

XX EXISTING TRAFFIC

(XX) BACKGROUND GROWTH

<XX> APPROVED DEVELOPMENT TRAFFIC

{XX} OLD MORGANTON ROAD TRAFFIC DIVERSION

[XX] TOTAL BACKGROUND TRAFFIC

FIGURE 5.3

EXISTING (2024) AND PROJECTED (2034) BACKGROUND AM PEAK HOUR VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

PATRIOT BLVD

MORGANTON ROAD

BRUCEWOOD ROAD

HENSLEY STREET

MATCHLINE

MATCHLINE

POD 3 DWY

POD 2 APTS DWY

POD 2 APTS DWY

FIRE LANE

PINE RIDGE APTS

CAROLINA GREEN PKWY

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1(0)[1]
24(3)[27]

LEGEND

XX EXISTING TRAFFIC

(XX) BACKGROUND GROWTH

<XX> APPROVED DEVELOPMENT TRAFFIC

{XX} OLD MORGANTON ROAD TRAFFIC DIVERSION

[XX] TOTAL BACKGROUND TRAFFIC

FIGURE 5.4

EXISTING (2024) AND PROJECTED (2034) BACKGROUND PM PEAK HOUR VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

PATRIOT BLVD

MORGANTON ROAD

BRUCEWOOD ROAD

SITE

LOT 1 DWY

LOT 2 DWY

LOT 3 DWY

LOT 4 DWY

MATCHLINE

HENSLEY STREET

FIRE LANE

CAROLINA GREEN PKWY

PINE RIDGE APTS

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0(86)<38>{20}[144]
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0(55)<5>{20}[80]
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[6](6)0
0(2)[2]
0(9)[9]
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0{10}10
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[208]{20}<58>(130)0
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35(9)<4>[48]
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87(46){20}[153]
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3(0)[3]
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[0](0)0
[777](52)725
[13](0)13
15(0)[15]
1(0)[1]
21(0)[21]

LEGEND

XX BACKGROUND TRAFFIC

(XX) SITE TRAFFIC

<XX> PASS-BY TRAFFIC

{XX} OLD MORGANTON ROAD TRAFFIC DIVERSION

[XX] BUILD-OUT TRAFFIC

FIGURE 5.5

PROJECTED (2027) BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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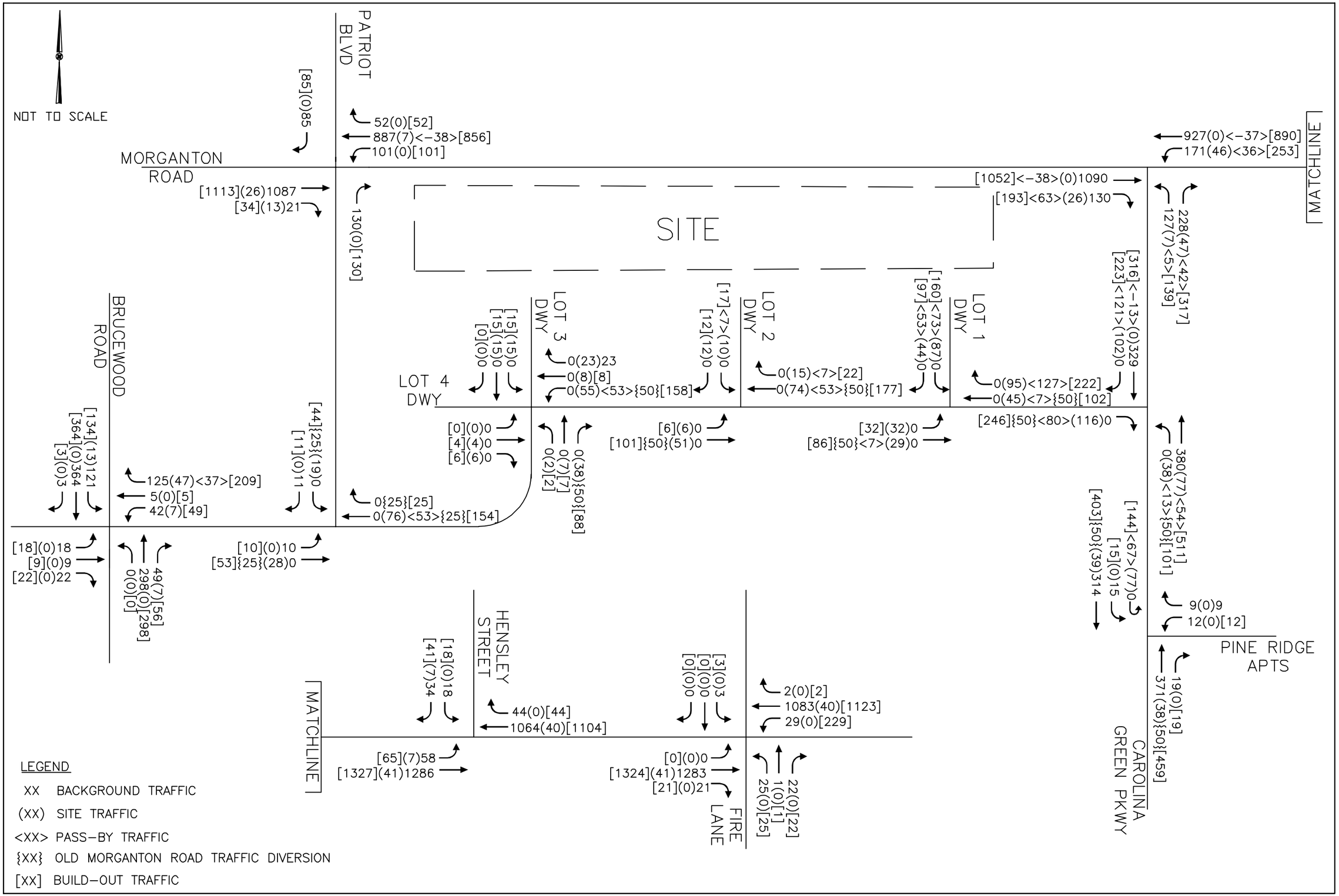

FIGURE 5.6

PROJECTED (2027) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

PATRIOT BLVD

MORGANTON ROAD

BRUCEWOOD ROAD

SITE

MATCHLINE

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46(0)[46]

LOT 1 DWY

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LOT 2 DWY

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LOT 3 DWY

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LOT 4 DWY

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POD 3 DWY

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[6](0)6

POD 2 APTS DWY

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31(0)[31]

PINE RIDGE APTS

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[0](0)0
[27](0)27

12(0)[12]
202(42)[244]
8(0)[8]

CAROLINA GREEN PKWY

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7(0)[7]
0(0)[0]

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[76](56)20
[2](0)2

POD 2 APTS DWY

0(9)[9]
0(2)[2]

22(42)[66]

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HENSLEY STREET

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[874](48)826
[14](0)14

FIRE LANE

16(0)[16]
1(0)[1]
23(0)[23]

LEGEND

XX BACKGROUND TRAFFIC
(XX) SITE TRAFFIC
<XX> PASS-BY TRAFFIC
[XX] BUILD-OUT TRAFFIC

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FIGURE 5.7

PROJECTED (2034) BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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NOT TO SCALE

PATRIOT BLVD

MORGANTON ROAD

BRUCEWOOD ROAD

SITE

MATCHLINE

LOT 4 DWY

LOT 3 DWY

LOT 2 DWY

LOT 1 DWY

POD 2 APTS DWY

POD 3 DWY

HENSLEY STREET

FIRE LANE

CAROLINA GREEN PKWY

PINE RIDGE APTS

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8(0)[8]

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342(0)[342]

52(6)[58]

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19(0)[19]
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28(0)[28]

[72](6)66
[1572](36)1536

[0](0)0
[1568](36)1532
[23](0)23

24(0)[24]
1(0)[1]
27(0)[27]

LEGEND

XX BACKGROUND TRAFFIC
(XX) SITE TRAFFIC
<XX> PASS-BY TRAFFIC
[XX] BUILD-OUT TRAFFIC

FIGURE 5.8

PROJECTED (2034) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

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6.0 Capacity Analysis

Capacity analyses were performed for the AM and PM peak hours for the existing (2024) traffic condition, the projected (2027) background and build-out traffic conditions, and the projected (2034) background and build-out traffic conditions and using Synchro/SimTraffic Version 12 software to determine the operating characteristics of the adjacent road network and the impacts of the proposed project. The NCDOT Congestion Management Group uses and reports Synchro Level-of-Service output for the analysis of intersection operating conditions.

Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a set time duration. Capacity is combined with level-of-service (LOS) to describe the operating characteristics of a road segment or intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels-of-service, LOS A through LOS F, with A representing the shortest average delays and F representing the longest average delays. LOS D is the typically accepted standard for signalized intersections in urbanized areas. For signalized intersections, LOS is defined for the overall intersection operation.

For unsignalized intersections, only the movements that must yield right-of-way experience control delay. Therefore, LOS criteria for the overall intersection is not reported by Synchro Version 10.3 or computable using methodology published in the *Highway Capacity Manual.* It is typical for stop sign-controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay. Table 6.0 lists the LOS control delay thresholds published in the *Highway Capacity Manual* for signalized and unsignalized intersections.

Table 6.0
Level-of-Service Control Delay Thresholds

Level-of-Service	Signalized Intersections – Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections – Average Control Delay [sec/veh] & Qualitative Operational Description	
A	≤ 10	≤ 10	Short Delays
B	> 10 – 20	> 10 – 15	
C	> 20 – 35	> 15 – 25	
D	> 35 – 55	> 25 – 35	Moderate Delays
E	> 55 – 80	> 35 – 50	
F	> 80	> 50	Long Delays

The following assumptions were used in the analysis:

- Existing signal plans and timings were obtained from NCDOT and from the signal controls and were used in the existing and background conditions. Minor adjustments to signal timings were made for the build-out conditions where noted.
- Existing peak hour factors (PHF) for the overall intersection were used for all existing intersections with a minimum of 0.90 for future year conditions. A PHF of 0.90 was used at all new intersections.
- Permitted+protected left-turn phasing was used where allowed today.
- Right-turns on red were permitted where allowed today.

Capacity analyses were performed for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions for the following intersections:

- US 15/501 at Brucewood Road
- US 15/501 at Partner Circle / Pine Ridge Parkway
- US 15/501 at Murray Hill Road
- Morganton Road at Brucewood Road
- Morganton Road at S Stephens Street Extension / Pine Ridge Parkway
- Pine Ridge Parkway at Site Driveway #1
- Pine Ridge Parkway at Site Driveway #2
- Pine Ridge Parkway at Site Driveway #3
- Pine Ridge Parkway at Site Driveway #4
- US 15/501 at Partner Circle / Pine Ridge Parkway North U-Turn (2034 only)
- Pine Ridge Parkway at Old Morganton Road Extension (2034 only)

All capacity analyses are included in the Appendix and are briefly summarized in the following sub-sections.

6.1 Brucewood Road at Old Morganton Road

Analyses indicates that the unsignalized intersection of Brucewood Road at Old Morganton Road currently operates with short delays for the minor street approaches (Old Morganton Road) in the AM and PM peak hours. With the addition of background and site traffic, the intersection is expected to continue operating with short delays for the minor street approaches in the AM and PM peak hours at build-out of Phase 4 of Morganton Park South in the year 2027. In the year 2034 the intersection is expected to operate with short delays for the minor street approaches in the AM peak hour and with short to moderate delays for the minor street approaches in the PM peak hour with or without the proposed project in place with no changes in LOS due to the addition of site traffic. Therefore, no roadway improvements are recommended at this intersection to accommodate project traffic.

Table 6.1 summarizes the operation of the intersection of Brucewood Road at Old Morganton Road for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.1
Level-of-Service
Brucewood Road at Old Morganton Road (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2027) Traffic	EB – B (10.6) WB – A (9.6) NBL – A (7.6) SBL – A (7.5)	EB – C (17.3) WB – B (13.5) NBL – A (8.0) SBL – A (8.3)
Background (2027) Traffic	EB – B (11.2) WB – A (9.8) NBL – A (7.7) SBL – A (7.6)	EB – C (20.3) WB – B (14.7) NBL – A (8.2) SBL – A (8.5)
Build-out (2027) Traffic	EB – B (11.8) WB – A (9.9) NBL – A (7.7) SBL – A (7.6)	EB – C (23.4) WB – C (15.2) NBL – A (8.2) SBL – A (8.6)
Background (2034) Traffic	EB – B (11.8) WB – B (10.2) NBL – A (7.7) SBL – A (7.7)	EB – D (27.3) WB – C (18.3) NBL – A (8.4) SBL – A (8.8)
Build-out (2034) Traffic	EB – B (12.5) WB – B (10.3) NBL – A (7.7) SBL – A (7.8)	EB – D (32.6) WB – C (18.5) NBL – A (8.4) SBL – A (8.8)

6.2 Old Morganton Road at Patriot Boulevard

The existing intersection of Old Morganton Road at Patriot Boulevard is a two-legged intersection with no delay for either approach. Phase 4 of Morganton Park South will extend Old Morganton Road from Patriot Boulevard to Carolina Green Parkway adding the 3rd leg to this intersection. It is assumed that stop-control will be implemented for the southbound approach of Patriot Boulevard when the 3rd leg is added. It is also assumed that the Old Morganton Road extension will be in place by the year 2034 with the construction of the Pod 2 apartments in Morganton Park South if Phase 4 has not already been completed by then.

Analyses indicate that this intersection is expected to operate with short delays for the Patriot Boulevard approach in the AM and PM peak hours at project build-out in 2027 and in the year 2034. No queueing issues are expected at this intersection. Based on the projected volumes, a single westbound lane is recommended on the westbound approach of Old Morganton Road.

Table 6.2 summarizes the operation of the intersection of Old Morganton Road at Patriot Boulevard for the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.2
Level-of-Service
Old Morganton Road at Patriot Boulevard (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-out (2027) Traffic	SB – A (9.8) EBL – A (9.5)	SB – B (10.3) EBL – A (7.6)
Background (2034) Traffic	SB – A (8.7) EBL – A (7.3)	SB – A (9.1) EBL – A (7.4)
Build-out (2034) Traffic	SB – A (9.8) EBL – A (7.6)	SB – B (10.4) EBL – A (7.7)

6.3 Morganton Road at Patriot Boulevard

Analyses indicate that the unsignalized intersection of Morganton Road at Patriot Boulevard currently operates with short delays on the minor street approaches (Patriot Boulevard) in both peak hours. The minor street approaches are expected to continue operating with short delays in 2027 and 2034 for both the background and build-out traffic conditions with only minor increases in delay and no changes to approach LOS due to site traffic. No queuing issues are expected at this intersection, and no improvements are recommended to accommodate projected site traffic.

Table 6.3 summarizes the operation of the intersection of Morganton Road at Patriot Boulevard for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.3
Level-of-Service
Morganton Road at Patriot Boulevard (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2027) Traffic	NB – B (10.7) SB – B (11.5) WBL – A (9.1)	NB – B (14.7) SB – B (11.7) WBL – B (11.5)
Background (2027) Traffic	NB – B (11.0) SB – B (11.5) WBL – A (9.4)	NB – C (16.2) SB – B (13.0) WBL – B (12.5)
Build-out (2027) Traffic	NB – B (11.2) SB – B (11.5) WBL – A (9.7)	NB – C (16.5) SB – B (12.8) WBL – B (12.8)
Background (2034) Traffic	NB – B (11.4) SB – B (12.3) WBL – A (9.8)	NB – C (19.2) SB – C (18.4) WBL – B (14.5)
Build-out (2034) Traffic	NB – B (11.6 SB – B (12.1) WBL – B (10.0)	NB – C (19.7) SB – C (17.6) WBL – B (14.9)

6.4 Morganton Road at Carolina Green Parkway

Analyses indicate that the signalized intersection of Morganton Road at Carolina Green Parkway currently operates at LOS A in the AM peak hour and LOS B in the PM peak hour. With this addition of background and site traffic, the intersection is expected to continue to operate at LOS A in the AM peak hour and LOS B in the PM peak hour in 2027 with or without the project in place.

In the year 2034, the intersection is expected to operate at LOS A in the AM peak hour in both the background and build-out conditions. In the PM peak hour, the intersection is expected to operate at LOS B in the background condition and LOS C in the build-out condition, but the increase in overall delay is less than 25%. Therefore, no improvements are recommended to be performed at this intersection to accommodate project traffic.

Minor adjustments to intersection signal timing are recommended as projects develop in the area and traffic patterns change, especially to accommodate queues for the westbound left-turn movement on Morganton Road, which may exceed the available storage in the year 2034. When Stephens Street is extended to Morganton Road from Lowe Avenue, Henley Street will be restricted to right-in/right-out access, and that westbound left-turn lane can be extended. However, as there are no immediate plans to extend Stephens Street, the intersections of Morganton Road at Carolina Green Parkway and at Henley Street were analyzed in their existing configurations.

Table 6.4 summarizes the operation of the intersection of the Morganton Road at Carolina Green Parkway for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.4 Level-of-Service Morganton Road at Carolina Green Parkway (Signalized)		
Condition	**AM Peak Hour LOS (Delay)**	**PM Peak Hour LOS (Delay)**
Existing (2027) Traffic	Overall - A (4.1) EB – A (7.5) WB – A (1.7) NB – A (8.5)	Overall – B (11.4) EB – B (15.3) WB – A (5.1) NB – B (17.9)
Background (2027) Traffic	Overall - A (5.7) EB – A (9.3) WB – A (3.0) NB – A (9.2)	Overall – B (14.5) EB – B (18.7) WB – A (7.1) NB – C (22.7)
Build-out (2027) Traffic	Overall - A (6.3) EB – B (10.7) WB – A (3.1) NB – A (8.0)	Overall – B (18.6) EB – C (24.2) WB – A (9.3) NB – C (26.4)
Background (2034) Traffic	Overall - A (7.5) EB – B (11.9) WB – A (4.4) NB – A (9.9)	Overall – B (18.1) EB – C (22.4) WB – A (8.8) NB – C (31.1)
Build-out (2034) Traffic	Overall - A (7.9) EB – B (12.9) WB – A (4.6) NB – A (9.3)	Overall – C (23.0) EB – C (28.7) WB – B (12.1) NB – C (33.8)

6.5 Morganton Road at Henley Street

Analyses indicates that the unsignalized intersection of Morganton Road at Henley Street currently operates with short delays for the minor street approach (Henley Street) in both peak hours. The intersection is expected to operate with short delays for the minor street approach in both peak hours in 2027 for both the background and build-out traffic conditions. In the year 2034, the intersection is expected to operate with short delays for the minor street approach in the AM peak hour and with moderate delays for the minor street approach in the PM peak hour with or without the project in place with only minor increases in delay due to the addition of site traffic. Therefore, no roadway improvements are recommended at this intersection to accommodate project traffic. As previously noted, this intersection is planned to be restricted to right-in/right-out access when Stephens Street is extended to Morganton Road from Lowe Avenue. However, as there are no immediate plans to extend Stephens Street, this intersection was analyzed in its existing configuration.

Table 6.5 summarizes the operation of the intersection of Morganton Road at Henley Street for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.5
Level-of-Service
Morganton Road at Henley Street (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2027) Traffic	SB – C (15.5) EBL – B (10.4)	SB – C (19.0) EBL – B (10.9)
Background (2027) Traffic	SB – C (16.9) EBL – B (11.1)	SB – C (22.0) EBL – B (11.9)
Build-out (2027) Traffic	SB – C (17.2) EBL – B (11.5)	SB – C (22.7) EBL – B (12.3)
Background (2034) Traffic	SB – C (19.1) EBL – B (12.3)	SB – D (27.2) EBL – B (13.3)
Build-out (2034) Traffic	SB – C (19.7) EBL – B (12.8)	SB – D (28.5) EBL – B (13.8)

6.6 Morganton Road at Fire Lane

Analyses indicate that the signalized intersection of Morganton Road at Fire Lane currently operates at LOS A in the AM and PM peak hours and is projected to continue to operate at LOS A in both peak hours for the background and build-out traffic conditions in 2027 and 2034 with only minor increases in delay due to site traffic. No queuing issues are expected at this intersection, and no improvements are recommended to accommodate projected site traffic.

Table 6.6 summarizes the operation of the intersection of Morganton Road at Fire Lane for the existing (2024) traffic condition and the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.6
Level-of-Service
Morganton Road at Fire Lane (Signalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2027) Traffic	Overall - A (5.5) EB – A (4.8) WB – A (5.5) NB – B (13.8) SB – B (14.8)	Overall - A (7.3) EB – A (8.3) WB – A (5.6) NB – B (17.4) SB – B (20.0)
Background (2027) Traffic	Overall - A (5.4) EB – A (4.6) WB – A (5.4) NB – B (15.0) SB – B (16.3)	Overall - A (7.4) EB – A (8.4) WB – A (5.5) NB – B (19.4) SB – B (22.4)
Build-out (2027) Traffic	Overall - A (6.4) EB – A (5.5) WB – A (6.5) NB – B (16.4) SB – B (17.3)	Overall - A (7.4) EB – A (8.4) WB – A (5.5) NB – B (19.9) SB – B (22.7)
Background (2034) Traffic	Overall - A (6.4) EB – A (5.3) WB – A (6.6) NB – B (17.7) SB – B (18.8)	Overall - A (8.2) EB – A (9.7) WB – A (5.7) NB – C (21.8) SB – C (23.8)
Build-out (2034) Traffic	Overall - A (6.3) EB – A (5.3) WB – A (6.6) NB – B (18.5) SB – B (19.7)	Overall - A (8.5) EB – B (10.1) WB – A (5.8) NB – C (21.8) SB – C (23.8)

6.7 Carolina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments

The Pine Ridge Apartments development is currently under construction within Morganton Park South adjacent to the Target shopping center and will be accessed by a full-movement driveway approximately 600 feet north of the Target driveway. Analyses indicates that this unsignalized intersection is projected to operate with short delays for the minor street approach (Pine Ridge Apartments) in the AM and PM peak hours in 2027 for both the background and build-out traffic conditions.

The apartment development planned in Pod 2 of Morganton Park South is proposed to have a driveway connection as the 4th leg of this intersection. It is anticipated that a northbound left-turn lane will be required on Carolina Green Parkway with that development. In the study year 2034, the intersection is expected to operate with short delays on the minor street approaches (both apartment driveways) in the AM peak hour. Both minor street approaches are expected to operate with moderate delays in the PM peak hour. However, SimTraffic simulations show no queuing issues at this intersection, with side street queues of 3 vehicles or less. Therefore, no additional improvements are recommended at this intersection.

Table 6.7 summarizes the operation of the intersection of the Carolina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments for the projected (2027 and 2034) background and build-out traffic conditions.

Table 6.7
Level-of-Service
Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments
(Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Background (2027) Traffic	WB – A (9.6) SBL – A (7.5)	WB – B (12.4) SBL – A (8.3)
Build-out (2027) Traffic	WB – B (13.3) SBL – A (8.9)	WB – C (22.3) SBL – B (12.2)
Background (2034) Traffic	EB – B (11.1) WB – B (11.5) NBL – A (7.8) SBL – A (7.7)	EB – C (16.5) WB – C (18.8) NBL – A (8.4) SBL – A (8.6)
Build-out (2034) Traffic	EB – B (16.4) WB – C (18.0) NBL – A (7.9) SBL – A (9.6)	EB – D (33.0) WB – E (40.4) NBL – A (8.6) SBL – B (13.2)

6.8 Carolina Green Parkway at Old Morganton Road/Pod 3 Driveway

As part of the proposed development, Old Morganton Road will be from Patriot Boulevard to Carolina Green Parkway as a 2-lane roadway. The following roadway laneage is recommended at this intersection:

- Construct a northbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper
- Construct this intersection as a directional crossover (left-in/right-in/right-out)

With the recommended laneage in place, this intersection is expected to operate with short delays on the minor street approach (Old Morganton Road) in the AM and PM peak hours at project build-out in 2027.

Pod 3 of the Morganton Park South development is planned to align a driveway as the 4th leg to this intersection. The following improvement is assumed to be required with Pod 3:

- Construct a southbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

With the recommended laneage in place, the intersection is expected to operate with short delays for both minor street approaches (Old Morganton Road and Pod 3 Driveway) in the AM and PM peak hours. SimTraffic simulations show no queuing issues at this intersection.

Table 6.8 summarizes the operation of the intersection of the Carolina Green Parkway at Old Morganton Road/Pod 3 Driveway for the projected (2027) build-out traffic condition and the projected (2034) background and build-out traffic conditions.

Table 6.8
Level-of-Service
Carolina Green Parkway at Old Morganton Road/Pod 3 Driveway (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-out (2027) Traffic	EB – B (11.3) NBL – A (8.4)	EB – B (13.5) NBL – A (9.2)
Background (2034) Traffic	EB – A (9.0) WB – A (9.1) NBL – A (8.2) SBL – A (7.8)	EB – A (8.9) WB – A (9.0) NBL – A (8.2) SBL – A (7.6)
Build-out (2034) Traffic	EB – B (11.6) WB – A (9.6) NBL – A (9.7) SBL – A (8.2)	EB – B (14.0) WB – B (11.0) NBL – B (12.5) SBL – A (9.0)

6.9 Old Morganton Road at Lot 1 Driveway

As part of the proposed development, Old Morganton Road will be from Patriot Boulevard to Carolina Green Parkway. Lot 1 of the development is the easternmost outparcel fronting Carolina Green Parkway. It is proposed to consist of a gas station with convenience market and is proposed to be accessed be a full-movement driveway on Old Morganton Road. Analyses indicates that this unsignalized intersection is projected to operate with short delays for the minor street approach (Lot 1 Driveway) in both the AM and PM peak hours at project build-out in 2027 and 2034. SimTraffic simulations show no operational or queuing issues at this intersection, and no roadway improvements are recommended.

Table 6.9 summarizes the operation of the intersection of the Old Morganton Road at Lot 1 Driveway for the projected (2027 and 2034) build-out traffic conditions.

Table 6.9
Level-of-Service
Old Morganton Road at Lot 1 Driveway (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-out (2027) Traffic	SB – B (13.5) EBL – A (8.0)	SB – B (14.8) EBL – A (8.1)
Build-out (2034) Traffic	SB – B (13.8) EBL – A (8.0)	SB – C (15.6) EBL – A (8.2)

6.10 Old Morganton Road at Lot 2 Driveway/Pod 2 Apartments

As part of the proposed development, Old Morganton Road will be from Patriot Boulevard to Carolina Green Parkway as a 2-lane roadway. Lot 2 of the development is located west of Lot 1. It is proposed to consist of a drive-in bank and is proposed to be accessed be a full-movement driveway on Old Morganton Road. Analysis indicates that this intersection is expected to operate with short delays on the minor street approach (Lot 2 Driveway) in the AM and PM peak hours at project build-out in 2027.

The apartment development planned in Pod 2 of Morganton Park South is proposed to have a driveway connection as the 4th leg of this intersection. In the study year 2034 background condition, the intersection is expected to operate with short delays on the minor street approach (Pod 2 Apartments) in the AM and PM peak hours. Both minor street approaches are expected to continue to operate with short delays in the AM and PM peak hours for the 2034 build-out condition. SimTraffic simulations show no operational or queuing issues at this intersection, and no improvements are recommended.

Table 6.10 summarizes the operation of the intersection of the Old Morganton Road at Lot 2 Driveway/Pod 2 Apartments for the projected (2027) build-out traffic condition and the projected (2034) background and build-out traffic conditions.

Table 6.10
Level-of-Service
Old Morganton Road at Lot 2 Driveway/Pod 2 Apartments (Unsignalized)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-out (2027) Traffic	SB – A (9.9) EBL – A (7.6)	SB – B (10.2) EBL – A (7.7)
Background (2034) Traffic	NB – A (8.6) WBL – A (7.3)	NB – A (8.9) WBL – A (7.4)
Build-out (2034) Traffic	NB – A (9.8) SB – B (10.4) EBL – A (9.8) WBL – A (7.4)	NB – B (10.4) SB – B (11.2) EBL – B (10.4) WBL – B (11.2)

6.11 Old Morganton Road at Lot 3 Driveway/Lot 4 Driveway

As part of the proposed development, Old Morganton Road will be from Patriot Boulevard to Carolina Green Parkway as a 2-lane roadway. The road is proposed to bend with a single-lane roundabout, and Lots 3 and 4 of the development are proposed to access this roundabout intersection. Lot 3 is planned to consist of a drive-through car wash, and Lot 4 is planned to consist of a quick lube vehicle shop. Analysis indicates that this intersection is expected to operate at LOS A in the AM and PM peak hours at project build-out in both 2027 and 2034. The volume-to-capacity (V/C) ratio at the roundabout is expected to be 0.17 or lower (or well under capacity), and SimTraffic simulations show no queuing issues at this intersection.

Table 6.11 summarizes the operation of the roundabout intersection of the Old Morganton Road at Lot 3 Driveway/Lot 4 Driveway for the projected (2027 and 2034) build-out traffic conditions.

Table 6.11
Level-of-Service
Old Morganton Road at Lot 3 Driveway/Lot 4 Driveway (Roundabout)

Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-out (2027) Traffic	A (3.6) V/C = 0.13	A (3.8) V/C = 0.16
Build-out (2034) Traffic	A (3.6) V/C = 0.14	A (3.8) V/C = 0.17

7.0 Pedestrian and Bicycle Accommodations

The following is a summary of existing pedestrian and bicycle facilities in the study area:

- 5-foot Sidewalk
  - South side of Morganton Road through the study area
  - East side of Carolina Green Parkway
  - South side of Old Morganton Road
  - Both sides of Patriot Boulevard
  - East side of Henley Street
  - West side of Fire Lane
- 10-foot Multi-Use Paths
  - North side of Morganton Road
  - West side of Carolina Green Parkway
  - North side of Old Morganton Road
- Crosswalks
  - East leg of Old Morganton Road at Brucewood Road
  - Both existing legs of Old Morganton Road at Patriot Boulevard
  - Both north and south legs of Patriot Boulevard at Morganton Road
  - West and south legs of Morganton Road at Carolina Green Parkway
  - East leg of Morganton Road at Henley Street
  - All legs of Morganton Road at Fire Lane

It is recommended that the sidewalk and multi-use path on Old Morganton Road be extended through the Phase 4 development. The placement of crosswalks on Carolina Green Parkway at Old Morganton Road and at the Pine Ridge Apartments/Pod 2 Apartments access should be evaluated at the time of design to ensure that adequate sight distance can be provided.

8.0 Recommendations

The following improvements are recommended with the proposed Phase 4 of the Morganton Park South development:

Carlina Green Parkway at Old Morganton Road/Pod 3 Driveway:

- Construct a northbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper
- Construct this intersection as a directional crossover (left-in/right-in/right-out)

The following improvements are anticipated to be required of and performed by other developments in the study area and were included in the 2034 background and build-out traffic conditions. These improvements would only be constructed if the associated developments move forward and the driveway connections are made:

Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments *(with Pod 2 Apartments)*:

- Construct a northbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

Carlina Green Parkway at Old Morganton Road/Pod 3 Driveway *(with Pod 3)*:

- Construct a southbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

Right-turn volumes were reviewed at several locations, but right-turn lanes are not recommended for several reasons. First, there are no right-turn lanes along Carolina Green Parkway, so they would be inconsistent with the character of the roadway. Second, all subject intersections operate acceptably without them, and with Carolina Green Parkway in particular being a 4-lane road with ample capacity, through vehicles can stay in the left lane to avoid right-turn vehicles. Third, right-turn lanes create additional conflicts and increased crossing distances for pedestrians.

With the recommended laneage in place, all study intersections are expected to operate acceptably at project build-out in 2027 and in the year 2034 with full build-out of Morganton Park South. While the minor street approaches of the intersection of Carlina Green Parkway at Pine Ridge Apartments/Pod 2 Apartments are expected to operate with moderate delays in the PM peak hour in the year 2034, SimTraffic simulations show no queuing issues on any approach, and both apartment developments have alternate means of ingress and egress.

SimTraffic simulations also show no queuing issues or conflicts at the site driveways along the Old Morganton Road extension or at Carolina Green Parkway. The locations of proposed driveways along Old Morganton Road are appropriate for the proposed uses and the character of this roadway.

The recommended build-out laneage is shown on **Figure 8.1**.

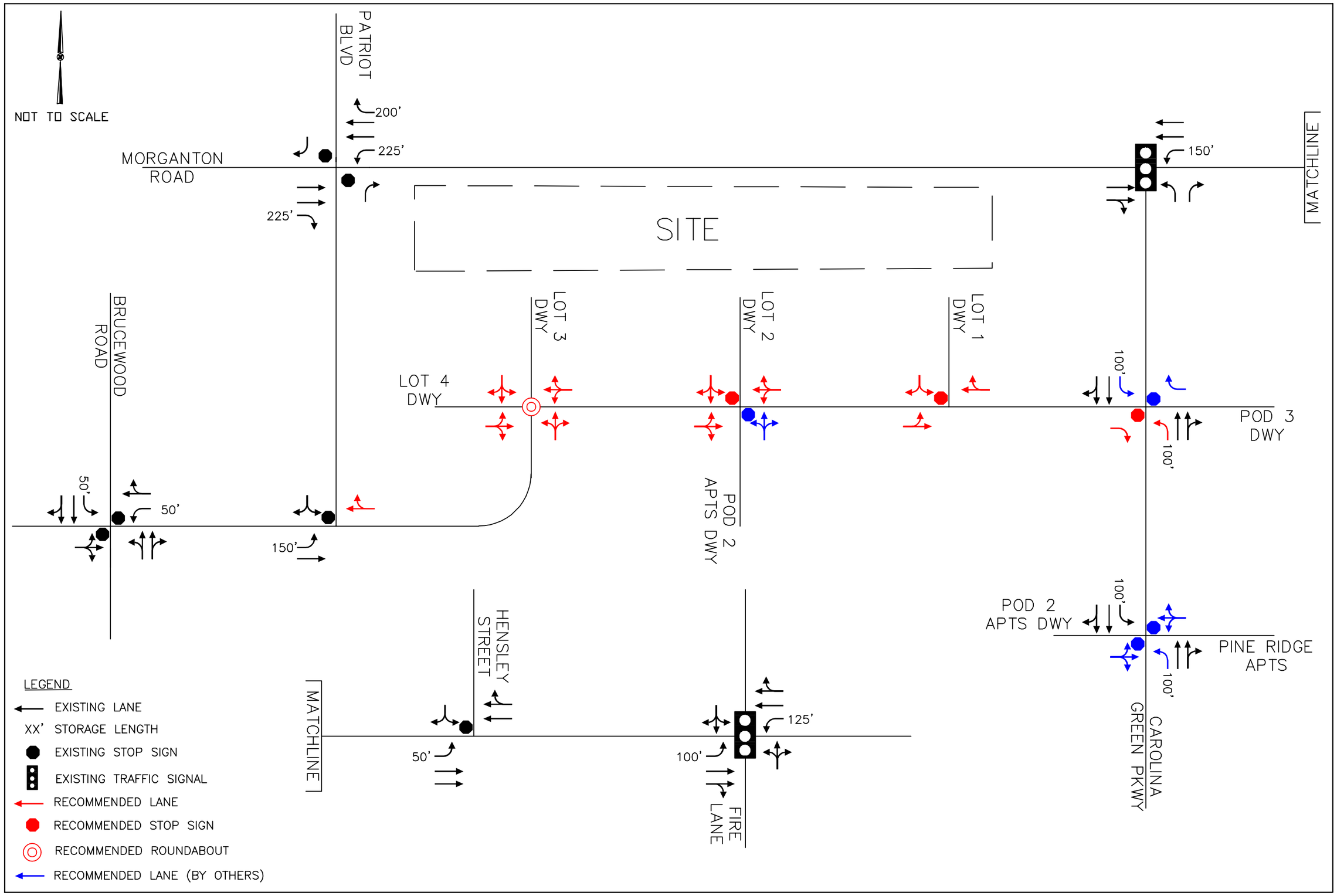

FIGURE 8.1

RECOMMENDED ROADWAY LANEAGE

MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

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Appendix

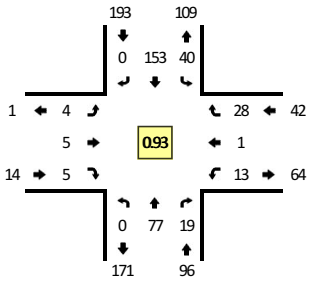
Appendix A:
Traffic Count Data

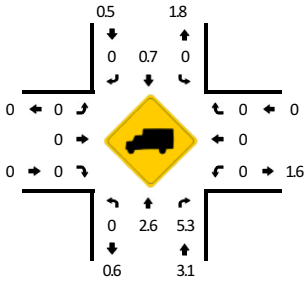
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

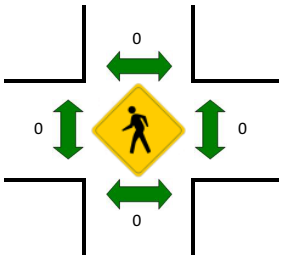
LOCATION: Brucewood Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

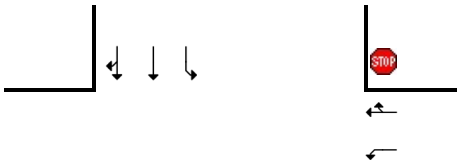
QC JOB #: 16814707
DATE: Wed, Oct 30 2024

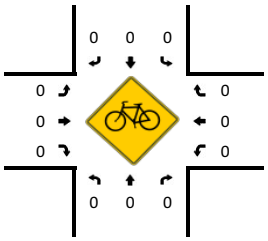
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

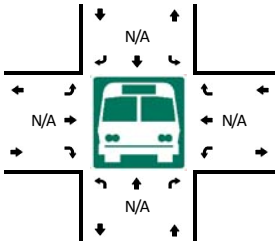


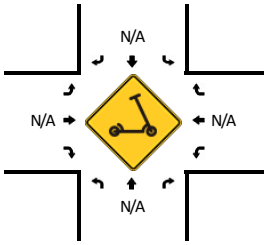












15-Min Count Period Beginning At	Brucewood Rd (Northbound)				Brucewood Rd (Southbound)				Old Morganton Rd (Eastbound)				Old Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	27	3	0	7	43	0	0	0	2	1	0	0	0	2	0	85	
7:15 AM	0	24	2	0	7	35	0	0	0	0	0	0	4	1	3	0	76	
7:30 AM	0	17	9	0	7	33	0	0	1	0	0	0	4	0	6	0	77	
7:45 AM	0	19	3	0	5	20	0	0	0	2	2	0	2	0	10	0	63	301
8:00 AM	0	15	3	0	6	38	0	0	1	3	2	0	2	0	4	0	74	290
8:15 AM	0	18	8	0	16	34	0	0	1	0	0	0	2	1	11	0	91	305
8:30 AM	0	18	5	0	8	38	0	0	1	1	1	0	6	0	9	0	87	315
8:45 AM	0	26	3	0	10	43	0	0	1	1	2	0	3	0	4	0	93	345

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	104	12	0	40	172	0	0	4	4	8	0	12	0	16	0	372
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

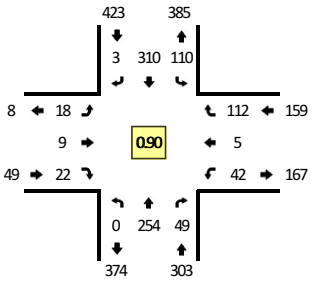
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

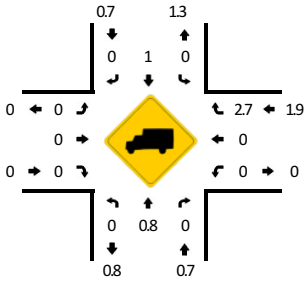
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

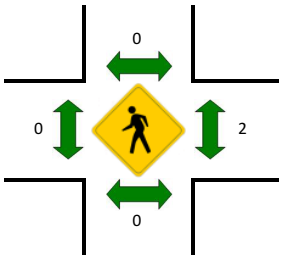
LOCATION: Brucewood Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

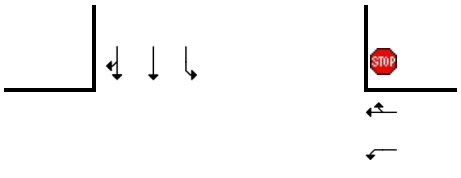
QC JOB #: 16814708
DATE: Wed, Oct 30 2024

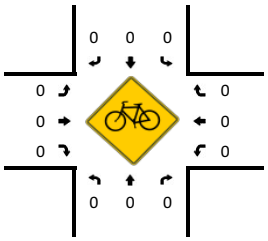
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

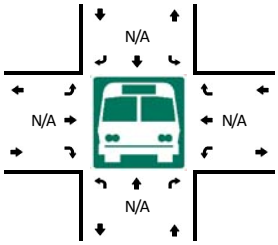


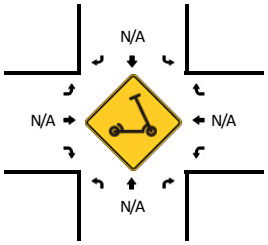












15-Min Count Period Beginning At	Brucewood Rd (Northbound)				Brucewood Rd (Southbound)				Old Morganton Rd (Eastbound)				Old Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	58	10	0	29	64	1	0	2	2	1	0	8	1	28	0	204	
4:15 PM	2	66	13	0	29	75	1	0	2	0	1	0	8	2	24	0	223	
4:30 PM	0	52	12	0	24	76	1	0	2	1	1	0	11	0	29	0	209	
4:45 PM	0	60	12	0	25	77	2	1	0	2	1	0	7	1	28	0	216	852
5:00 PM	0	70	19	0	37	70	0	0	5	5	9	0	11	2	31	0	259	907
5:15 PM	0	72	6	0	23	87	0	0	11	1	11	0	13	2	24	0	250	934
5:30 PM	0	56	11	0	25	62	0	0	0	2	1	0	10	0	21	0	188	913
5:45 PM	0	64	18	0	19	73	0	0	2	1	2	0	7	1	15	0	202	899

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	280	76	0	148	280	0	0	20	20	36	0	44	8	124	0	1036
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

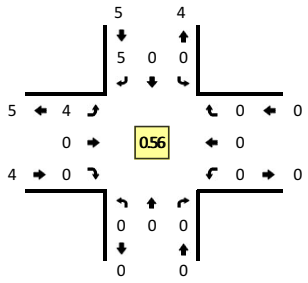
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

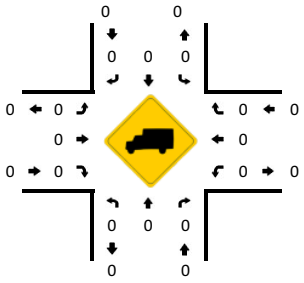
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Old Morganton Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

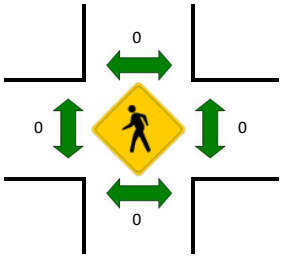
QC JOB #: 16814715
DATE: Wed, Oct 30 2024

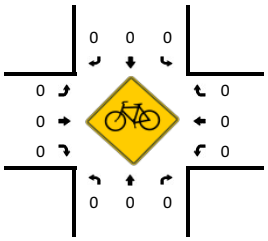
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

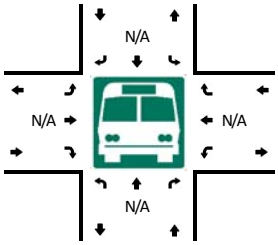


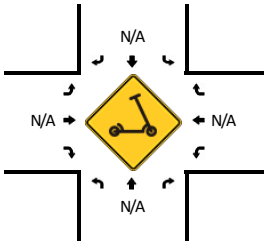


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Old Morganton Rd (Northbound)				Old Morganton Rd (Southbound)				Old Morganton Rd (Eastbound)				Old Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
7:30 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8:00 AM	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	3	9
8:15 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2	9
8:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0	0	16
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

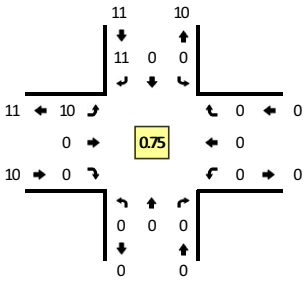
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

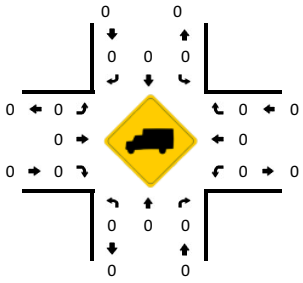
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

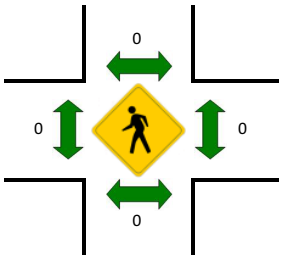
LOCATION: Old Morganton Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

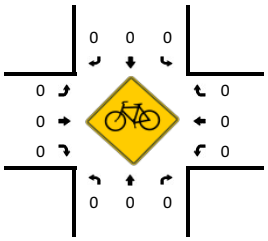
QC JOB #: 16814716
DATE: Wed, Oct 30 2024

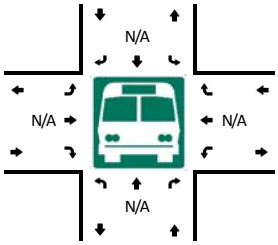
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

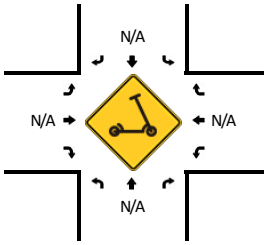












15-Min Count Period Beginning At	Old Morganton Rd (Northbound)				Old Morganton Rd (Southbound)				Old Morganton Rd (Eastbound)				Old Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4	
4:15 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4	
4:30 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	
4:45 PM	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	7	18
5:00 PM	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	4	18
5:15 PM	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	6	20
5:30 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4	21
5:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	17

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	12	0	16	0	0	0	0	0	0	0	28
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

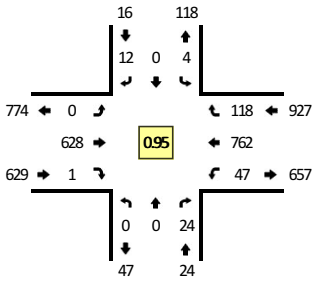
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

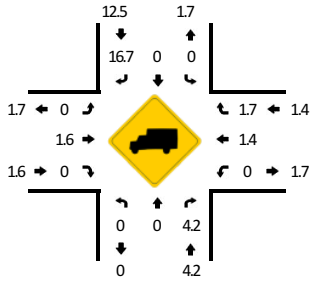
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

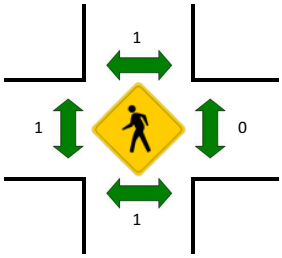
LOCATION: Patriot Blvd/Old Morganton Rd -- Morganton Rd
CITY/STATE: Southern Pines, NC

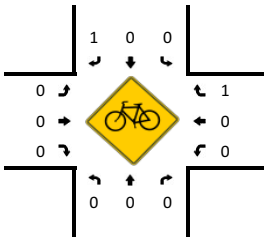
QC JOB #: 16814713
DATE: Wed, Oct 30 2024

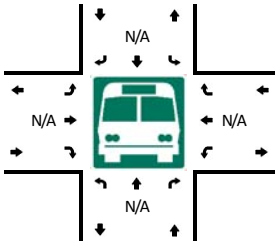
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

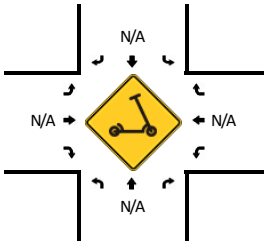












15-Min Count Period Beginning At	Patriot Blvd/Old Morganton Rd (Northbound)				Patriot Blvd/Old Morganton Rd (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	5	0	3	0	4	0	0	116	0	0	4	54	48	0	234	
7:15 AM	0	0	2	0	1	0	3	0	0	176	1	0	10	108	61	0	362	
7:30 AM	0	0	6	0	0	1	1	0	0	148	1	0	9	142	29	0	337	
7:45 AM	0	0	11	0	2	0	0	0	0	165	0	0	9	167	43	0	397	1330
8:00 AM	0	0	4	0	0	0	2	0	0	138	0	0	17	190	32	0	383	1479
8:15 AM	0	0	6	0	0	0	4	0	0	174	1	0	10	202	24	0	421	1538
8:30 AM	0	0	3	0	2	0	6	0	0	151	0	0	10	203	19	1	395	1596
8:45 AM	0	0	5	0	1	0	5	0	0	173	1	0	10	153	26	0	374	1573

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	24	0	0	0	16	0	0	696	4	0	40	808	96	0	1684
Heavy Trucks	0	0	0		0	0	4		0	16	0		0	12	0		32
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

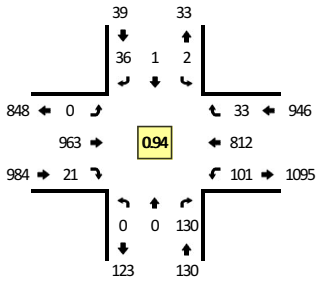
Report generated on 11/6/2024 12:19 PM

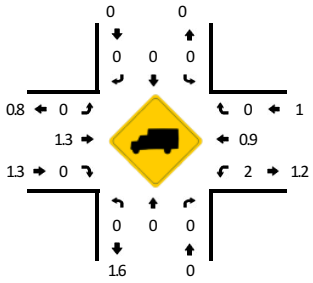
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

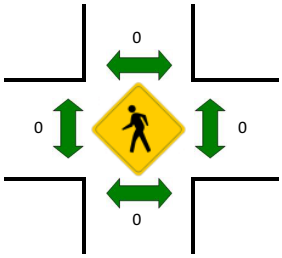
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

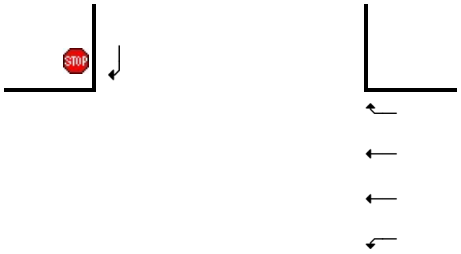
LOCATION: Patriot Blvd/Old Morganton Rd -- Morganton Rd | **QC JOB #:** 16814714
CITY/STATE: Southern Pines, NC | **DATE:** Wed, Oct 30 2024

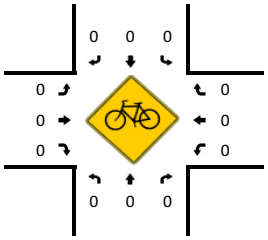
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

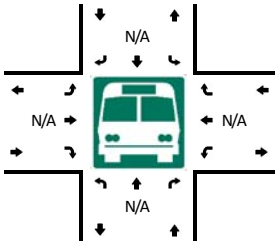


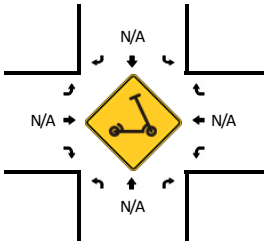












15-Min Count Period Beginning At	Patriot Blvd/Old Morganton Rd (Northbound)				Patriot Blvd/Old Morganton Rd (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	26	0	1	0	9	0	0	240	4	0	32	165	12	0	489	
4:15 PM	0	0	29	0	2	0	10	0	0	246	7	0	32	161	14	0	501	
4:30 PM	0	0	37	0	1	1	12	0	0	210	4	0	22	207	7	0	501	
4:45 PM	0	0	28	0	0	0	14	0	0	237	7	0	25	189	10	0	510	2001
5:00 PM	0	0	29	0	1	0	5	0	0	262	5	0	24	223	7	0	556	2068
5:15 PM	0	0	36	0	0	0	5	0	0	254	5	0	30	193	9	0	532	2099
5:30 PM	0	0	35	0	1	0	3	0	0	222	1	0	18	186	11	0	477	2075
5:45 PM	0	0	28	0	1	0	1	0	0	209	6	0	22	176	7	0	450	2015

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	116	0	4	0	20	0	0	1048	20	0	96	892	28	0	2224
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	4	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

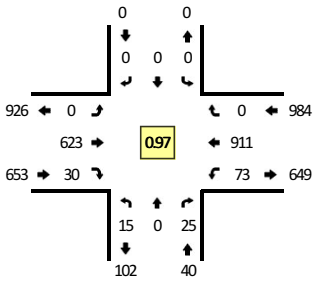
Comments:

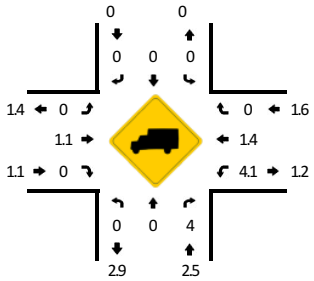
Report generated on 11/6/2024 12:19 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

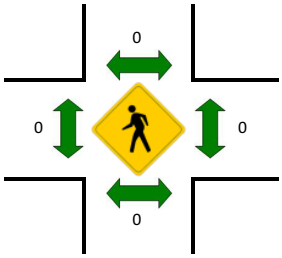
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

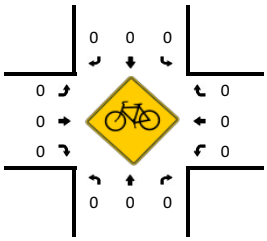
LOCATION: Carolina Grn Pkwy -- Morganton Rd | **QC JOB #:** 16814717
CITY/STATE: Southern Pines, NC | **DATE:** Wed, Oct 30 2024

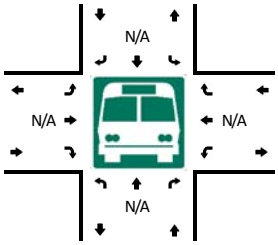
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

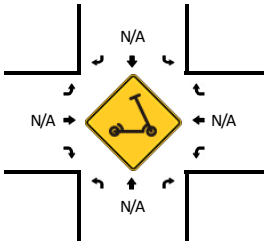












15-Min Count Period Beginning At	Carolina Grn Pkwy (Northbound)				Carolina Grn Pkwy (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	3	0	0	0	0	0	0	115	4	0	7	118	0	0	247	
7:15 AM	0	0	5	0	0	0	0	0	0	176	7	0	14	177	0	0	379	
7:30 AM	3	0	8	0	0	0	0	0	0	152	3	0	9	180	0	0	355	
7:45 AM	3	0	6	0	0	0	0	0	0	171	4	0	19	213	0	0	416	1397
8:00 AM	4	0	6	0	0	0	0	0	0	132	8	0	18	240	0	0	408	1558
8:15 AM	3	0	8	0	0	0	0	0	0	172	9	0	8	232	0	0	432	1611
8:30 AM	5	0	5	0	0	0	0	0	0	148	9	0	27	226	0	1	421	1677
8:45 AM	5	0	13	0	0	0	0	0	0	160	12	0	15	186	0	0	391	1652

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	0	32	0	0	0	0	0	0	688	36	0	32	928	0	0	1728
Heavy Trucks	0	0	0		0	0	0		0	20	0		4	20	0		44
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

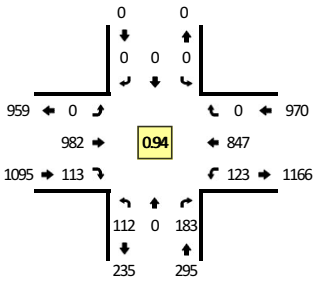
Comments:

Report generated on 11/6/2024 12:19 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

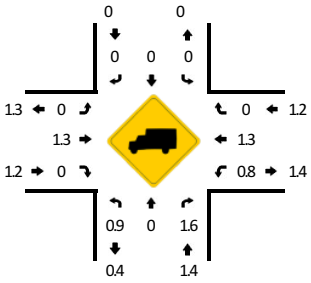
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

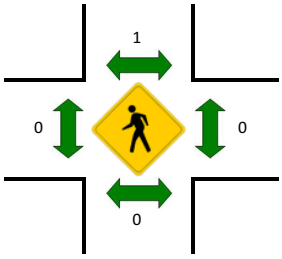
LOCATION: Carolina Grn Pkwy -- Morganton Rd | **QC JOB #:** 16814718
CITY/STATE: Southern Pines, NC | **DATE:** Wed, Oct 30 2024

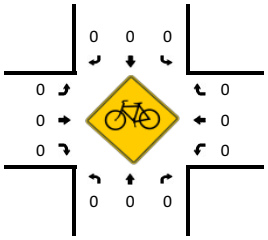
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

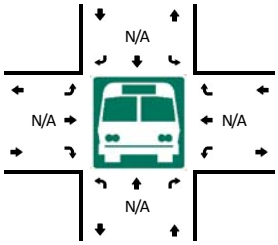


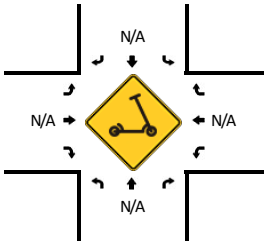
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Carolina Grn Pkwy (Northbound)				Carolina Grn Pkwy (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	18	0	43	0	0	0	0	0	0	231	33	0	43	196	0	0	564	
4:15 PM	27	0	42	0	0	0	0	0	0	228	37	0	37	181	0	0	552	
4:30 PM	23	0	53	0	0	0	0	0	0	225	28	0	34	210	0	0	573	
4:45 PM	33	0	40	0	0	0	0	0	0	238	28	0	24	197	0	0	560	2249
5:00 PM	26	0	47	0	0	0	0	0	0	262	27	0	29	235	0	1	627	2312
5:15 PM	30	0	43	0	0	0	0	0	0	257	30	0	35	205	0	0	600	2360
5:30 PM	21	0	52	0	0	0	0	0	0	220	40	0	20	217	0	2	572	2359
5:45 PM	30	0	38	0	0	0	0	0	0	201	22	0	15	172	0	0	478	2277

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	104	0	188	0	0	0	0	0	0	1048	108	0	116	940	0	4	2508
Heavy Trucks	4	0	0		0	0	0		0	12	0		0	4	0		20
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

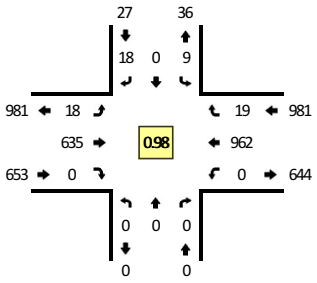
Report generated on 11/6/2024 12:19 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

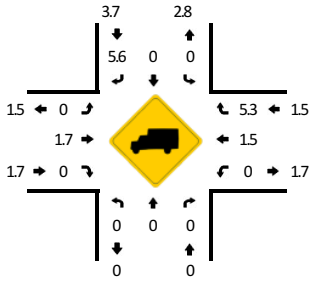
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

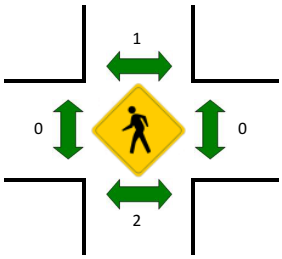
LOCATION: Henley St -- Morganton Rd
CITY/STATE: Southern Pines, NC

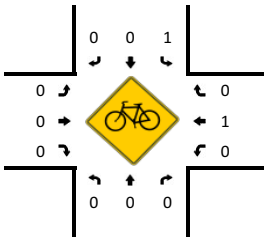
QC JOB #: 16814719
DATE: Wed, Oct 30 2024

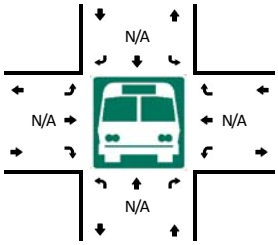
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

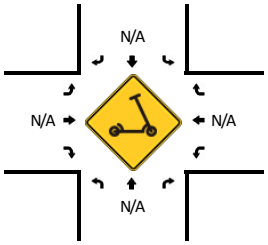












15-Min Count Period Beginning At	Henley St (Northbound)				Henley St (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	2	0	3	113	0	0	0	115	2	0	236	
7:15 AM	0	0	0	0	0	0	4	0	1	181	0	0	0	187	2	0	375	
7:30 AM	0	0	0	0	6	0	3	0	5	156	0	0	0	187	7	0	364	
7:45 AM	0	0	0	0	2	0	5	0	4	173	0	0	0	226	6	0	416	1391
8:00 AM	0	0	0	0	2	0	3	0	5	136	0	0	0	256	8	0	410	1565
8:15 AM	0	0	0	0	3	0	6	0	2	176	0	0	0	234	4	0	425	1615
8:30 AM	0	0	0	0	2	0	4	0	6	150	0	1	0	246	1	0	410	1661
8:45 AM	0	0	0	0	0	0	8	0	7	164	0	0	0	193	3	0	375	1620

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	12	0	24	0	8	704	0	0	0	936	16	0	1700
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	16	0		36
Buses																	
Pedestrians		4				4				0				0			8
Bicycles	0	0	0		4	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

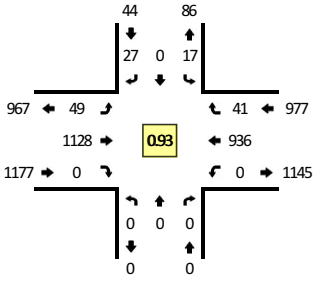
Report generated on 11/6/2024 12:19 PM

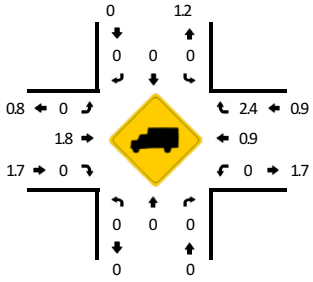
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

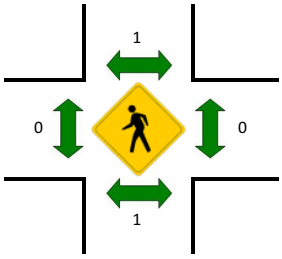
LOCATION: Henley St -- Morganton Rd | **QC JOB #:** 16814720
CITY/STATE: Southern Pines, NC | **DATE:** Wed, Oct 30 2024

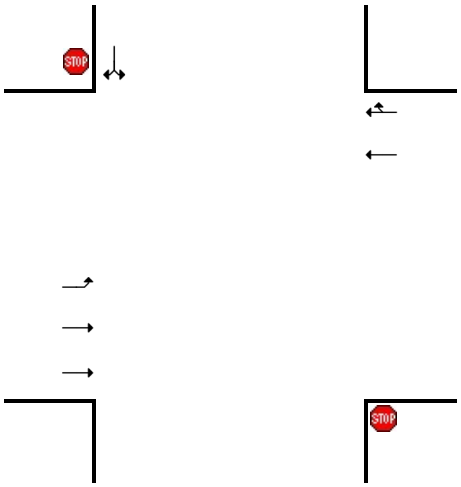
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

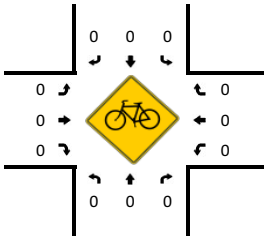


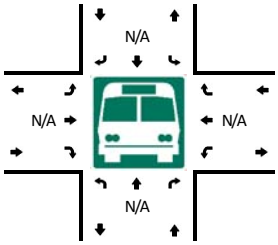


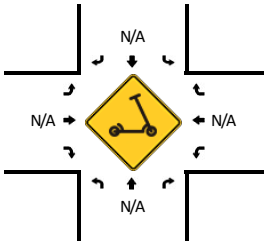
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Henley St (Northbound)				Henley St (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	0	9	0	10	269	0	1	0	235	5	0	530	
4:15 PM	0	0	0	0	4	0	5	0	12	250	0	1	0	204	1	0	477	
4:30 PM	0	0	0	0	6	0	7	0	10	272	0	2	0	235	12	0	544	
4:45 PM	0	0	0	0	4	0	9	0	9	269	0	2	0	210	13	0	516	2067
5:00 PM	0	0	0	0	4	0	6	0	11	303	0	0	0	257	8	0	589	2126
5:15 PM	0	0	0	0	3	0	5	0	15	284	0	0	0	234	8	0	549	2198
5:30 PM	0	0	0	0	4	0	4	0	6	268	0	2	0	237	7	0	528	2182
5:45 PM	0	0	0	0	1	0	5	0	5	223	0	0	0	181	5	0	420	2086

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	16	0	24	0	44	1212	0	0	0	1028	32	0	2356
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	0	0		20
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

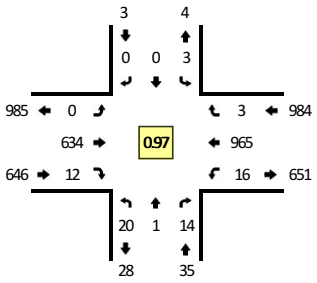
Report generated on 11/6/2024 12:19 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

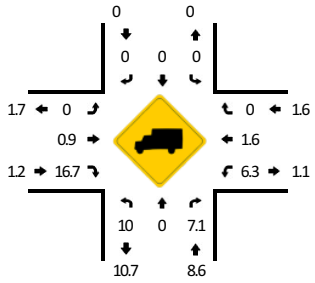
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Fire Ln -- Morganton Rd
CITY/STATE: Southern Pines, NC

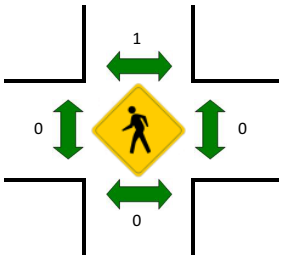
QC JOB #: 16814721
DATE: Wed, Oct 30 2024

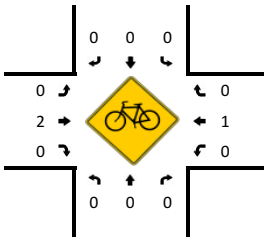
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

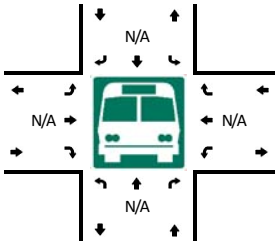


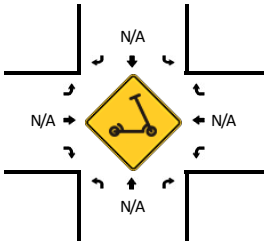


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	Fire Ln (Northbound)				Fire Ln (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	0	3	0	0	0	0	0	0	110	3	0	2	115	0	0	240	
7:15 AM	9	0	2	0	1	0	0	0	0	169	10	0	0	180	0	0	371	
7:30 AM	4	0	3	0	0	0	0	0	0	160	4	0	4	189	3	0	367	
7:45 AM	5	0	3	0	0	0	0	0	0	174	3	0	4	225	0	0	414	1392
8:00 AM	6	0	4	0	1	0	0	0	0	135	4	0	6	260	1	0	417	1569
8:15 AM	5	1	3	0	2	0	0	0	0	174	4	0	4	234	1	0	428	1626
8:30 AM	4	0	4	0	0	0	0	0	0	151	1	0	2	246	1	0	409	1668
8:45 AM	2	0	6	0	1	1	0	0	0	162	1	0	1	193	1	0	368	1622

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	4	12	0	8	0	0	0	0	696	16	0	16	936	4	0	1712
Heavy Trucks	4	0	0		0	0	0		0	16	4		0	16	0		40
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

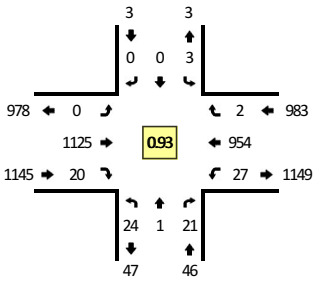
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

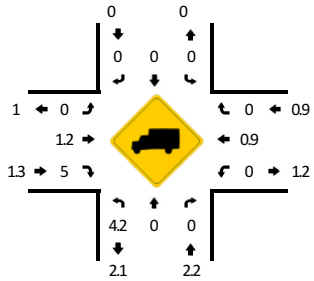
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Fire Ln -- Morganton Rd
CITY/STATE: Southern Pines, NC

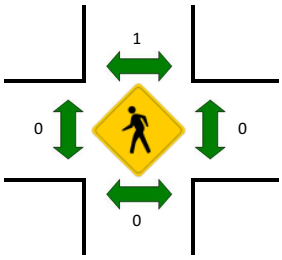
QC JOB #: 16814722
DATE: Wed, Oct 30 2024

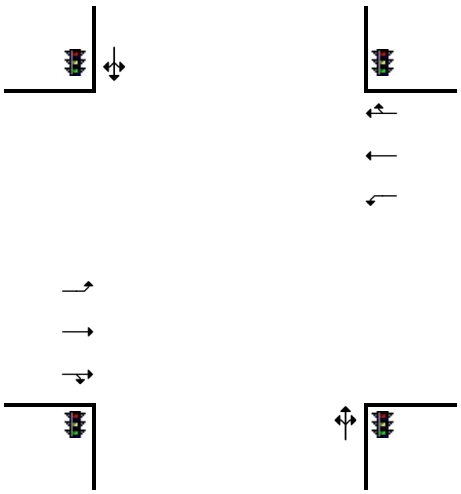
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

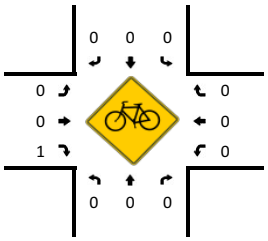


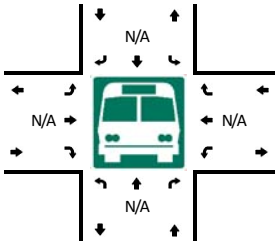


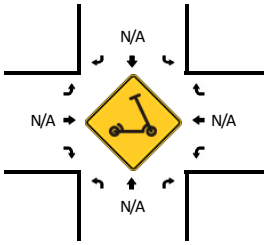
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Fire Ln (Northbound)				Fire Ln (Southbound)				Morganton Rd (Eastbound)				Morganton Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	1	9	0	0	1	1	0	0	267	6	0	9	236	0	0	532	
4:15 PM	2	1	4	0	0	0	0	0	0	246	4	0	8	205	0	0	470	
4:30 PM	8	0	3	0	1	0	0	0	0	274	5	0	4	237	0	0	532	
4:45 PM	2	1	3	0	2	0	0	0	0	268	5	0	4	225	2	0	512	2046
5:00 PM	4	0	9	0	0	0	0	0	0	308	4	0	5	257	0	0	587	2101
5:15 PM	10	0	6	0	0	0	0	0	0	275	6	0	14	235	0	0	546	2177
5:30 PM	7	0	3	0	0	1	0	0	0	265	8	0	4	231	0	0	519	2164
5:45 PM	8	0	9	0	1	1	0	0	0	226	5	0	4	179	3	0	436	2088

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	36	0	0	0	0	0	0	1232	16	0	20	1028	0	0	2348
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	0	0		12
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/6/2024 12:19 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix B:
Trip Generation

Morganton Park South Phase 4

Table 1 - Trip Generation: Revised Pod 1 (2027)

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
912 Drive-In Bank	3,500	s.f.	352	176	176	35	20	15	74	37	37
945 Conveinence Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	3,850	3,850	548	274	274	474	237	237
941 Quick Lubrication Vehicle Shop	2,500	s.f.	174	87	87	15	11	4	22	9	13
948 Automated Car Wash	1	tunnel	780	390	390	39	20	19	78	39	39
Subtotal			**9,006**	**4,503**	**4,503**	**637**	**325**	**312**	**648**	**322**	**326**
Pass-By Capture	AM	PM									
912 Drive-In Bank	29%	35%	112	56	56	10	6	4	26	13	13
945 Conveinence Store/Gas-Station - VFP (16-24)	76%	75%	5,814	2907	2,907	416	208	208	356	178	178
Subtotal			5,926	2,963	2,963	426	214	212	382	191	191
10% Adjacent Street Traffic			*2,300*	*1,150*	*1,150*	*193*	*97*	*96*	*267*	*134*	*133*
Pass-By Capture Total			*2,300*	*1,150*	*1,150*	*193*	*97*	*96*	*267*	*134*	*133*
Total Net New External Trips - Proposed Land Uses			**6,706**	**3,353**	**3,353**	**444**	**228**	**216**	**381**	**188**	**193**

K:\RAL_TPTO_Traffic\011820005 MPS Traffic Services\Phase 4\November 2024 TIA\T4 - Analysis\[MPS Phase 4 - TIA Data 2027.xls]TripGen 11/20/24

Morganton Park South Phase 4

Table 2 - Trip Generation: Revised Pod 1 (2034)

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
912 Drive-In Bank	3,500	s.f.	352	176	176	35	20	15	74	37	37
945 Conveinence Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	3,850	3,850	548	274	274	474	237	237
941 Quick Lubrication Vehicle Shop	2,500	s.f.	174	87	87	15	11	4	22	9	13
948 Automated Car Wash	1	tunnel	780	390	390	39	20	19	78	39	39
Subtotal			**9,006**	**4,503**	**4,503**	**637**	**325**	**312**	**648**	**322**	**326**
Pass-By Capture	AM	PM									
912 Drive-In Bank	29%	35%	112	56	56	10	6	4	26	13	13
945 Conveinence Store/Gas-Station - VFP (16-24)	76%	75%	5,814	2907	2,907	416	208	208	356	178	178
Subtotal			5,926	2,963	2,963	426	214	212	382	191	191
10% Adjacent Street Traffic			*2,666*	*1,333*	*1,333*	*224*	*113*	*111*	*309*	*154*	*155*
Pass-By Capture Total			*2,666*	*1,333*	*1,333*	*224*	*113*	*111*	*309*	*154*	*155*
Total Net New External Trips - Proposed Land Uses			**6,340**	**3,170**	**3,170**	**413**	**212**	**201**	**339**	**168**	**171**

Appendix C:
Approved Development Data

KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

December 6, 2021

James Michel, P.E.
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387

RE: ***Morganton Park North Site 3 Medical Office Building, Southern Pines, NC – Revised Traffic Impact Analysis***

Kimley-Horn has revised the Traffic Impact Analysis (TIA) for the proposed medical office building located on Site 3 within the Morganton Park North development in Southern Pines, NC. The site is proposed to consist of a 68,000 square-foot medical office building on the northwest quadrant of the intersection of Pavilion Way at Patriot Way. The TIA dated November 5, 2021 included 60,000 square feet of medical office space and a 15,000 square-foot quality restaurant. The development has a projected build-out year of 2023.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development in the projected (2023) build-out year and the projected (2031) ten-year horizon condition per the Town's UDO. The site location is shown on **Figure 1**, while **Figure 2** shows the proposed site plan. The existing roadway laneage at the study intersections is shown on **Figure 3**.

Existing and Background Traffic

AM and PM peak hour turning movement counts performed on February 11, 2020 were obtained from the *Revised Pinehurst Medical Morganton Park North Medical Office Building TIA* (Kimley-Horn, March 2020) for the following intersections:

- Morganton Road at Brucewood Road
- Brucewood Road at Pavilion Way

As those turning movement counts are more than one year old, a 2% growth rate was applied for one year up to the existing study year 2021. No growth was applied to traffic volumes north of Morganton Road as approved development traffic is expected to account for those traffic increases.

Based on historic daily traffic volumes in the area and to be consistent with other TIA's performed in the area, an annual growth factor of 2% was applied to existing volumes for the 2023 study year scenarios, and an annual growth factor of 1% was applied to 2023 volumes to the 2031 study year scenarios.

Traffic from the Morganton Park Elementary School, Sandhills Pediatrics, Pinehurst Medical sites, Legends Apartments Expansion, and Pine Ridge Commercial developments were also included in the year 2023 and 2031 analyses as background traffic. Traffic from the Morganton Park South Master Plan build-out was included in the year 2031 analyses only. Morganton Park Elementary School is now open but was not open when the 2020 traffic counts were performed. Site traffic volumes for the Morganton Park Elementary School, Sandhills Pediatrics, Pinehurst Medical sites, and Legends Apartments Expansion were obtained from the *Legends Apartments Expansion TIA* (Kimley-Horn, April

6, 2021). Traffic diversions due to the extension of Carlisle Street from W. Lowe Avenue to Brucewood Road for both school and non-school traffic were also obtained from that study. Traffic volumes for the Pine Ridge Commercial and MPS Master Plan were obtained from the *Pine Ridge Commercial TIA* (Kimley-Horn, July 23, 2021).

Existing and projected (2023) background peak hour traffic volumes, which include historic growth traffic, approved development traffic, and Carlisle Street/Morganton Park Elementary School traffic diversions, are shown on **Figures 4** and **5**. Projected (2031) background traffic volumes are shown on **Figures 6** and **7**.

Trip Generation

The trip generation potential of the development was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Tenth Edition, 2017). Table 1 summarizes the estimated traffic generation potential for the site.

Table 1
ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
720	Medical Office Building	68,000	s.f.	1,263	1,263	123	35	65	168

Table 1 shows that the site has the potential to generate 2,526 new trips on a typical weekday with 158 new trips during the AM peak hour and 233 new trips in the PM peak hour.

Trip Distribution and Assignment

The proposed generated trips were assigned to the surrounding roadway network based according to the distribution below. The directional distribution and assignment were based on land uses and existing travel patterns in the area.

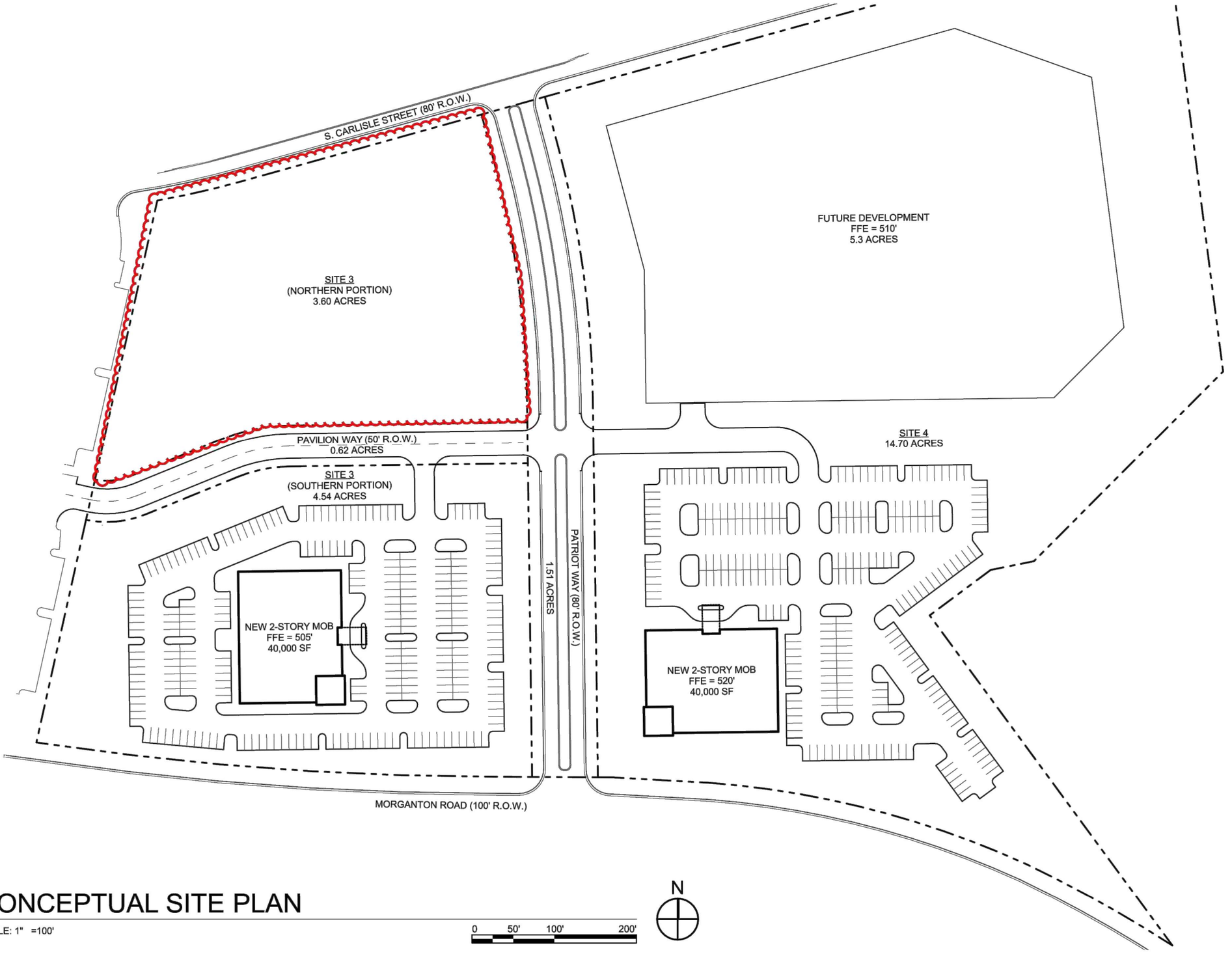
- 45% to/from the west along Morganton Road
- 35% to/from the east along Morganton Road
- 15% to/from the south along Brucewood Road
- 3% to/from the east along the future Carlisle Street Extension
- 2% to/from north along Brucewood Road

This is consistent with the TIA for the Pinehurst Medical sites. The site traffic distribution and percent assignment are shown on **Figure 8**.

The attached **Figures 9** and **10** show the year 2023 AM and PM peak hour site and build-out traffic volumes at the study intersections, respectively. **Figures 11** and **12** show the year 2031 AM and PM peak hour site and build-out traffic volumes at the study, respectively.

Capacity Analysis

Capacity analyses were performed using Synchro Version 10.3 software. Existing signal timings were obtained from NCDOT. Existing peak hour factors (PHF) were used for the existing traffic condition at



1
A-1

CONCEPTUAL SITE PLAN

SCALE: 1" =100'

FIGURE
2

CONCEPTUAL SITE PLAN

MPN SITE 3
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

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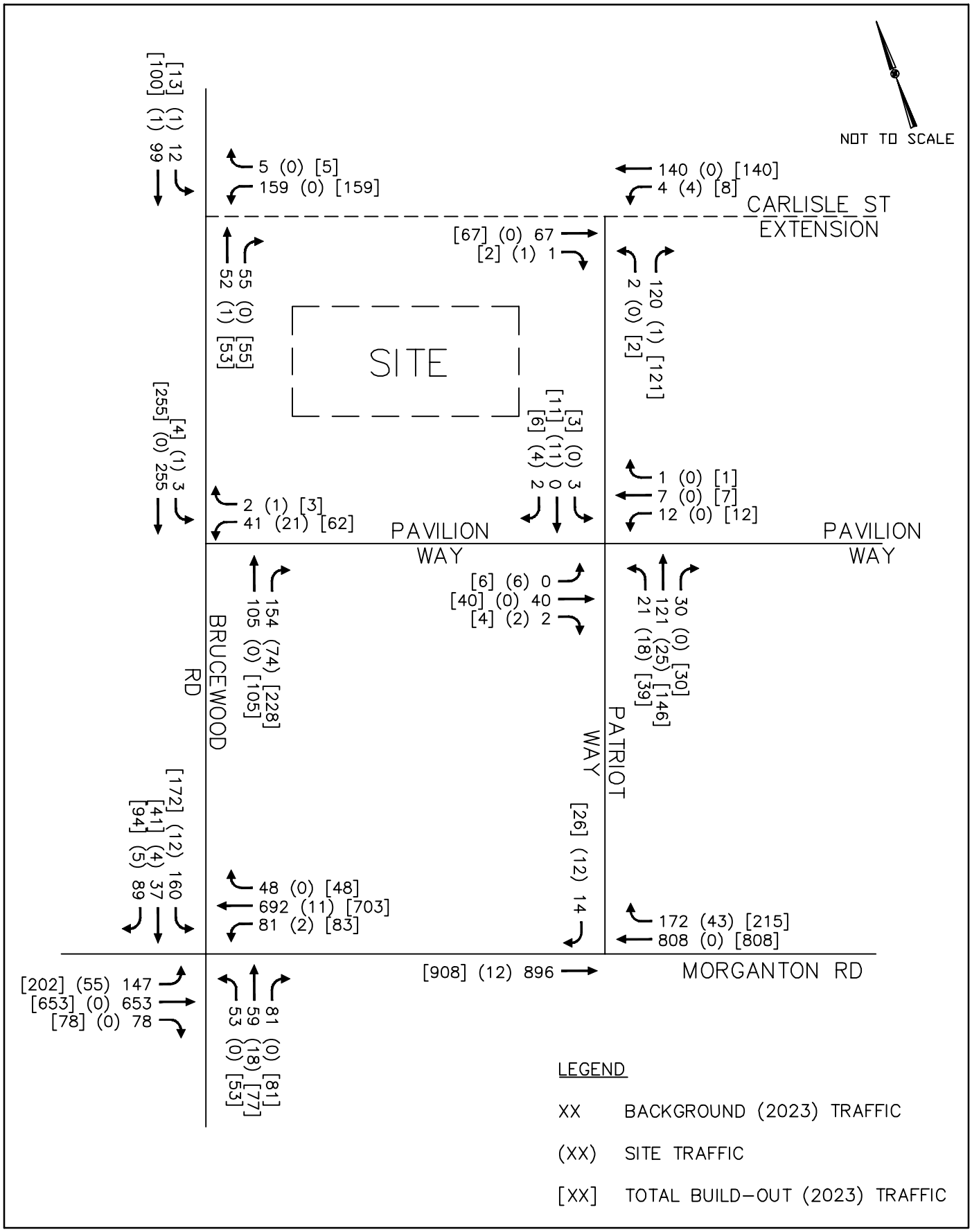
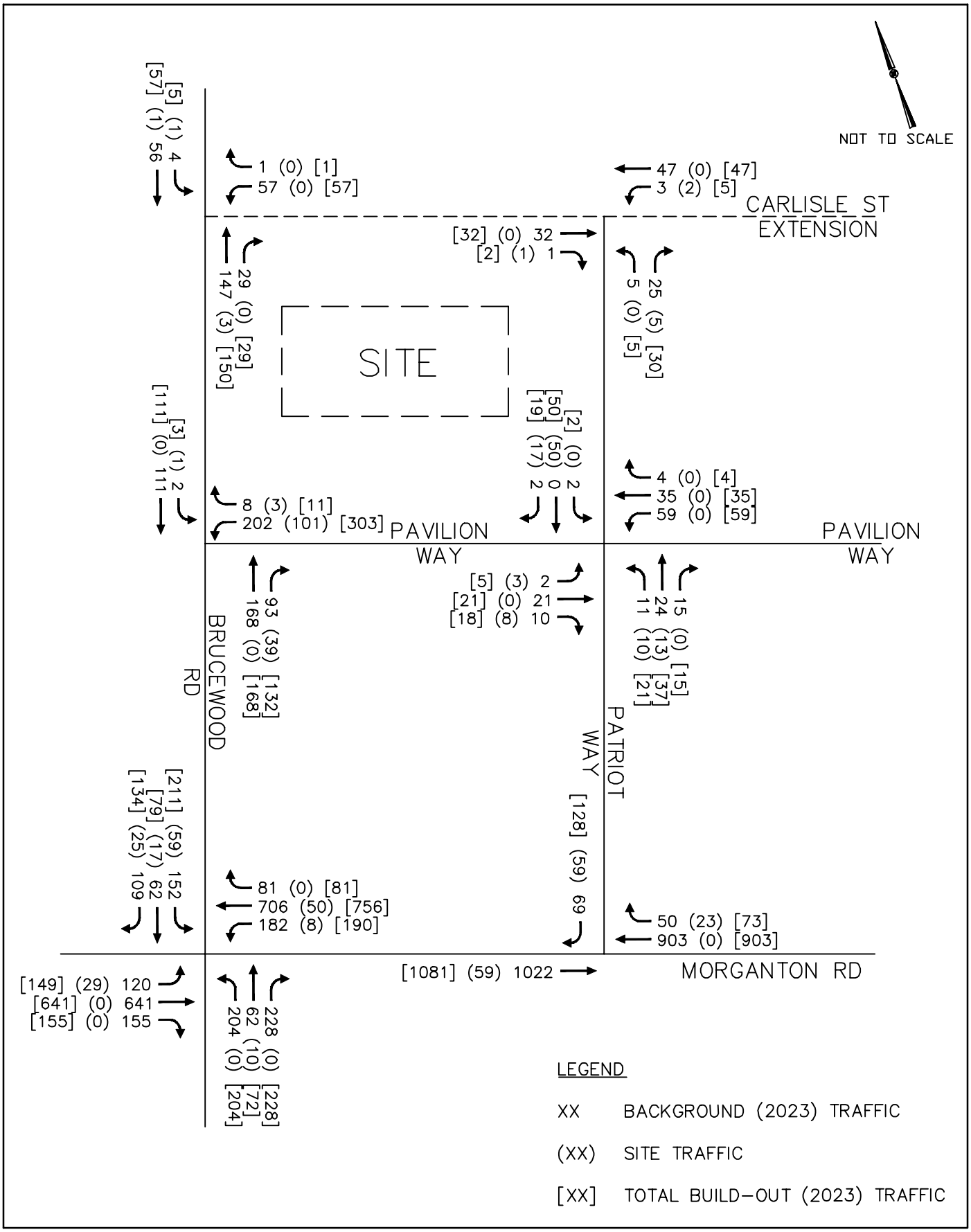


Kimley»Horn	MPN SITE 3 TRAFFIC IMPACT ANALYSIS SOUTHERN PINES, NC	BACKGROUND AND BUILD-OUT (2023) AM PEAK HOUR TRAFFIC VOLUMES	FIGURE 9

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



Kimley»Horn	MPN SITE 3 TRAFFIC IMPACT ANALYSIS SOUTHERN PINES, NC	BACKGROUND AND BUILD-OUT (2023) PM PEAK HOUR TRAFFIC VOLUMES	FIGURE 10

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

June 29, 2022

James Michel, P.E.
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387

DocuSigned by:
034394
E0D825BFBC36429...
6/29/2022

RE: ***Morganton Park North Apartments, Southern Pines, NC – Traffic Impact Analysis***

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the proposed Morganton Park North Apartment development located on the northwest quadrant of the intersection of Morganton Road at Brucewood Road in Southern Pines, NC. The site is proposed to consist of up to 300 low-rise multifamily units and approximately 3 acres of commercial space (assumed to be up to 20,000 square-feet of commercial space). The site is proposed to be accessed by a driveway on Brucewood Road aligning with Pavilion Way and a driveway on the extension of Carlisle Street across from the Legends Apartments Driveway. The development has a projected build-out year of 2025.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development in the projected (2025) build-out year and the projected (2032) ten-year horizon condition per the Town's UDO. The site location is shown on **Figure 1**, while **Figure 2** shows the proposed site plan. The existing roadway laneage at the study intersections is shown on **Figure 3**.

Existing and Background Traffic

AM and PM peak hour (7-9 AM and 4-6 PM) turning movement counts were collected on June 1, 2022 at the following intersections:

- Morganton Road at Felton Capel Lane
- Morganton Road at Tanglewood Drive
- Morganton Road at Brucewood Road
- Morganton Road at Patriot Boulevard
- Brucewood Road at Old Morganton Road
- Brucewood Road at Pavilion Way
- Brucewood Road at Carlisle Street
- Carlisle Street at Patriot Boulevard
- Patriot Boulevard at Pavilion Way

Based on historic daily traffic volumes in the area, an annual growth factor of 2% was applied to existing volumes up to the 2025 and 2032 study years.

Traffic from seven approved developments was included in the analysis as follows:

- Sandhills Pediatrics
  - 22,600 SF medical office building on the northeast quadrant of the intersection of Brucewood Road at Pavilion Way
  - Traffic volumes obtained from *Morganton Park North Medical Office Building TIA* (Kimley-Horn, November 2018)

- Pinehurst Surgical
  - Newly constructed medical office building on the northeast quadrant of the intersection of Morganton Road at Patriot Boulevard
  - When the traffic counts were collected, Pinehurst Surgical Center was determined to be operating at 1/3 capacity. To simulate full build out conditions, all traffic entering and exiting the east leg of Pavilion Way at Patriot Blvd was tripled and the additional trips carried through the network
- Morganton Park North Site 3
  - 60,000 SF medical office building on the northwest quadrant of the intersection of Pavilion Way at Patriot Boulevard
  - Traffic volumes obtained from *Morganton Park North Site 3 Medical Office Building TIA* (Kimley-Horn, December 2021)
- Legends Apartments Expansion
  - 144 additional units on the east side of the Legends Apartments development
  - Traffic volumes obtained from *Legends Apartments Expansion TIA* (Kimley-Horn, March 2021)
- Morganton Park South Outparcels
  - Two commercial outparcel buildings totaling 13,760 SF within the Morganton Park South Lowe's Foods shopping center
  - Trips were generated and assigned to the network
- Pine Ridge Commercial
  - 260 multifamily dwelling units and 240,000 SF of commercial space within the Morganton Park South development between Morganton Road and US 15-501
  - Traffic volumes obtained from *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021)
- Morganton Park South Master Plan (2032 only)
  - 50-acre multi-use development assumed to consist of 300 multifamily dwelling units, 122,500 SF of office space, and 259,500 SF of retail space
  - Traffic volumes obtained from *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021)

With the addition of approved development traffic, the effective annual background growth rates range 5-8% to 2025 and 3-4% to 2032.

Existing and projected (2025) background peak hour traffic volumes, which include historic growth traffic and approved development traffic are shown on **Figures 4** and **5**. Projected (2032) background traffic volumes are shown on **Figures 6** and **7**.

Trip Generation

The trip generation potential of the development was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Tenth Edition, 2017). Table 1 summarizes the estimated traffic generation potential of the site.

Table 1 ITE Traffic Generation (Vehicles)									
Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
220	Multifamily Housing (Low-Rise)	300	units	999	999	28	88	95	55
822	Strip Retail Plaza (<40k)	20,000	s.f.	537	537	27	18	64	63
Internal Capture Total				*-179*	*-179*	*-2*	*-2*	*-22*	*-22*
Pass-By Capture				*-152*	*-152*	*-0*	*-0*	*-20*	*-16*
Total Net New External Trips				**1,205**	**1,205**	**53**	**104**	**117**	**80**

Table 1 shows that the site has the potential to generate 2,410 new trips on a typical weekday, 157 new trips during the AM peak hour, and 197 new trips in the PM peak hour.

Trip Distribution and Assignment

The proposed generated trips were assigned to the surrounding roadway network based according to the distribution below. The directional distribution and assignment were based on land uses, existing travel patterns, and engineering judgement.

- 20% to/from the west along Morganton Road
- 20% to/from the east along Morganton Road
- 10% to/from the south along Brucewood Road
- 10% to/from the north on Felton Capel Lane
- 10% to/from the east on Carlisle Street
- 10% to/from the east on Pavilion Way
- 10% to/from Morganton Park South
- 5% to/from the north on Tanglewood Drive
- 5% to/from Legends Apartments

The site traffic distribution and percent assignment are shown on **Figure 8**.

Carlisle Street is planned to be extended from Brucewood Road to Tanglewood Drive as part of this development. Diversions were applied to some existing movements to account for this new street connection. Diverted traffic volume calculations are detailed on intersection spreadsheets and are shown on **Figures 9** - **12.**

The attached **Figures 9** and **10** show the year 2023 AM and PM peak hour site and build-out traffic volumes at the study intersections, respectively. **Figures 11** and **12** show the year 2031 AM and PM peak hour site and build-out traffic volumes at the study, respectively.

Capacity Analysis

Capacity analyses were performed using Synchro Version 10.3 software. Existing signal timings were obtained from NCDOT. Existing peak hour factors (PHF) were used for all traffic conditions at all study intersections except for new intersections or approaches where a PHF of 0.90 was used. Synchro

MORGANTON PARK NORTH - SITE 1

CONCEPTUAL MASTER PLAN

SOUTHERN PINES, NORTH CAROLINA

MAY 31, 2022

STORM WATER MANAGEMENT (TYP)

WETLANDS

TANGLEWOOD DRIVE

STORM WATER MANAGEMENT (TYP)

STORM WATER MANAGEMENT (TYP)

STORM WATER MANAGEMENT (TYP)

GARAGE PARKING (TYP)

PROPOSED MULTI-FAMILY BUILDING (TYP)

MORGANTON ROAD

AMENITY AREA
- CLUBHOUSE
- POOL

COMMERCIAL / RETAIL / OFFICE

PROPOSED MULTI-FAMILY BUILDING (TYP)

BRUCEWOOD

SCALE: 1" = 60'-0"

MORGANTON PARK NORTH - SITE ONE

PROPOSED UNITS:	(300) APARTMENT UNITS
TOTAL PARKING:	(33) GARAGES SPACES (485) SURFACE SPACES
	(518) TOTAL (1.73 SPACES / UNIT)
RETAIL / COMMERCIAL / OFFICE:	±20,000 SF
TOTAL PARKING:	(80) SPACES (1 SPACE /250 SF)

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

FIGURE 2

PROPOSED SITE PLAN

MORGANTON PARK NORTH APARTMENTS
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

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\\kimley-horn.com\SE_RAL1\RAL_TPTO_Traffic\014266002 MPN Apartments\T5 - Report-Submittals\Figures\MPN TIA Figures.dwg

NOT TO SCALE

TANGLEWOOD DRIVE

LEGENDS APARTMENTS

CARLISLE STREET

PAVILION WAY

SITE DWY.

SITE DWY.

SITE

FELTON CAPEL LANE

BEVERLY LANE

MORGANTON ROAD

OLD MORGANTON ROAD

BRUCEWOOD ROAD

PATRIOT BOULEVARD

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LEGEND

XX	BACKGROUND (2025) TRAFFIC VOLUMES
(XX)	SITE TRAFFIC
"XX"	CARLISLE STREET EXTENSION DIVERSION
[XX]	BUILD–OUT (2025) TRAFFIC VOLUMES

FIGURE 9

BACKGROUND AND BUILD–OUT (2025) AM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH APARTMENTS
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

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NOT TO SCALE

TANGLEWOOD DRIVE

LEGENDS APARTMENTS

CARLISLE STREET

PAVILION WAY

FELTON CAPEL LANE

BEVERLY LANE

MORGANTON ROAD

OLD MORGANTON ROAD

BRUCEWOOD ROAD

PATRIOT BOULEVARD

SITE

SITE DWY.

SITE DWY.

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LEGEND

XX	BACKGROUND (2025) TRAFFIC VOLUMES
(XX)	SITE TRAFFIC
<XX>	PASS-BY TRAFFIC
"XX"	CARLISLE STREET EXTENSION DIVERSION
[XX]	BUILD-OUT (2025) TRAFFIC VOLUMES

FIGURE 10

BACKGROUND AND BUILD-OUT (2025) PM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH APARTMENTS
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

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KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

November 21, 2023

James Michel, P.E.
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387

DocuSigned by:
E9D325BBBC3E429...
11/21/2023

RE: ***Morganton Park North Site 4N, Southern Pines, NC – Traffic Impact Analysis***

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the proposed medical office buildings located on Site 4N within the Morganton Park North development in Southern Pines, NC. The proposed development will consist of an approximately 40,000 SF of surgical center and approximately 90,000-120,000 SF of clinic space on the northeast quadrant of the intersection of Pavilion Way at Patriot Way. The development is planned to be constructed in phases. Phase 1 is expected to consist of approximately 20,000 SF of surgical space. The timeline for other phases is unknown at this time, therefore, the 10-year horizon required by the Town's UDO will be analyzed for the full build-out condition.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development in the projected (2025 and 2033) background and build-out conditions. The site location is shown on **Figure 1**, while **Figure 2** shows the conceptual site plan. The existing roadway laneage at the study intersections is shown on **Figure 3**.

Existing and Background Traffic

AM and PM peak hour turning movement counts were performed on March 30, 2023 at the following intersections:

- Morganton Road at Brucewood Road
- Morganton Road at Patriot Boulevard
- Brucewood Road at Old Morganton Road
- Brucewood Road at Pavilion Way
- Brucewood Road at Carlisle Street
- Carlisle Street at Patriot Boulevard
- Patriot Boulevard at Pavilion Way

24-hour pneumatic tube counts were also performed on Carlisle Street just east of Southern Pines Elementary school on June 7, 2023 when school was in session and on June 15, 2023 when school was out of session for comparison purposes. Based on these counts, Carlisle Street currently has a daily traffic volume of 1,200-1,300 vehicles per day with approximately 80-150 vehicles during the AM and PM peak hours depending on whether or not school is in session.

Based on historic daily traffic volumes in the area and to be consistent with other TIA's performed in the area, an annual growth factor of 2% was applied to existing volumes up to the 2033 analysis year.

Traffic from seven approved developments was included in the analysis as follows:

- Sandhills Pediatrics
  - Traffic was obtained from *Morganton Park North Medical Office Building TIA* (Kimley-Horn, November 2018)
- Pinehurst Medical/Pinehurst Surgical
  - It was determined that Pinehurst Medical was approximately 80% occupied and that Pinehurst Medical was approximately 47% occupied when the traffic counts were performed. Therefore, traffic counts collected at these sites were factored up appropriately to reflect full occupancy based on the level of occupancy at the time of data collection. The additional trips were carried through the study network.
- Morganton Park North Site 3
  - Traffic was obtained from *Morganton Park North Site 3 Medical Office Building TIA* (Kimley-Horn, December 2021)
- Legends Apartment Expansion
  - Traffic was obtained from *Legends Apartments Expansion TIA* (Kimley-Horn, March 2021)
- Pineridge Development
  - Traffic was obtained from *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021)
- Lowes Food Outparcels
  - Traffic was obtained from *Morganton Park North Apartments TIA* approved developments (Kimley-Horn, June 2022)
- Morganton Park North Apartments
  - Traffic was obtained from *Morganton Park North Apartments TIA* (Kimley-Horn, June 2022)

All approved development traffic was included in both the 2025 and 2033 scenarios to be conservative. With the addition of approved development traffic, the effective annual background growth rates at most intersections range from 3-5% with some locations as high as 11%.

Existing and projected (2025 and 2033) background peak hour traffic volumes, which include historic growth traffic, and approved development traffic are shown on **Figures 4** - **7**.

Trip Generation

The trip generation potential for Phase 1 of the development was determined using the traffic generation rates and equations published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, 11th Edition, 2023). Table 1 summarizes the estimated traffic generation potential for the site.

Table 1
Phase 1 - ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
720	Medical Office Building	20,000	s.f.	376	376	45	12	23	55

Table 1 shows that Phase 1 of the site has the potential to generate 752 new trips on a typical weekday with 57 new trips during the AM peak hour and 78 new trips in the PM peak hour.

The trip generation potential for Full Build-out of the development was determined using the traffic generation rates and equations published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, 11th Edition, 2023). While the proposed surgical and clinic space are expected to generate different levels of traffic, all space was generated as medical office building (ITE land use code 720) to present a conservative analysis. Table 2 summarizes the estimated traffic generation potential for the site.

Table 2
Full Build-out - ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
720	Medical Office Building	160,000	s.f.	3,384	3,384	291	77	194	454

Table 2 shows that the site has the potential to generate 6,768 new trips on a typical weekday with 368 new trips during the AM peak hour and 648 new trips in the PM peak hour. It should be noted that no reductions for walking or biking trips were assumed despite the presence of complimentary land uses (e.g. housing and restaurants/retail) and good sidewalk connectivity.

Trip Distribution and Assignment

The proposed generated trips were assigned to the surrounding roadway network based on the distribution below. The directional distribution and assignment were based on surrounding land uses and existing travel patterns in the area.

- 35% to/from the west along Morganton Road
- 30% to/from the east along Morganton Road
- 15% to/from the south along Brucewood Road
- 10% to/from the east along Carlisle Street
- 5% to/from Morganton Park South
- 5% to/from the west along Carlisle Street

It should be noted that no trips were assigned to adjacent residential and commercial land uses, but some interaction with these uses is certainly expected, which would reduce the number of trips on the external roadway network. The site traffic distribution and percent assignment are shown on **Figure 8**.

The 10% projected to/from the east on Carlisle Street represents approximately 75 vehicles per day and 6-8 peak hour trips with Phase 1 and 680 vehicles per day and 35-65 peak hour trips at full build-out of the site. As the existing volumes on Carlisle Street are very low, there should be no operational issues with this increase in traffic.

The attached **Figures 9** - **12** show the AM and PM peak hour site and build-out traffic volumes at the study intersections for the years 2025 and 2033.

J:\443.00.00 Morganton Park Master Planning\443.01.03 Site 3 & 4 Master Planning\Sites 3b & 4b - Conceptual Site Plan OPTION 4 MORPH .pln

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SCALE: NOT TO SCALE

10/20/2022

4N MEDICAL OFFICE BUILDINGS

SOUTHERN PINES, NC

HAROLD DEAN PEACOCK ARCHITECT

FIGURE 2

CONCEPTUAL SITE PLAN

MORGANTON PARK NORTH SITE 4N
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

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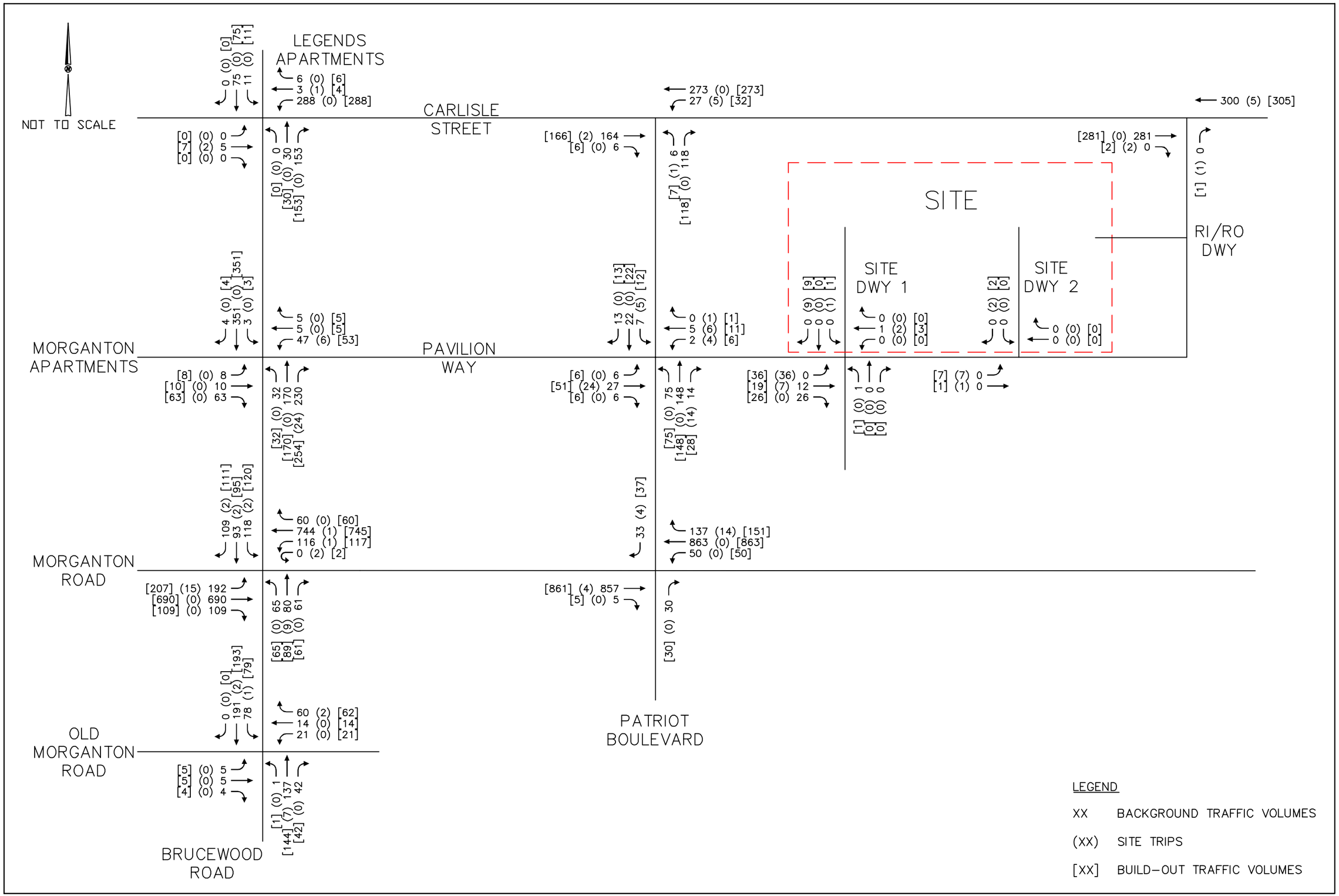

FIGURE 9

BUILD-OUT (2025) AM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH SITE 4N
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

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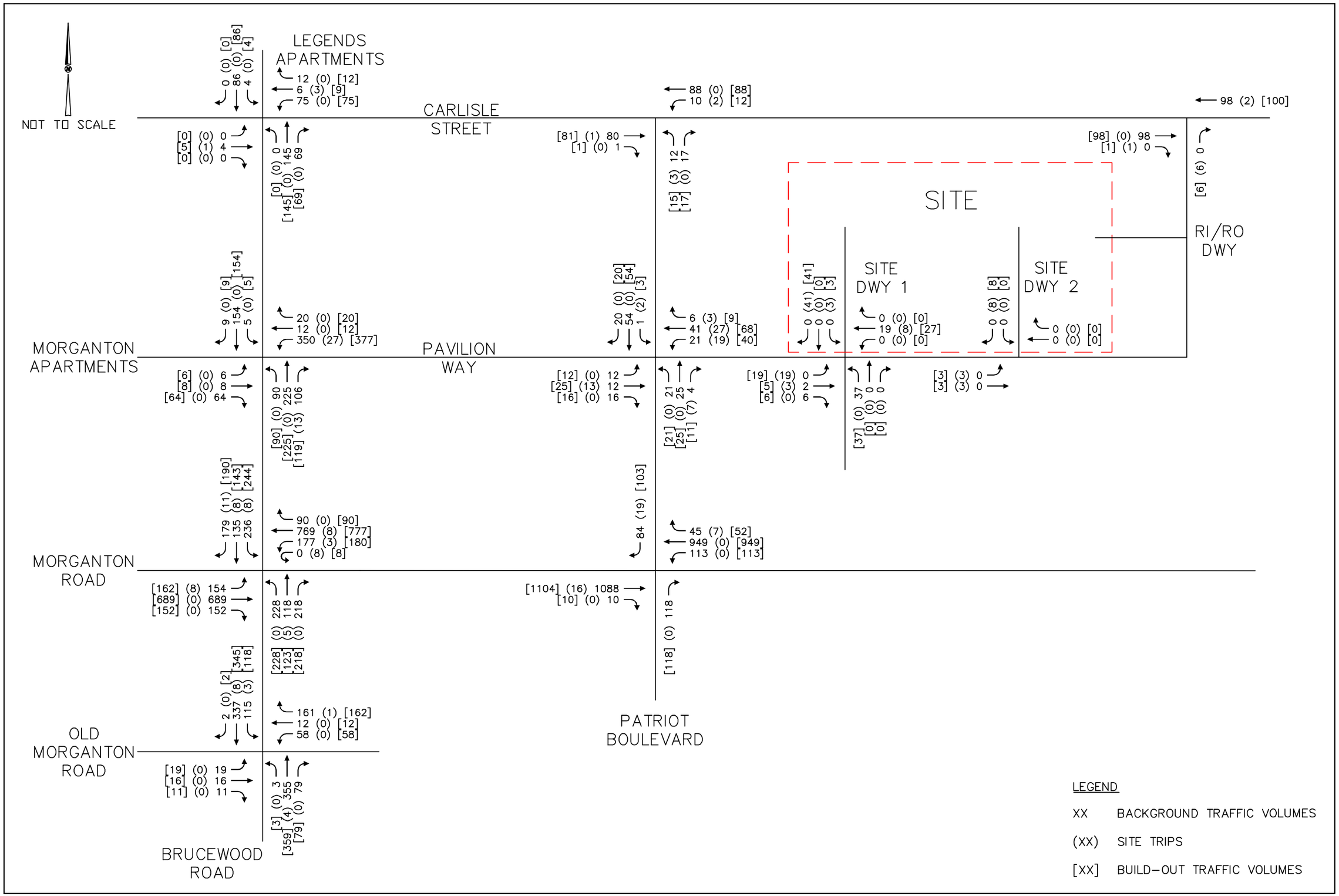

FIGURE 10

BUILD-OUT (2025) PM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH SITE 4N
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

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NOT TO SCALE

LEGENDS APARTMENTS

CARLISLE STREET

MORGANTON APARTMENTS

PAVILION WAY

SITE

SITE DWY 1

SITE DWY 2

RI/RO DWY

MORGANTON ROAD

OLD MORGANTON ROAD

BRUCEWOOD ROAD

PATRIOT BOULEVARD

LEGEND

XX BACKGROUND TRAFFIC VOLUMES

(XX) SITE TRIPS

[XX] BUILD-OUT TRAFFIC VOLUMES

FIGURE 11

BUILD-OUT (2033) AM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH SITE 4N
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

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NOT TO SCALE

LEGENDS APARTMENTS

CARLISLE STREET

PAVILION WAY

MORGANTON APARTMENTS

MORGANTON ROAD

OLD MORGANTON ROAD

BRUCEWOOD ROAD

PATRIOT BOULEVARD

SITE

SITE DWY 1

SITE DWY 2

RI/RO DWY

LEGEND

XX BACKGROUND TRAFFIC VOLUMES

(XX) SITE TRIPS

[XX] BUILD-OUT TRAFFIC VOLUMES

FIGURE 12

BUILD-OUT (2033) PM PEAK HOUR TRAFFIC VOLUMES

MORGANTON PARK NORTH SITE 4N
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

Kimley»Horn

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Appendix D:
Morganton Park South Master Plan Trip Generation & Assignment

Traffic Impact Analysis for

Pine Ridge Commercial

Southern Pines, North Carolina

Prepared for:

LKC Engineering

Aberdeen, NC

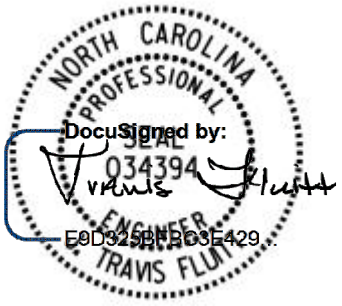
Prepared by:

Kimley-Horn and Associates, Inc.

NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

July 2021

018923019



7/23/2021

Executive Summary

Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis (TIA) for the proposed Pine Ridge Commercial development located between US 15/501 and Morganton Road east of the Southern Pines Village shopping center in Southern Pines, NC. The site is currently vacant. As currently envisioned, the development is proposed to include up to 260 multi-family residential units, 20,000 square feet (SF) of office space, and 220,000 SF of shopping center space. The site is proposed to be accessed by the new Pine Ridge Parkway, which will extend from US 15/501 at Partner Circle to Morganton Road at the proposed S. Stephens Street Extension. Build-out of the development is anticipated in 2024.

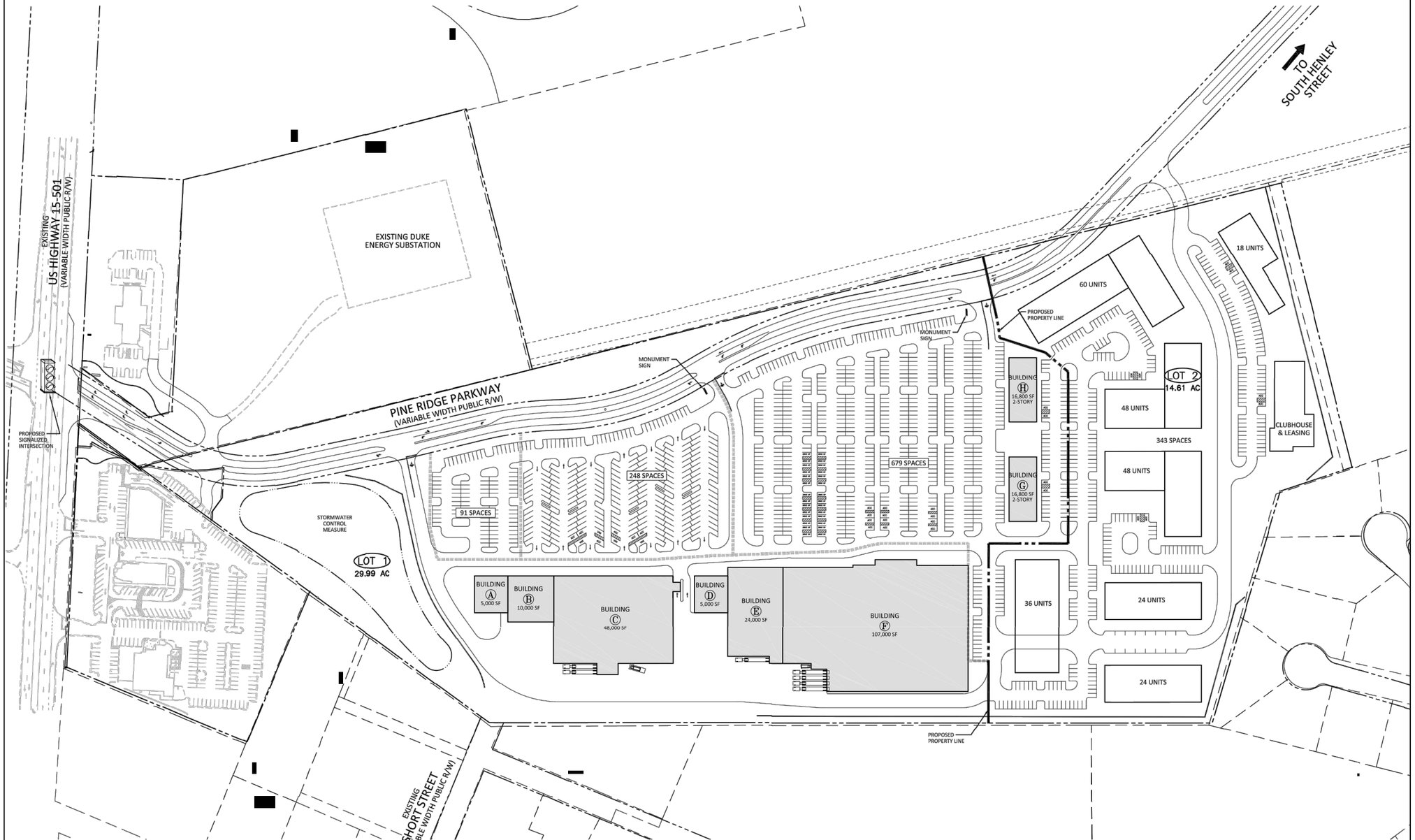
This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the proposed development. The Town of Southern Pines' Unified Development Ordinance (UDO) requires the study of the build-out traffic conditions for both the site build-out and 10-year projections. Therefore, the traffic conditions studied include the existing (2021) and projected (2024 and 2031) background and build-out traffic conditions for the AM and PM peak hours.

As shown in Table ES-1, the site has the potential to generate approximately 7,832 net new daily trips, 382 net new external trips during the AM peak hour, and 685 net new external trips during the PM peak hour.

Table ES-1
ITE Traffic Generation (Vehicles)

Land Use Code	Land Use	Intensity		Daily Total	AM Peak Hour		PM Peak Hour	
					In	Out	In	Out
221	Multifamily Housing (Mid-Rise)	260	d.u.	1,416	23	64	68	43
710	General Office Building	20,000	s.f.	224	39	6	4	21
820	Shopping Center	220,000	s.f.	10,278	162	100	468	506
Subtotal				11,918	224	170	540	570
Internal Capture Reduction				*784*	*6*	*6*	*56*	*56*
Pass-By Reduction				*3,302*	*0*	*0*	*152*	*161*
Total Net New External Trips				**7,832**	**218**	**164**	**332**	**353**

Intersection capacity analyses were performed using Synchro/SimTraffic Version 10.3 software. Table ES-2 summarizes the operation of the overall study intersections for the AM and PM peak hours.



LOT 1 PARKING SUMMARY

	SQUARE FOOTAGE	SPACES	SPACES/1,000 SF
BUILDING A+B	15,000 SF	91	6.06
BUILDING C	48,000 SF	248	5.16
BUILDING D+E +F+G+H[1]	169,600 SF	679	4.00

(1) INCLUDES OFFICE SQUARE FOOTAGE

SITE DATA

	LOT 1	LOT 2	TOTAL
SITE AREA	29.99 AC	14.61 AC	44.60 AC
RETAIL	215,800 SF	-	215,800 SF
OFFICE	16,800 SF	-	16,800 SF
MULTI-FAMILY	-	258 UNITS	258 UNITS
PROPOSED PARKING	1,018 SPACES	343 SPACES	1,361 SPACES

GRAPHIC SCALE
0 50 100 200
1 inch = 100 ft.

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

FIGURE 2.2

SITE PLAN

PINE RIDGE COMMERCIAL
SOUTHERN PINES, NC
TRAFFIC IMPACT ANALYSIS

Kimley»Horn

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4.0 Site Traffic Distribution

The proposed site generated trips were assigned to the surrounding roadway network. The directional distribution and assignment were based on a review of surrounding land uses and traffic patterns. The following overall distribution was used for new external site trips:

- 30% to/from the north on US 15/501
- 25% to/from the south on US 15/501
- 25% to/from the east on Morganton Road
- 5% to/from the west on Morganton Road
- 5% to/from the north on S Stephens Street Extension
- 5% to/from development along Brucewood Road
- 3% to/from the east on Murray Hill Road
- 2% to/from development north of Brucewood Road

The site traffic distribution and percent assignment for the Pine Ridge Commercial development for the 2024 build-out condition are shown on **Figure 4.1**. The site traffic percent assignment for the 2031 build-out condition is slightly different due to the extensions of Southern Road and Old Morganton Road to Pine Ridge Parkway and is shown on **Figure 4.2**.

KIMLEY-HORN AND ASSOCIATES, INC
NC License #F-0102

July 10, 2023

James Michel, P.E.
Town of Southern Pines
801 SE Service Road
Southern Pines NC 28387

RE: ***Morganton Park South Parcel 10 – Trip Generation Analysis***

7/10/2023

Dear Mr. Michel,

Kimley-Horn has performed an analysis of the proposed development of Parcel 10 of the Morganton Park South shopping center located on the north side of the Southern Road extension at the future parkway in Southern Pines, North Carolina. Access to the site is proposed via two driveways on the Southern Road extension.

The Parcel 10 development is currently proposed to include an approximately 100,000 square-foot (SF) discount club with fueling facility and an approximately 2,500 SF coffee shop with drive-through window. In the *Pine Ridge Commercial TIA* (July 23, 2021), the 10-year horizon analysis included full build-out of the Morganton Park South development. In that TIA, Parcel 10 was called Phase 5 and was assumed to consist of 114,000 SF of retail space.

Trip generation calculations for Phase 5 from the July 2021 are summarized in Table 1 below. Detailed trip generation calculations from the original TIA are attached for reference.

Table 1
ITE Trip Generation (Vehicles) – Phase 5 from July 2021 TIA

Land Use	Size	Daily	AM Peak Hour		PM Peak Hour	
		Total	In	Out	In	Out
Shopping Center (LUC 820)	114,000 SF	6,572	130	79	288	311
Internal Capture		*217*	*1*	*1*	*14*	*19*
Pass-by Capture		*2,107*	*0*	*0*	*93*	*99*
Total Net New External Trips: Phase 5		**4,248**	**129**	**78**	**181**	**193**

As shown in Table 1, Phase 5 of the Morganton Park South development was projected to generate approximately 4,248 total net new trips on a typical weekday, 207 net new trips during the AM peak hour, and 374 net new trips during the PM peak hour.

Traffic for the currently proposed development was generated using data from the 11th Edition of the ITE *Trip Generation Manual.* It should be noted that the description for discount club (ITE land use code 857) notes that sites may include “on-site fueling pumps”. Trip generation calculations for the proposed land uses are shown below on Table 2 below, and detailed trip generation calculations are attached.

Table 2 ITE Trip Generation (Vehicles) – Parcel 10 Proposed Land Uses						
Land Use	**Size**	**Daily**	**AM Peak Hour**		**PM Peak Hour**	
		Total	**In**	**Out**	**In**	**Out**
Discount Club (LUC 857)	100,000 SF	4,246	49	31	210	209
Coffee/Donut Shop w/ Drive-Through Window (LUC 937)	2,500 SF	1,334	110	105	49	48
Subtotal		5,580	159	136	259	257
Internal Capture		*892*	*8*	*8*	*34*	*34*
Pass-by Capture		*1,481*	*95*	*91*	*99*	*93*
Total Net New External Trips: Parcel 10		**3,207**	**56**	**37**	**126**	**130**
Total Net New External Trips: Phase 5		*4,248*	*129*	*78*	*181*	*193*
Difference: Proposed vs. TIA		**-1,041**	**-73**	**-41**	**-55**	**-63**

As shown in Table 2, the proposed Parcel 10 development is projected to generate approximately 3,207 total net new trips on a typical weekday, 93 net new trips during the AM peak hour, and 256 net new trips during the PM peak hour. This represents 1,041 fewer net new daily trips, 114 fewer net new AM peak hour trips, and 118 fewer net new PM peak hour trips.

As the improvements being performed for the Morganton Park South development were designed to accommodate the projected site traffic from the July 2021 TIA and as the proposed land uses for this site are projected to generate fewer daily, AM peak hour, and PM peak hour trips than the land uses assumed in the TIA, no additional roadway improvements should be required for the development of Parcel 10.

Please let me know if you have any questions or require any further information. We appreciate the opportunity to provide these services to you.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Travis Fluitt, P.E.
Senior Project Manager

Morganton Park South

Exhibit VII - Land Use Plan

Southern Pines, North Carolina

THE PAVILION

PATRIOT BLVD.

EXISTING BLVD.

BRUCEWOOD RD.

OLD MORGANTON RD.

S. HENLEY ST.

MORGANTON RD.

PHASES 3 & 4:
11.8 acres x 10,000 SF/acre =
118,000 SF (50/50 retail/office)

POD 1

RETAIL/ OFFICE

RETAIL/ OFFICE

RETAIL/ OFFICE

PHASE 7: 12.3 acres
Residential at same density as Phase 2 = **250 MF units**
Ground-floor commercial at same density as Phase 1 = **62,000 SF (50/50 retail/office)**

MIXED USE -RESIDENTIAL -COMMERCIAL -OFFICE

MIXED USE -RESIDENTIAL -COMMERCIAL -OFFICE

POD 3

POWER EASEMENT

PHASE 9:
6.5 acres x 10,000 SF/acre =
65,000 SF (50/50 retail/office)

PHASE 8:
Townhomes @
5 acres x10 units/acre =
50 units

SIDEWALK

PHASE 5: 11.25 acres
Same density as Phase 1 =
114,000 SF Retail

POD 2

SOUTHERN RD.

RETAIL

MULTI-FAMILY/ RESIDENTIAL

PHASE 2:
260 units on
12.7 acres

SIDEWALK

RETAIL

PHASE 6: 2.25 acres
Same density as Phase 1 =
23,000 SF Retail

PHASE 1:
240,000 SF
on 23.7 acres

RETAIL

US 15-501

PARTNER CIR.

STORMWATER

LAND USE LEGEND:

- RETAIL
- MULTI-FAMILY/RESIDENTIAL
- MIXED USE
- RETAIL/OFFICE
- OPEN SPACE

OPEN SPACE SUMMARY:	
CATEGORY	**REQUIRED**
Overall Open Space	19.8 acres; 20% minimum
Usable Open Space	9.9 acres; 10% minimum

*PER SECTION 5.5.2 OF THE CONCEPTUAL DEVELOPMENT PLAN

LEGEND:

- PROPERTY BOUNDARY
- MAJOR CONTOURS
- MINOR CONTOURS
- EXISTING PARCEL
- PROPOSED MULTI-USE TRAIL
- PROPOSED SIDEWALK
- PROPOSED CIRCULATION PATTERN
- PROPOSED STORMWATER MANAGEMENT LOCATION

200' 0' 100' 200' 400'

SCALE: 1" = 200'

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

Morganton Park South Phase 4

Table 2 - Trip Generation: Pod 2 Apartments

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
220 Multifamily Housing (Low-Rise)	214 d.u.	1,448	724	724	89	21	68	113	71	42

Morganton Park South Phase 4

Table 3 - Trip Generation: Revised Pod 3

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
710 General Office Building	40,000	s.f.	524	262	262	76	67	9	78	13	65
822 Strip Retail Plaza (<40K)	10,000	s.f.	652	326	326	29	17	12	78	39	39
932 High-Turnover Sit-Down Restaurant	3,500	s.f.	376	188	188	33	18	15	32	20	12
934 Fast-Food Restaurant with Drive-Through Window	3,500	s.f.	1,636	818	818	156	80	76	116	60	56
Subtotal			**3,188**	**1,594**	**1,594**	**294**	**182**	**112**	**304**	**132**	**172**
Internal Capture											
710 General Office Building			255	104	151	21	12	9	8	3	5
822 Strip Retail Plaza (<40K)			272	158	114	9	4	5	35	23	12
932 High-Turnover Sit-Down Restaurant			58	29	29	3	1	2	7	3	4
934 Fast-Food Restaurant with Drive-Through Window			251	127	124	15	7	8	28	10	18
Internal Capture Total			*836*	*418*	*418*	*48*	*24*	*24*	*78*	*39*	*39*
Total External Trips			**2,352**	**1,176**	**1,176**	**246**	**158**	**88**	**226**	**93**	**133**
Pass-By Capture	AM	PM									
932 High-Turnover Sit-Down Restaurant	0%	43%	118	59	59	0	0	0	10	7	3
934 Fast-Food Restaurant with Drive-Through Window	50%	55%	722	361	361	71	37	34	49	28	21
Pass-By Capture Total			***840***	***420***	***420***	***71***	***37***	***34***	***59***	***35***	***24***
Total Net New External Trips			**1,512**	**756**	**756**	**175**	**121**	**54**	**167**	**58**	**109**

Appendix E:

Intersection Spreadsheets - 2027 Build-Out

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Brucewood Road**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-by Trips:	78	77	94	93

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.93

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Brucewood Road Northbound			Brucewood Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	4	5	5	13	1	28	0	77	19	40	153	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	4	5	5	13	1	28	0	77	19	40	153	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.061	0.000
2027 Background Growth	0	0	0	0	0	0	0	5	0	0	9	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	9	0	0	3	0
MPN Apartments	0	0	0	0	0	5	0	5	0	10	10	0
MPN Site 4N (Phase 1)	0	0	0	0	0	2	0	7	0	1	2	0
Pine Ridge Apartments	0	0	0	0	0	0	0	1	0	0	2	0
BJ's & Starbucks	0	0	0	0	0	0	0	2	0	0	3	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	7	0	24	0	11	20	0
2027 Background Traffic	4	5	5	13	1	35	0	106	19	51	182	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	9	18	0	0
Percent Assignment Outbound	0%	0%	0%	5%	0%	35%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	9	0	61	0	0	0	0	0	0
Total External Site Traffic	0	0	0	9	0	61	0	0	9	18	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	31	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	31	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	9	0	92	0	0	9	18	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	4	5	5	22	1	127	0	106	28	69	182	0
Percent Impact (Approach)		0.0%			67.3%			6.7%			7.2%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Brucewood Road Northbound			Brucewood Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	18	9	22	42	5	112	0	254	49	110	310	3
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	18	9	22	42	5	112	0	254	49	110	310	3
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.061	0.000
2027 Background Growth	0	0	0	0	0	0	0	16	0	0	19	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	5	0	0	13	0
MPN Apartments	0	0	0	0	0	12	0	12	0	8	8	0
MPN Site 4N (Phase 1)	0	0	0	0	0	1	0	4	0	3	8	0
Pine Ridge Apartments	0	0	0	0	0	0	0	1	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	6	0	0	6	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	13	0	28	0	11	35	0
2027 Background Traffic	18	9	22	42	5	125	0	298	49	121	364	3
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	7	13	0	0
Percent Assignment Outbound	0%	0%	0%	5%	0%	35%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	7	0	47	0	0	0	0	0	0
Total External Site Traffic	0	0	0	7	0	47	0	0	7	13	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	37	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	37	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	7	0	84	0	0	7	13	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	18	9	22	49	5	209	0	298	56	134	364	3
Percent Impact (Approach)		0.0%			34.6%			2.0%			2.6%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Patriot Blvd**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.56

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	4	0	0	0	0	0				0	0	5
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	4	0	0	0	0	0	0	0	0	0	0	5
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	4	0	0	0	0	0	0	0	0	0	0	5
Project Traffic												
Percent Assignment Inbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%
Inbound Project Traffic	0	34	0	0	0	0	0	0	0	23	0	0
Percent Assignment Outbound	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	86	0	0	0	0	0	0	0
Total External Site Traffic	0	34	0	0	86	0	0	0	0	23	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	38	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	38	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	34	0	0	124	0	0	0	0	23	0	0
Old Morganton Road Diversion	0	10	0	0	10	10	0	0	0	10	0	0
2027 Buildout Total	4	44	0	0	134	10	0	0	0	33	0	5
Percent Impact (Approach)		70.8%			86.1%			-			60.5%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.75

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	10	0	0	0	0	0				0	0	11
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	10	0	0	0	0	0	0	0	0	0	0	11
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	10	0	0	0	0	0	0	0	0	0	0	11
Project Traffic												
Percent Assignment Inbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%
Inbound Project Traffic	0	28	0	0	0	0	0	0	0	19	0	0
Percent Assignment Outbound	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	77	0	0	0	0	0	0	0
Total External Site Traffic	0	28	0	0	76	0	0	0	0	19	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	53	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	53	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	28	0	0	129	0	0	0	0	19	0	0
Old Morganton Road Diversion	0	25	0	0	25	25	0	0	0	25	0	0
2027 Buildout Total	10	53	0	0	154	25	0	0	0	44	0	11
Percent Impact (Approach)		44.4%			72.1%			-			34.5%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Patriot Blvd**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
	78	77	94	93

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.95

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Patriot Blvd Northbound Left	Through	Right	Patriot Blvd Southbound Left	Through	Right
2024 Traffic Count	0	628	1	47	762	118	0	0	24	0	0	12
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	628	1	47	762	118	0	0	24	0	0	12
Growth Factor 2.0% per year to Build-out	0.000	0.061	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	38	0	0	47	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	0	22	0	0	0	0	0	3
MPN Apartments	0	21	7	0	11	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	4	0	0	0	14	0	0	0	0	0	4
Pine Ridge Apartments	0	2	0	0	5	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	33	7	0	16	36	0	0	0	0	0	7
2027 Background Traffic	0	699	8	47	825	154	0	0	24	0	0	19
Project Traffic												
Percent Assignment Inbound	0%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	36	18	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	9	0	0	0	0	0	0	0
Total External Site Traffic	0	36	18	0	9	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	-31	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	-31	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	36	18	0	-22	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	735	26	47	803	154	0	0	24	0	0	19
Percent Impact (Approach)		7.1%			-2.2%			0.0%			0.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.94

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Patriot Blvd Northbound Left	Through	Right	Patriot Blvd Southbound Left	Through	Right
2024 Traffic Count	0	963	21	101	812	33	0	0	130	0	0	36
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	963	21	101	812	33	0	0	130	0	0	36
Growth Factor 2.0% per year to Build-out	0.000	0.061	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	59	0	0	50	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	0	12	0	0	0	0	0	30
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	16	0	0	0	7	0	0	0	0	0	19
Pine Ridge Apartments	0	3	0	0	2	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	65	0	0	25	19	0	0	0	0	0	49
2027 Background Traffic	0	1087	21	101	887	52	0	0	130	0	0	85
Project Traffic												
Percent Assignment Inbound	0%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	26	13	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	7	0	0	0	0	0	0	0
Total External Site Traffic	0	26	13	0	7	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	-38	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	-38	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	26	13	0	-31	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	1113	34	101	856	52	0	0	130	0	0	85
Percent Impact (Approach)		3.4%			-3.1%			0.0%			0.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.97

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	- Southbound Left	Through	Right
2024 Traffic Count	0	623	30	73	911	0	15	0	25			
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	623	30	73	911	0	15	0	25	0	0	0
Growth Factor 2.0% per year to Build-out	0.000	0.061	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	38	0	0	56	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	4	0	0	14	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	2	5	0	0	5	0	15	0	0	0
BJ's & Starbucks	0	-15	15	29	-15	0	15	0	24	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	16	17	34	32	0	20	0	39	0	0	0
2027 Background Traffic	0	677	47	107	999	0	35	0	64	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	20%	35%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	36	64	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	5%	0%	35%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	9	0	61	0	0	0
Total External Site Traffic	0	0	36	64	0	0	9	0	61	0	0	0
Pass-By Capture Reduction	0	-31	-4	-4	-31	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	35	35	0	0	4	0	35	0	0	0
Total Pass-By Traffic	0	-31	31	30	-30	0	4	0	35	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	-31	67	94	-30	0	13	0	96	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	646	114	201	969	0	48	0	160	0	0	0
Percent Impact (Approach)		4.7%			5.5%			52.4%			-	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.94

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	- Southbound Left	Through	Right
2024 Traffic Count	0	982	113	123	847	0	112	0	183			
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	982	113	123	847	0	112	0	183	0	0	0
Growth Factor 2.0% per year to Build-out	0.000	0.061	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	60	0	0	52	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	16	0	0	7	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	3	8	0	0	2	0	5	0	0	0
BJ's & Starbucks	0	-14	14	40	-14	0	13	0	40	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	48	17	48	28	0	15	0	45	0	0	0
2027 Background Traffic	0	1090	130	171	927	0	127	0	228	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	20%	35%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	26	46	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	5%	0%	35%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	7	0	47	0	0	0
Total External Site Traffic	0	0	26	46	0	0	7	0	47	0	0	0
Pass-By Capture Reduction	0	-38	-5	-5	-38	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	42	42	0	0	5	0	42	0	0	0
Total Pass-By Traffic	0	-38	37	36	-37	0	5	0	42	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	-38	63	82	-37	0	12	0	89	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	1052	193	253	890	0	139	0	317	0	0	0
Percent Impact (Approach)		2.0%			3.9%			22.1%			-	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Henley Street**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.98

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Henley Street Northbound Left	Through	Right	Henley Street Southbound Left	Through	Right
2024 Traffic Count	18	635	0	0	962	19				9	0	18
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	18	635	0	0	962	19	0	0	0	9	0	18
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	1	39	0	0	59	1	0	0	0	1	0	1
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	4	0	0	14	0	0	0	0	0	0	0
Pine Ridge Apartments	3	13	0	0	5	0	0	0	0	0	0	1
BJ's & Starbucks	2	8	0	0	11	0	0	0	0	0	0	2
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	5	52	0	0	63	0	0	0	0	0	0	3
2027 Background Traffic	24	726	0	0	1084	20	0	0	0	10	0	22
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	5%
Inbound Project Traffic	0	0	0	0	55	0	0	0	0	0	0	9
Percent Assignment Outbound	5%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	9	52	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	9	52	0	0	55	0	0	0	0	0	0	9
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	9	52	0	0	55	0	0	0	0	0	0	9
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	33	778	0	0	1139	20	0	0	0	10	0	31
Percent Impact (Approach)		7.5%			4.7%			-			22.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.93

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Henley Street Northbound Left	Through	Right	Henley Street Southbound Left	Through	Right
2024 Traffic Count	49	1128	0	0	936	41				17	0	27
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	49	1128	0	0	936	41	0	0	0	17	0	27
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	3	69	0	0	57	3	0	0	0	1	0	2
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	16	0	0	7	0	0	0	0	0	0	0
Pine Ridge Apartments	1	4	0	0	7	0	0	0	0	0	0	1
BJ's & Starbucks	5	23	0	0	22	0	0	0	0	0	0	4
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	6	89	0	0	71	0	0	0	0	0	0	5
2027 Background Traffic	58	1286	0	0	1064	44	0	0	0	18	0	34
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	5%
Inbound Project Traffic	0	0	0	0	40	0	0	0	0	0	0	7
Percent Assignment Outbound	5%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	7	41	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	7	41	0	0	40	0	0	0	0	0	0	7
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	7	41	0	0	40	0	0	0	0	0	0	7
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	65	1327	0	0	1104	44	0	0	0	18	0	41
Percent Impact (Approach)		3.4%			3.5%			-			11.9%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Fire Lane**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.97

Description	Morganton Road Eastbound			Morganton Road Westbound			Fire Lane Northbound			Fire Lane Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	634	12	16	965	3	20	1	14	3	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	634	12	16	965	3	20	1	14	3	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	39	1	1	59	0	1	0	1	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	4	0	0	14	0	0	0	0	0	0	0
Pine Ridge Apartments	0	13	0	0	5	0	0	0	0	0	0	0
BJ's & Starbucks	0	8	0	0	11	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	52	0	0	63	0	0	0	0	0	0	0
2027 Background Traffic	0	725	13	17	1087	3	21	1	15	3	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	55	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	52	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	52	0	0	55	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	52	0	0	55	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	777	13	17	1142	3	21	1	15	3	0	0
Percent Impact (Approach)		6.6%			4.7%			0.0%			0.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.93

Description	Morganton Road Eastbound			Morganton Road Westbound			Fire Lane Northbound			Fire Lane Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	1125	20	27	954	2	24	1	21	3	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	1125	20	27	954	2	24	1	21	3	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	69	1	2	58	0	1	0	1	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	16	0	0	7	0	0	0	0	0	0	0
Pine Ridge Apartments	0	4	0	0	7	0	0	0	0	0	0	0
BJ's & Starbucks	0	23	0	0	22	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	89	0	0	71	0	0	0	0	0	0	0
2027 Background Traffic	0	1283	21	29	1083	2	25	1	22	3	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	40	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	41	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	41	0	0	40	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	41	0	0	40	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2027 Buildout Total	0	1324	21	29	1123	2	25	1	22	3	0	0
Percent Impact (Approach)		3.0%			3.5%			0.0%			0.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Pod 2 Apartments / Pine Ridge Apartments**

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.9

Description	Pod 2 Apartments Eastbound Left	Through	Right	Pine Ridge Apartments Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	Carolina Green Parkway Southbound U-Turn	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	40	0	0	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	40	0	0	0	103	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	31	0	25	0	0	12	0	9	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	47	0	0	0	55	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0		0	0	0
Pod 3	0	0	0	0	0	0	0	0	0		0	0	0
Total Committed Traffic	0	0	0	31	0	25	0	47	12	0	9	55	0
2027 Background Traffic	0	0	0	31	0	25	0	87	12	0	9	158	0
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	46	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	20%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	86	0	43	0
Total External Site Traffic	0	0	0	0	0	0	0	46	0	86	0	44	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	48	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	48	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	46	0	134	0	44	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	20	0		0	20	0
2027 Buildout Total	0	0	0	31	0	25	0	153	12	134	9	222	0
Percent Impact (Approach)		-			0.0%			27.9%				48.8%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Pod 2 Apartments Eastbound Left	Through	Right	Pine Ridge Apartments Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	Carolina Green Parkway Southbound U-Turn	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	295	0	0	0	236	0
2024 Existing Traffic	0	0	0	0	0	0	0	295	0	0	0	236	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	12	0	9	0	0	19	0	15	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	76	0	0	0	78	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0		0	0	0
Pod 3	0	0	0	0	0	0	0	0	0		0	0	0
Total Committed Traffic	0	0	0	12	0	9	0	76	19	0	15	78	0
2027 Background Traffic	0	0	0	12	0	9	0	371	19	0	15	314	0
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	38	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	20%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	77	0	39	0
Total External Site Traffic	0	0	0	0	0	0	0	38	0	77	0	39	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	67	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	67	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	38	0	144	0	39	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	50	0		0	50	0
2027 Buildout Total	0	0	0	12	0	9	0	459	19	144	15	403	0
Percent Impact (Approach)		-			0.0%			7.9%				32.6%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Old Morganton Road/Pod 3 Driveway**

	AM In	**AM Out**	**PM In**	**PM Out**
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road **Eastbound**			Pod 3 Driveway **Westbound**			Carolina Green Parkway **Northbound**				Carolina Green Parkway **Southbound**		
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	0	40	0	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	40	0	0	103	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	25	0	0	9	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	47	0	0	55	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	72	0	0	64	0
2027 Background Traffic	0	0	0	0	0	0	0	0	112	0	0	167	0
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	55%
Inbound Project Traffic	0	0	0	0	0	0	0	46	0	0	0	0	125
Percent Assignment Outbound	0%	0%	60%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	130	0	0	0	0	0	86	0	0	0	0
Total External Site Traffic	0	0	130	0	0	0	0	46	86	0	0	0	125
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-10	0	0	-10	0
Pass-By Capture Assignment	0	0	58	0	0	0	0	10	48	0	0	0	87
Total Pass-By Traffic	0	0	58	0	0	0	0	10	38	0	0	-10	87
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	188	0	0	0	0	56	124	0	0	-10	212
Old Morganton Road Diversion	0	0	20	0	0	0	0	20	0	0	0	0	0
2027 Buildout Total	0	0	208	0	0	0	0	76	236	0	0	157	212
Percent Impact (Approach)		90.4%			-				57.7%			54.7%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road **Eastbound**			Pod 3 Driveway **Westbound**			Carolina Green Parkway **Northbound**				Carolina Green Parkway **Southbound**		
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	0	295	0	0	236	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	295	0	0	236	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.061	0.000	0.000	0.000	0.000	0.000	0.000
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	9	0	0	15	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	76	0	0	78	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	85	0	0	93	0
2027 Background Traffic	0	0	0	0	0	0	0	0	380	0	0	329	0
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	55%
Inbound Project Traffic	0	0	0	0	0	0	0	38	0	0	0	0	103
Percent Assignment Outbound	0%	0%	60%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	116	0	0	0	0	0	77	0	0	0	0
Total External Site Traffic	0	0	116	0	0	0	0	38	77	0	0	0	102
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-13	0	0	-13	0
Pass-By Capture Assignment	0	0	80	0	0	0	0	13	67	0	0	0	121
Total Pass-By Traffic	0	0	80	0	0	0	0	13	54	0	0	-13	121
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	196	0	0	0	0	51	131	0	0	-13	223
Old Morganton Road Diversion	0	0	50	0	0	0	0	50	0	0	0	0	0
2027 Buildout Total	0	0	246	0	0	0	0	101	511	0	0	316	223
Percent Impact (Approach)		79.7%			-				29.7%			39.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

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Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Lot 1 Driveway**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Lot 1 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	17%	0%	0%	0%	24%	51%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	39	0	0	0	55	116	0	0	0	0	0	0
Percent Assignment Outbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	45%	0%	23%
Outbound Project Traffic	0	32	0	0	0	0	0	0	0	97	0	50
Total External Site Traffic	39	33	0	0	55	116	0	0	0	97	0	50
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	5	0	0	5	92	0	0	0	53	0	38
Total Pass-By Traffic	0	5	0	0	5	92	0	0	0	53	0	38
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	39	38	0	0	60	208	0	0	0	150	0	88
Old Morganton Road Diversion	0	20	0	0	20	0	0	0	0	0	0	0
2027 Buildout Total	39	58	0	0	80	208	0	0	0	150	0	88
Percent Impact (Approach)		79.4%			93.1%			-			100.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Lot 1 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	17%	0%	0%	0%	24%	51%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	32	0	0	0	45	96	0	0	0	0	0	0
Percent Assignment Outbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	45%	0%	23%
Outbound Project Traffic	0	29	0	0	0	0	0	0	0	87	0	44
Total External Site Traffic	32	29	0	0	45	95	0	0	0	87	0	44
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	7	0	0	7	127	0	0	0	73	0	53
Total Pass-By Traffic	0	7	0	0	7	127	0	0	0	73	0	53
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	32	36	0	0	52	222	0	0	0	160	0	97
Old Morganton Road Diversion	0	50	0	0	50	0	0	0	0	0	0	0
2027 Buildout Total	32	86	0	0	102	222	0	0	0	160	0	97
Percent Impact (Approach)		57.6%			84.6%			-			100.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Lot 2 Driveway / Pod 2 Driveway**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Pod 2 Driveway Northbound			Lot 2 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	3%	17%	0%	0%	16%	8%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	7	39	0	0	36	18	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	23%	0%	0%	0%	0%	5%	0%	6%
Outbound Project Traffic	0	22	0	0	50	0	0	0	0	11	0	13
Total External Site Traffic	7	61	0	0	86	19	0	0	0	11	0	13
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	38	5	0	0	0	5	0	0
Total Pass-By Traffic	0	0	0	0	38	5	0	0	0	5	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	7	61	0	0	124	24	0	0	0	16	0	13
Old Morganton Road Diversion	0	20	0	0	20	0	0	0	0	0	0	0
2027 Buildout Total	7	81	0	0	144	24	0	0	0	16	0	13
Percent Impact (Approach)		77.3%			88.1%			-			100.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Pod 2 Driveway Northbound			Lot 2 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	3%	17%	0%	0%	16%	8%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	6	32	0	0	30	15	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	23%	0%	0%	0%	0%	5%	0%	6%
Outbound Project Traffic	0	19	0	0	44	0	0	0	0	10	0	12
Total External Site Traffic	6	51	0	0	74	15	0	0	0	10	0	12
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	53	7	0	0	0	7	0	0
Total Pass-By Traffic	0	0	0	0	53	7	0	0	0	7	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	6	51	0	0	127	22	0	0	0	17	0	12
Old Morganton Road Diversion	0	50	0	0	50	0	0	0	0	0	0	0
2027 Buildout Total	6	101	0	0	177	22	0	0	0	17	0	12
Percent Impact (Approach)		53.3%			74.9%			-			100.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Old Morganton Road / Lot 3 Driveway**
E/W Street:	**Old Morganton Road / Lot 4 Driveway**

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.061208	**Buildout Year:**	2027

AM PEAK HOUR
AM PHF = 0.9

Description	Lot 4 Driveway Eastbound			Old Morganton Road Westbound			Old Morganton Road Northbound			Lot 3 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	4%	12%	1%	4%	20%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	9	27	2	9	46	0	0	0
Percent Assignment Outbound	0%	2%	3%	29%	0%	0%	0%	0%	0%	8%	8%	0%
Outbound Project Traffic	0	4	6	63	0	0	0	0	0	17	17	0
Total External Site Traffic	0	4	6	63	9	27	2	9	46	18	17	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	38	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	38	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	4	6	101	9	27	2	9	46	18	17	0
Old Morganton Road Diversion	0	0	0	20	0	0	0	0	20	0	0	0
2027 Buildout Total	0	4	6	121	9	27	2	9	66	18	17	0
Percent Impact (Approach)		100.0%			87.3%			74.0%			100.0%	

Overall Percent Impact (2027)

PM PEAK HOUR
PM PHF = 0.9

Description	Lot 4 Driveway Eastbound			Old Morganton Road Westbound			Old Morganton Road Northbound			Lot 3 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
2027 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Phase 1)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2027 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	4%	12%	1%	4%	20%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	8	23	2	8	38	0	0	0
Percent Assignment Outbound	0%	2%	3%	29%	0%	0%	0%	0%	0%	8%	8%	0%
Outbound Project Traffic	0	4	6	56	0	0	0	0	0	15	15	0
Total External Site Traffic	0	4	6	55	8	23	2	7	38	15	15	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	53	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	53	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	4	6	108	8	23	2	7	38	15	15	0
Old Morganton Road Diversion	0	0	0	50	0	0	0	0	50	0	0	0
2027 Buildout Total	0	4	6	158	8	23	2	7	88	15	15	0
Percent Impact (Approach)		100.0%			73.5%			48.5%			100.0%	

Overall Percent Impact (2027)

Overall Percent Impact ()

Appendix F:

Intersection Spreadsheets - 2034 Build-Out

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Brucewood Road**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-by Trips:	90	89	108	108

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.93

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Brucewood Road Northbound			Brucewood Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	4	5	5	13	1	28	0	77	19	40	153	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	4	5	5	13	1	28	0	77	19	40	153	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.139	0.000
2034 Background Growth	0	0	0	0	0	0	0	11	0	0	21	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	9	0	0	3	0
MPN Apartments	0	0	0	0	0	5	0	5	0	10	10	0
MPN Site 4N (Full Build)	0	0	0	0	0	15	0	44	0	4	12	0
Pine Ridge Apartments	0	0	0	0	0	0	0	1	0	0	2	0
BJ's & Starbucks	0	0	0	0	0	0	0	2	0	0	3	0
Pod 2 Apartments	0	0	0	3	0	3	0	0	1	1	0	0
Pod 3	0	0	0	2	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	5	0	23	0	61	1	15	30	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	4	5	5	18	1	51	0	149	20	55	204	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	9	17	0	0
Percent Assignment Outbound	0%	0%	0%	5%	0%	35%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	8	0	56	0	0	0	0	0	0
Total External Site Traffic	0	0	0	8	0	56	0	0	9	17	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	36	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	36	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	8	0	92	0	0	9	17	0	0
2034 Buildout Total	4	5	5	26	1	143	0	149	29	72	204	0
Percent Impact (Approach)		0.0%			58.8%			5.1%			6.2%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Brucewood Road Northbound			Brucewood Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	18	9	22	42	5	112	0	254	49	110	310	3
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	18	9	22	42	5	112	0	254	49	110	310	3
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.139	0.000
2034 Background Growth	0	0	0	0	0	0	0	35	0	0	43	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	5	0	0	13	0
MPN Apartments	0	0	0	0	0	12	0	12	0	8	8	0
MPN Site 4N (Full Build)	0	0	0	0	0	10	0	29	0	23	68	0
Pine Ridge Apartments	0	0	0	0	0	0	0	1	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	6	0	0	6	0
Pod 2 Apartments	0	0	0	1	0	1	0	0	3	3	0	0
Pod 3	0	0	0	4	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	5	0	23	0	53	3	34	95	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	18	9	22	47	5	135	0	342	52	144	448	3
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	6	12	0	0
Percent Assignment Outbound	0%	0%	0%	5%	0%	35%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	6	0	42	0	0	0	0	0	0
Total External Site Traffic	0	0	0	6	0	42	0	0	6	12	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	43	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	43	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	6	0	85	0	0	6	12	0	0
2034 Buildout Total	18	9	22	53	5	220	0	342	58	156	448	3
Percent Impact (Approach)		0.0%			32.7%			1.5%			2.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Patriot Blvd**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	4	0	0	0	0	0				0	0	5
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	4	0	0	0	0	0	0	0	0	0	0	5
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	2	0	0	7	0	0	0	0	0	0	0
Pod 3	0	0	0	0	3	0	0	0	0	0	0	0
Total Committed Traffic	0	2	0	0	10	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	10	0	0	10	10	0	0	0	10	0	0
2034 Background Traffic	4	12	0	0	20	10	0	0	0	10	0	5
Project Traffic												
Percent Assignment Inbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%
Inbound Project Traffic	0	32	0	0	0	0	0	0	0	21	0	0
Percent Assignment Outbound	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	80	0	0	0	0	0	0	0
Total External Site Traffic	0	32	0	0	80	0	0	0	0	21	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	45	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	45	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	32	0	0	125	0	0	0	0	21	0	0
2034 Buildout Total	4	44	0	0	145	10	0	0	0	31	0	5
Percent Impact (Approach)		66.7%			80.6%			-			58.3%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	10	0	0	0	0	0				0	0	11
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	10	0	0	0	0	0	0	0	0	0	0	11
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	7	0	0	4	0	0	0	0	0	0	0
Pod 3	0	0	0	0	6	0	0	0	0	0	0	0
Total Committed Traffic	0	7	0	0	10	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	25	0	0	25	25	0	0	0	25	0	0
2034 Background Traffic	10	32	0	0	35	25	0	0	0	25	0	11
Project Traffic												
Percent Assignment Inbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%
Inbound Project Traffic	0	25	0	0	0	0	0	0	0	17	0	0
Percent Assignment Outbound	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	68	0	0	0	0	0	0	0
Total External Site Traffic	0	25	0	0	68	0	0	0	0	17	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	62	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	62	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	25	0	0	130	0	0	0	0	17	0	0
2034 Buildout Total	10	57	0	0	165	25	0	0	0	42	0	11
Percent Impact (Approach)		37.3%			68.4%			-			32.1%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Patriot Blvd**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
	90	89	108	108

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.95

Description	Morganton Road Eastbound			Morganton Road Westbound			Patriot Blvd Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	628	1	47	762	118	0	0	24	0	0	12
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	628	1	47	762	118	0	0	24	0	0	12
Growth Factor 2.0% per year to Build-out	0.000	0.139	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	87	0	0	106	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	0	22	0	0	0	0	0	3
MPN Apartments	0	21	7	0	11	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	23	0	0	0	87	0	0	0	0	0	27
Pine Ridge Apartments	0	2	0	0	5	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	1	0	0	4	0	0	0	0	0	0	0
Pod 3	0	7	0	0	7	0	0	0	0	0	0	0
Total Committed Traffic	0	60	7	0	27	109	0	0	0	0	0	30
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	775	8	47	895	227	0	0	24	0	0	42
Project Traffic												
Percent Assignment Inbound	0%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	34	17	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	8	0	0	0	0	0	0	0
Total External Site Traffic	0	34	17	0	8	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	-36	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	-36	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	34	17	0	-28	0	0	0	0	0	0	0
2034 Buildout Total	0	809	25	47	867	227	0	0	24	0	0	42
Percent Impact (Approach)		6.1%			-2.5%			0.0%			0.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.94

Description	Morganton Road Eastbound			Morganton Road Westbound			Patriot Blvd Northbound			Patriot Blvd Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	963	21	101	812	33	0	0	130	0	0	36
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	963	21	101	812	33	0	0	130	0	0	36
Growth Factor 2.0% per year to Build-out	0.000	0.139	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	134	0	0	113	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	0	12	0	0	0	0	0	30
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	136	0	0	0	58	0	0	0	0	0	159
Pine Ridge Apartments	0	3	0	0	2	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	4	0	0	2	0	0	0	0	0	0	0
Pod 3	0	3	0	0	12	0	0	0	0	0	0	0
Total Committed Traffic	0	192	0	0	39	70	0	0	0	0	0	189
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	1289	21	101	964	103	0	0	130	0	0	225
Project Traffic												
Percent Assignment Inbound	0%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	24	12	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	6	0	0	0	0	0	0	0
Total External Site Traffic	0	24	12	0	6	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	-43	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	-43	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	24	12	0	-37	0	0	0	0	0	0	0
2034 Buildout Total	0	1313	33	101	927	103	0	0	130	0	0	225
Percent Impact (Approach)		2.7%			-3.3%			0.0%			0.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips	90	89	108	108

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.97

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	- Southbound Left	Through	Right
2024 Traffic Count	0	623	30	73	911	0	15	0	25			
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	623	30	73	911	0	15	0	25	0	0	0
Growth Factor 2.0% per year to Build-out	0.000	0.139	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	87	0	0	127	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	23	0	0	87	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	2	5	0	0	5	0	15	0	0	0
BJ's & Starbucks	0	-15	15	29	-15	0	15	0	24	0	0	0
Pod 2 Apartments	0	0	1	3	0	0	4	0	13	0	0	0
Pod 3	0	-9	16	38	-9	0	15	0	30	0	0	0
Total Committed Traffic	0	26	34	75	96	0	39	0	82	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	736	64	148	1134	0	54	0	107	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	20%	35%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	34	60	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	5%	0%	35%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	8	0	56	0	0	0
Total External Site Traffic	0	0	34	60	0	0	8	0	56	0	0	0
Pass-By Capture Reduction	0	-36	-5	-5	-36	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	41	41	0	0	4	0	40	0	0	0
Total Pass-By Traffic	0	-36	36	35	-35	0	4	0	40	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	-36	70	95	-35	0	12	0	96	0	0	0
2034 Buildout Total	0	700	134	243	1099	0	66	0	203	0	0	0
Percent Impact (Approach)		4.1%			4.5%			40.1%			-	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.94

Description	Morganton Road Eastbound Left	Through	Right	Morganton Road Westbound Left	Through	Right	Carolina Green Parkway Northbound Left	Through	Right	- Southbound Left	Through	Right
2024 Traffic Count	0	982	113	123	847	0	112	0	183			
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	982	113	123	847	0	112	0	183	0	0	0
Growth Factor 2.0% per year to Build-out	0.000	0.139	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	136	0	0	118	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	136	0	0	58	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	3	8	0	0	2	0	5	0	0	0
BJ's & Starbucks	0	-14	14	40	-14	0	13	0	40	0	0	0
Pod 2 Apartments	0	0	4	13	0	0	2	0	7	0	0	0
Pod 3	0	-7	10	20	-7	0	17	0	44	0	0	0
Total Committed Traffic	0	161	31	81	72	0	34	0	96	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	1279	144	204	1037	0	146	0	279	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	20%	35%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	24	41	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	5%	0%	35%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	6	0	42	0	0	0
Total External Site Traffic	0	0	24	41	0	0	6	0	42	0	0	0
Pass-By Capture Reduction	0	-43	-5	-5	-43	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	49	49	0	0	5	0	49	0	0	0
Total Pass-By Traffic	0	-43	44	43	-42	0	5	0	49	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	-43	68	84	-42	0	11	0	91	0	0	0
2034 Buildout Total	0	1236	212	288	995	0	157	0	370	0	0	0
Percent Impact (Approach)		1.7%			3.3%			19.4%			-	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Henley Street**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips	90	89	108	108

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.98

Description	Morganton Road Eastbound			Morganton Road Westbound			Henley Street Northbound			Henley Street Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	18	635	0	0	962	19				9	0	18
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	18	635	0	0	962	19	0	0	0	9	0	18
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	3	88	0	0	134	3	0	0	0	1	0	3
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	23	0	0	87	0	0	0	0	0	0	0
Pine Ridge Apartments	3	13	0	0	5	0	0	0	0	0	0	1
BJ's & Starbucks	2	8	0	0	11	0	0	0	0	0	0	2
Pod 2 Apartments	0	13	0	0	3	0	0	0	0	0	0	0
Pod 3	2	20	0	0	25	0	0	0	0	0	0	5
Total Committed Traffic	7	104	0	0	164	0	0	0	0	0	0	8
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	28	827	0	0	1260	22	0	0	0	10	0	29
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	5%
Inbound Project Traffic	0	0	0	0	51	0	0	0	0	0	0	9
Percent Assignment Outbound	5%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	8	48	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	8	48	0	0	51	0	0	0	0	0	0	9
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	8	48	0	0	51	0	0	0	0	0	0	9
2034 Buildout Total	36	875	0	0	1311	22	0	0	0	10	0	38
Percent Impact (Approach)		6.1%			3.8%			-			18.8%	
Overall Percent Impact (2034)												

PM PEAK HOUR
PM PHF = 0.93

Description	Morganton Road Eastbound			Morganton Road Westbound			Henley Street Northbound			Henley Street Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	49	1128	0	0	936	41				17	0	27
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	49	1128	0	0	936	41	0	0	0	17	0	27
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	7	157	0	0	130	6	0	0	0	2	0	4
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	136	0	0	58	0	0	0	0	0	0	0
Pine Ridge Apartments	1	4	0	0	7	0	0	0	0	0	0	1
BJ's & Starbucks	5	23	0	0	22	0	0	0	0	0	0	4
Pod 2 Apartments	0	7	0	0	13	0	0	0	0	0	0	0
Pod 3	4	35	0	0	11	0	0	0	0	0	0	2
Total Committed Traffic	10	251	0	0	146	0	0	0	0	0	0	7
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	66	1536	0	0	1212	47	0	0	0	19	0	38
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	5%
Inbound Project Traffic	0	0	0	0	35	0	0	0	0	0	0	6
Percent Assignment Outbound	5%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	6	36	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	6	36	0	0	35	0	0	0	0	0	0	6
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	6	36	0	0	35	0	0	0	0	0	0	6
2034 Buildout Total	72	1572	0	0	1247	47	0	0	0	19	0	44
Percent Impact (Approach)		2.6%			2.7%			-			9.5%	
Overall Percent Impact (2034)												

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Fire Lane**
E/W Street:	**Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips	90	89	108	108

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.97

Description	Morganton Road Eastbound			Morganton Road Westbound			Fire Lane Northbound			Fire Lane Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	634	12	16	965	3	20	1	14	3	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	634	12	16	965	3	20	1	14	3	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	88	2	2	134	0	3	0	2	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	6	0	0	22	0	0	0	0	0	0	0
MPN Apartments	0	21	0	0	11	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	23	0	0	87	0	0	0	0	0	0	0
Pine Ridge Apartments	0	13	0	0	5	0	0	0	0	0	0	0
BJ's & Starbucks	0	8	0	0	11	0	0	0	0	0	0	0
Pod 2 Apartments	0	13	0	0	3	0	0	0	0	0	0	0
Pod 3	0	20	0	0	25	0	0	0	0	0	0	0
Total Committed Traffic	0	104	0	0	164	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	826	14	18	1263	3	23	1	16	3	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	51	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	48	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	48	0	0	51	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	48	0	0	51	0	0	0	0	0	0	0
2034 Buildout Total	0	874	14	18	1314	3	23	1	16	3	0	0
Percent Impact (Approach)		5.4%			3.8%			0.0%			0.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.93

Description	Morganton Road Eastbound			Morganton Road Westbound			Fire Lane Northbound			Fire Lane Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count	0	1125	20	27	954	2	24	1	21	3	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	1125	20	27	954	2	24	1	21	3	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	156	3	4	133	0	3	0	3	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	30	0	0	12	0	0	0	0	0	0	0
MPN Apartments	0	16	0	0	23	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	136	0	0	58	0	0	0	0	0	0	0
Pine Ridge Apartments	0	4	0	0	7	0	0	0	0	0	0	0
BJ's & Starbucks	0	23	0	0	22	0	0	0	0	0	0	0
Pod 2 Apartments	0	7	0	0	13	0	0	0	0	0	0	0
Pod 3	0	35	0	0	11	0	0	0	0	0	0	0
Total Committed Traffic	0	251	0	0	146	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	0	0	0	0	0	0	0	0	0	0	0
2034 Background Traffic	0	1532	23	31	1233	2	27	1	24	3	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	30%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	35	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	36	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	0	36	0	0	35	0	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	36	0	0	35	0	0	0	0	0	0	0
2034 Buildout Total	0	1568	23	31	1268	2	27	1	24	3	0	0
Percent Impact (Approach)		2.3%			2.7%			0.0%			0.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Pod 2 Apartments / Pine Ridge Apartments**

	AM In		AM Out	PM In	PM Out
Net New Trips:	212		201	168	171
Pass-by Trips:	113		111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Pod 2 Apartments **Eastbound** Left	Through	Right	Pine Ridge Apartments **Westbound** Left	Through	Right	Carolina Green Parkway **Northbound** Left	Through	Right	Carolina Green Parkway **Southbound** U-Turn	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	40	0	0	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	40	0	0	0	103	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	31	0	25	0	0	12	0	9	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	47	0	0	0	55	0
Pod 2 Apartments	22	0	27	0	0	0	8	4	0	0	0	12	6
Pod 3	0	0	0	0	0	0	0	91	0	0	0	30	0
Total Committed Traffic	22	0	27	31	0	25	8	142	12	0	9	97	6
Old Morganton Road Diversion	0	0	0	0	0	0	0	20	0	0	0	20	0
2034 Background Traffic	22	0	27	31	0	25	8	202	12	0	9	220	6
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	42	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	20%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	80	0	40	0
Total External Site Traffic	0	0	0	0	0	0	0	42	0	80	0	41	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	56	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	56	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	42	0	136	0	41	0
2034 Buildout Total	22	0	27	31	0	25	8	244	12	136	9	261	6
Percent Impact (Approach)		0.0%			0.0%			15.9%				43.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Pod 2 Apartments **Eastbound** Left	Through	Right	Pine Ridge Apartments **Westbound** Left	Through	Right	Carolina Green Parkway **Northbound** Left	Through	Right	Carolina Green Parkway **Southbound** U-Turn	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	295	0	0	0	236	0
2024 Existing Traffic	0	0	0	0	0	0	0	295	0	0	0	236	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	12	0	9	0	0	19	0	15	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	76	0	0	0	78	0
Pod 2 Apartments	13	0	17	0	0	0	28	13	0	0	0	8	19
Pod 3	0	0	0	0	0	0	0	51	0	0	0	42	0
Total Committed Traffic	13	0	17	12	0	9	28	140	19	0	15	128	19
Old Morganton Road Diversion	0	0	0	0	0	0	0	50	0	0	0	50	0
2034 Background Traffic	13	0	17	12	0	9	28	485	19	0	15	414	19
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	34	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	20%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	68	0	34	0
Total External Site Traffic	0	0	0	0	0	0	0	34	0	68	0	35	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	77	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	77	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	34	0	145	0	35	0
2034 Buildout Total	13	0	17	12	0	9	28	519	19	145	15	449	19
Percent Impact (Approach)		0.0%			0.0%			6.0%				28.7%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Carolina Green Parkway**
E/W Street:	**Old Morganton Road/Pod 3 Driveway**

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Pod 3 Driveway Westbound			Carolina Green Parkway Northbound				Carolina Green Parkway Southbound		
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	0	40	0	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	40	0	0	103	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	25	0	0	9	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	47	0	0	55	0
Pod 2 Apartments	0	0	12	0	0	0	0	4	22	0	0	6	2
Pod 3	0	0	0	0	0	46	30	3	10	47	67	0	0
Total Committed Traffic	0	0	12	0	0	46	30	7	104	47	67	70	2
Old Morganton Road Diversion	0	0	20	0	0	0	0	20	0	0	0	0	0
2034 Background Traffic	0	0	32	0	0	46	30	27	144	47	67	173	2
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	55%
Inbound Project Traffic	0	0	0	0	0	0	0	42	0	0	0	0	117
Percent Assignment Outbound	0%	0%	60%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	120	0	0	0	0	0	80	0	0	0	0
Total External Site Traffic	0	0	121	0	0	0	0	42	80	0	0	0	117
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-11	0	0	-11	0
Pass-By Capture Assignment	0	0	67	0	0	0	0	11	56	0	0	0	102
Total Pass-By Traffic	0	0	67	0	0	0	0	11	45	0	0	-11	102
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	188	0	0	0	0	53	125	0	0	-11	219
2034 Buildout Total	0	0	220	0	0	46	30	80	269	47	67	162	221
Percent Impact (Approach)		85.5%			0.0%				41.8%			46.2%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Pod 3 Driveway Westbound			Carolina Green Parkway Northbound				Carolina Green Parkway Southbound		
	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	Left	Through	Right
2024 Traffic Count													
Count Balancing	0	0	0	0	0	0	0	0	295	0	0	236	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	295	0	0	236	0
Growth Factor 2.0% per year to Build-out	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects													
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	9	0	0	15	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	76	0	0	78	0
Pod 2 Apartments	0	0	8	0	0	0	0	13	13	0	0	19	7
Pod 3	0	0	0	0	0	70	42	6	15	26	42	0	0
Total Committed Traffic	0	0	8	0	0	70	42	19	113	26	42	112	7
Old Morganton Road Diversion	0	0	50	0	0	0	0	50	0	0	0	0	0
2034 Background Traffic	0	0	58	0	0	70	42	69	408	26	42	348	7
Project Traffic													
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	55%
Inbound Project Traffic	0	0	0	0	0	0	0	34	0	0	0	0	92
Percent Assignment Outbound	0%	0%	60%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	103	0	0	0	0	0	68	0	0	0	0
Total External Site Traffic	0	0	103	0	0	0	0	34	68	0	0	0	92
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	-15	0	0	-15	0
Pass-By Capture Assignment	0	0	93	0	0	0	0	15	77	0	0	0	139
Total Pass-By Traffic	0	0	93	0	0	0	0	15	62	0	0	-15	139
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	196	0	0	0	0	49	130	0	0	-15	231
2034 Buildout Total	0	0	254	0	0	70	42	118	538	26	42	333	238
Percent Impact (Approach)		77.2%			0.0%				24.7%			35.2%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Lot 1 Driveway**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Lot 1 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	12	0	0	5	0	0	0	0	0	0	0
Pod 3	0	0	0	0	3	0	0	0	0	0	0	0
Total Committed Traffic	0	12	0	0	8	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	20	0	0	20	0	0	0	0	0	0	0
2034 Background Traffic	0	32	0	0	28	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	17%	0%	0%	0%	24%	51%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	36	0	0	0	51	108	0	0	0	0	0	0
Percent Assignment Outbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	45%	0%	23%
Outbound Project Traffic	0	30	0	0	0	0	0	0	0	90	0	46
Total External Site Traffic	36	30	0	0	51	108	0	0	0	91	0	46
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	6	0	0	6	107	0	0	0	61	0	45
Total Pass-By Traffic	0	6	0	0	6	107	0	0	0	61	0	45
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	36	36	0	0	57	215	0	0	0	152	0	91
2034 Buildout Total	36	68	0	0	85	215	0	0	0	152	0	91
Percent Impact (Approach)		69.2%			90.7%			-			100.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			- Northbound			Lot 1 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	8	0	0	20	0	0	0	0	0	0	0
Pod 3	0	0	0	0	6	0	0	0	0	0	0	0
Total Committed Traffic	0	8	0	0	26	0	0	0	0	0	0	0
Old Morganton Road Diversion	0	50	0	0	50	0	0	0	0	0	0	0
2034 Background Traffic	0	58	0	0	76	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	17%	0%	0%	0%	24%	51%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	29	0	0	0	40	86	0	0	0	0	0	0
Percent Assignment Outbound	0%	15%	0%	0%	0%	0%	0%	0%	0%	45%	0%	23%
Outbound Project Traffic	0	26	0	0	0	0	0	0	0	77	0	39
Total External Site Traffic	29	26	0	0	40	86	0	0	0	77	0	39
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	8	0	0	8	146	0	0	0	85	0	62
Total Pass-By Traffic	0	8	0	0	8	146	0	0	0	85	0	62
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	29	34	0	0	48	232	0	0	0	162	0	101
2034 Buildout Total	29	92	0	0	124	232	0	0	0	162	0	101
Percent Impact (Approach)		52.1%			78.7%			-			100.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Lot 2 Driveway / Pod 2 Driveway**
E/W Street:	**Old Morganton Road**

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Pod 2 Driveway Northbound			Lot 2 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	2	5	0	0	7	0	12	0	0	0
Pod 3	0	0	0	0	3	0	0	0	0	0	0	0
Total Committed Traffic	0	0	2	5	3	0	7	0	12	0	0	0
Old Morganton Road Diversion	0	20	0	0	20	0	0	0	0	0	0	0
2034 Background Traffic	0	20	2	5	23	0	7	0	12	0	0	0
Project Traffic												
Percent Assignment Inbound	3%	17%	0%	0%	16%	8%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	6	36	0	0	34	17	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	23%	0%	0%	0%	0%	5%	0%	6%
Outbound Project Traffic	0	20	0	0	46	0	0	0	0	10	0	12
Total External Site Traffic	6	56	0	0	80	17	0	0	0	10	0	12
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	45	6	0	0	0	6	0	0
Total Pass-By Traffic	0	0	0	0	45	6	0	0	0	6	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	6	56	0	0	125	23	0	0	0	16	0	12
2034 Buildout Total	6	76	2	5	148	23	7	0	12	16	0	12
Percent Impact (Approach)		73.8%			84.1%			0.0%			100.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Old Morganton Road Eastbound			Old Morganton Road Westbound			Pod 2 Driveway Northbound			Lot 2 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	7	20	0	0	4	0	8	0	0	0
Pod 3	0	0	0	0	6	0	0	0	0	0	0	0
Total Committed Traffic	0	0	7	20	6	0	4	0	8	0	0	0
Old Morganton Road Diversion	0	50	0	0	50	0	0	0	0	0	0	0
2034 Background Traffic	0	50	7	20	56	0	4	0	8	0	0	0
Project Traffic												
Percent Assignment Inbound	3%	17%	0%	0%	16%	8%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	5	29	0	0	27	13	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	23%	0%	0%	0%	0%	5%	0%	6%
Outbound Project Traffic	0	17	0	0	39	0	0	0	0	9	0	10
Total External Site Traffic	5	46	0	0	66	13	0	0	0	9	0	10
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	62	8	0	0	0	8	0	0
Total Pass-By Traffic	0	0	0	0	62	8	0	0	0	8	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	5	46	0	0	128	21	0	0	0	17	0	10
2034 Buildout Total	5	96	7	20	184	21	4	0	8	17	0	10
Percent Impact (Approach)		47.2%			66.2%			0.0%			100.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Intersection Analysis Sheet

Project:	**Morganton Park South Phase 4**
Location:	**Southern Pines, NC**
Ct. Date	
N/S Street:	**Old Morganton Road / Lot 3 Driveway**
E/W Street:	**Old Morganton Road / Lot 4 Driveway**

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Annual Growth Rate (Buildout):	2.0%	**Existing Year:**	2024
Growth Factor (Buildout):	0.138934	**Buildout Year:**	2034

AM PEAK HOUR
AM PHF = 0.9

Description	Lot 4 Driveway Eastbound			Old Morganton Road Westbound			Old Morganton Road Northbound			Lot 3 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	7	0	0	0	0	2	0	0	0
Pod 3	0	0	0	3	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	10	0	0	0	0	2	0	0	0
Old Morganton Road Diversion	0	0	0	20	0	0	0	0	20	0	0	0
2034 Background Traffic	0	0	0	30	0	0	0	0	22	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	4%	12%	1%	4%	20%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	8	25	2	8	42	0	0	0
Percent Assignment Outbound	0%	2%	3%	29%	0%	0%	0%	0%	0%	8%	8%	0%
Outbound Project Traffic	0	4	6	58	0	0	0	0	0	16	16	0
Total External Site Traffic	0	4	6	58	8	26	2	9	42	16	16	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	45	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	45	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	4	6	103	8	26	2	9	42	16	16	0
2034 Buildout Total	0	4	6	133	8	26	2	9	64	16	16	0
Percent Impact (Approach)		100.0%			82.0%			70.7%			100.0%	

Overall Percent Impact (2034)

PM PEAK HOUR
PM PHF = 0.9

Description	Lot 4 Driveway Eastbound			Old Morganton Road Westbound			Old Morganton Road Northbound			Lot 3 Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2024 Traffic Count												
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor 2.0% per year to Build-out	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139	0.139
2034 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
MPN Site 3 Medical Office Building (1/2 Occupied)	0	0	0	0	0	0	0	0	0	0	0	0
MPN Apartments	0	0	0	0	0	0	0	0	0	0	0	0
MPN Site 4N (Full Build)	0	0	0	0	0	0	0	0	0	0	0	0
Pine Ridge Apartments	0	0	0	0	0	0	0	0	0	0	0	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	0	0	0
Pod 2 Apartments	0	0	0	4	0	0	0	0	7	0	0	0
Pod 3	0	0	0	6	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	10	0	0	0	0	7	0	0	0
Old Morganton Road Diversion	0	0	0	50	0	0	0	0	50	0	0	0
2034 Background Traffic	0	0	0	60	0	0	0	0	57	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	4%	12%	1%	4%	20%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	7	20	2	7	34	0	0	0
Percent Assignment Outbound	0%	2%	3%	29%	0%	0%	0%	0%	0%	8%	8%	0%
Outbound Project Traffic	0	3	5	50	0	0	0	0	0	14	14	0
Total External Site Traffic	0	3	5	49	7	20	2	6	34	14	14	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	62	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	62	0	0	0	0	0	0	0	0
Internal Capture Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	3	5	111	7	20	2	6	34	14	14	0
2034 Buildout Total	0	3	5	171	7	20	2	6	91	14	14	0
Percent Impact (Approach)		100.0%			69.7%			42.4%			100.0%	

Overall Percent Impact (2034)

Overall Percent Impact ()

Appendix G:
Synchro Output:
Existing (2024)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	13	4	28	4	77	19	40	153	4
Future Volume (vph)	4	5	5	13	4	28	4	77	19	40	153	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1749	0	1770	1617	0	0	3349	0	1770	3525	0
Flt Permitted		0.986		0.950				0.998		0.950		
Satd. Flow (perm)	0	1749	0	1770	1617	0	0	3349	0	1770	3525	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	14	34	0	0	107	0	43	169	0
Sign Control		Stop			Stop			Free			Free	

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

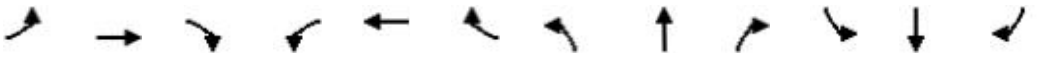
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	5	13	4	28	4	77	19	40	153	4
Future Vol, veh/h	4	5	5	13	4	28	4	77	19	40	153	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	2	2	2
Mvmt Flow	4	5	5	14	4	30	4	83	20	43	165	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	305	364	85	272	356	52	169	0	0	103	0	0
Stage 1	253	253	-	101	101	-	-	-	-	-	-	-
Stage 2	52	111	-	171	255	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	624	563	957	659	568	1005	1399	-	-	1487	-	-
Stage 1	729	696	-	894	811	-	-	-	-	-	-	-
Stage 2	954	803	-	814	695	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	587	545	957	635	550	1005	1399	-	-	1487	-	-
Mov Cap-2 Maneuver	587	545	-	635	550	-	-	-	-	-	-	-
Stage 1	727	676	-	891	809	-	-	-	-	-	-	-
Stage 2	918	801	-	780	675	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.6	9.6	0.3	1.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1399	-	-	660	635	911	1487	-	-
HCM Lane V/C Ratio	0.003	-	-	0.023	0.022	0.038	0.029	-	-
HCM Control Delay (s/veh)	7.6	0	-	10.6	10.8	9.1	7.5	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.1	0.1	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	628	4	47	762	118	0	0	24	0	0	12
Future Volume (vph)	0	628	4	47	762	118	0	0	24	0	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1454
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1454
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	661	4	49	802	124	0	0	25	0	0	13
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	628	4	47	762	118	0	0	24	0	0	12
Future Vol, veh/h	0	628	4	47	762	118	0	0	24	0	0	12
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	4	2	2	13
Mvmt Flow	0	661	4	49	802	124	0	0	25	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	665	0	0	-	-	331	-	-	401
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.98	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.34	-	-	3.43
Pot Cap-1 Maneuver	0	-	-	920	-	-	0	0	659	0	0	569
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	920	-	-	-	-	659	-	-	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.5	10.7	11.5
HCM LOS			B	B

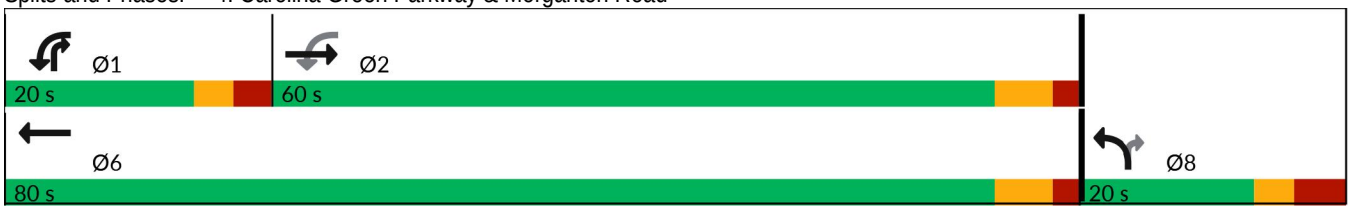
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	659	-	-	920	-	-	569
HCM Lane V/C Ratio	0.038	-	-	0.054	-	-	0.022
HCM Control Delay (s/veh)	10.7	-	-	9.1	-	-	11.5
HCM Lane LOS	B	-	-	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	0.2	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	623	30	73	911	15	25
Future Volume (vph)	623	30	73	911	15	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3462	0	1734	3468	1717	1537
Flt Permitted			0.378		0.950	
Satd. Flow (perm)	3462	0	690	3468	1717	1537
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	8					26
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	594	
Travel Time (s)	20.2			6.0	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	673	0	75	939	15	26
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	23.1		28.3	36.8	9.3	10.3
Actuated g/C Ratio	0.58		0.71	0.93	0.23	0.26
v/c Ratio	0.33		0.11	0.29	0.04	0.06
Control Delay (s/veh)	7.5		2.4	1.6	14.5	5.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5		2.4	1.6	14.5	5.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	A		A	A	B	A
Approach Delay (s/veh)	7.5			1.7	8.5	
Approach LOS	A			A	A	
Queue Length 50th (ft)	35		0	0	2	0
Queue Length 95th (ft)	116		17	88	17	11
Internal Link Dist (ft)	1255			319	514	
Turn Bay Length (ft)			150			
Base Capacity (vph)	3462		976	3468	679	701
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.19		0.08	0.27	0.02	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 39.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.33			
Intersection Signal Delay (s/veh): 4.1		Intersection LOS: A	
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	635	962	19	9	18
Future Volume (vph)	18	635	962	19	9	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3617	0	1636	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1734	3468	3617	0	1636	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	648	1001	0	27	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.2%		ICU Level of Service A	
Analysis Period (min) 15			

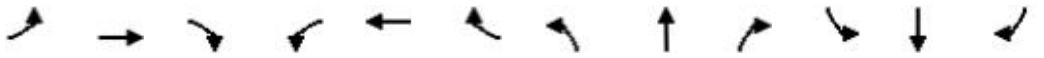
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	635	962	19	9	18
Future Vol, veh/h	18	635	962	19	9	18
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, %	-	4	-5	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	4	4
Mvmt Flow	18	648	982	19	9	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1001	0	-	0	1352	501
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	360	-
Critical Hdwy	4.14	-	-	-	6.88	6.98
Critical Hdwy Stg 1	-	-	-	-	5.88	-
Critical Hdwy Stg 2	-	-	-	-	5.88	-
Follow-up Hdwy	2.22	-	-	-	3.54	3.34
Pot Cap-1 Maneuver	687	-	-	-	139	510
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	687	-	-	-	135	510
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	671	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.3	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	687	-	-	-	372
HCM Lane V/C Ratio	0.027	-	-	-	0.074
HCM Control Delay (s/veh)	10.4	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2

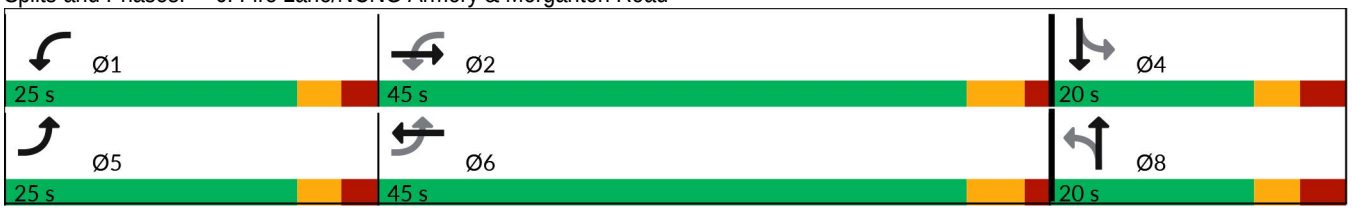


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	634	12	16	965	4	20	4	14	4	4	4
Future Volume (vph)	4	634	12	16	965	4	20	4	14	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3476	0	1761	3518	0	0	1608	0	0	1750	0
Flt Permitted	0.253			0.399				0.855			0.874	
Satd. Flow (perm)	464	3476	0	740	3518	0	0	1412	0	0	1555	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1			14			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	9%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	666	0	16	999	0	0	39	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	27.8	30.4		27.8	30.4			8.7			8.7	
Actuated g/C Ratio	0.73	0.80		0.73	0.80			0.23			0.23	
v/c Ratio	0.01	0.24		0.02	0.36			0.12			0.03	
Control Delay (s/veh)	3.5	4.8		3.4	5.5			13.8			14.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.5	4.8		3.4	5.5			13.8			14.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		4.8			5.5			13.8			14.8	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	0		1	0			4			1	
Queue Length 95th (ft)	3	112		6	184			30			14	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	1054	3263		1116	3302			594			648	
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	0.00	0.20		0.01	0.30			0.07			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 38.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.36			
Intersection Signal Delay (s/veh): 5.5		Intersection LOS: A	
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	9	22	42	5	112	4	254	49	110	310	4
Future Volume (vph)	18	9	22	42	5	112	4	254	49	110	310	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1719	0	1770	1596	0	0	3399	0	1770	3532	0
Flt Permitted		0.982		0.950				0.999		0.950		
Satd. Flow (perm)	0	1719	0	1770	1596	0	0	3399	0	1770	3532	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	47	130	0	0	340	0	122	348	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	9	22	42	5	112	4	254	49	110	310	4
Future Vol, veh/h	18	9	22	42	5	112	4	254	49	110	310	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	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	20	10	24	47	6	124	4	282	54	122	344	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	742	934	174	738	909	168	348	0	0	336	0	0
Stage 1	590	590	-	317	317	-	-	-	-	-	-	-
Stage 2	152	344	-	421	592	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	304	264	839	306	273	847	1208	-	-	1220	-	-
Stage 1	461	493	-	669	653	-	-	-	-	-	-	-
Stage 2	835	635	-	581	492	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	235	237	839	265	245	847	1208	-	-	1220	-	-
Mov Cap-2 Maneuver	235	237	-	265	245	-	-	-	-	-	-	-
Stage 1	459	444	-	666	650	-	-	-	-	-	-	-
Stage 2	703	632	-	496	443	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.3	13.5	0.1	2.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1208	-	-	348	265	767	1220	-	-
HCM Lane V/C Ratio	0.004	-	-	0.156	0.176	0.169	0.1	-	-
HCM Control Delay (s/veh)	8	0	-	17.3	21.5	10.6	8.3	-	-
HCM Lane LOS	A	A	-	C	C	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.5	0.6	0.6	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	963	21	101	812	33	0	0	130	0	0	36
Future Volume (vph)	0	963	21	101	812	33	0	0	130	0	0	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1024	22	107	864	35	0	0	138	0	0	38
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	963	21	101	812	33	0	0	130	0	0	36
Future Vol, veh/h	0	963	21	101	812	33	0	0	130	0	0	36
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1024	22	107	864	35	0	0	138	0	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1046	0	0	-	-	512	-	-	432
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	661	-	-	0	0	507	0	0	572
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	661	-	-	-	-	507	-	-	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.2	14.7	11.7
HCM LOS			B	B

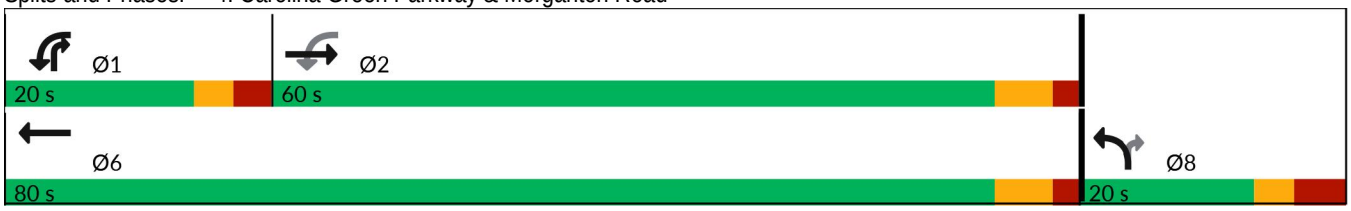
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	507	-	-	661	-	-	572
HCM Lane V/C Ratio	0.273	-	-	0.163	-	-	0.067
HCM Control Delay (s/veh)	14.7	-	-	11.5	-	-	11.7
HCM Lane LOS	B	-	-	B	-	-	B
HCM 95th %tile Q (veh)	1.1	-	-	0.6	-	-	0.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	982	113	123	847	112	183
Future Volume (vph)	982	113	123	847	112	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3434	0	1734	3468	1734	1552
Flt Permitted			0.150		0.950	
Satd. Flow (perm)	3434	0	274	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	19					87
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	594	
Travel Time (s)	20.2			6.0	11.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1165	0	131	901	119	195
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	30.8		39.3	46.1	11.4	20.9
Actuated g/C Ratio	0.50		0.63	0.74	0.18	0.34
v/c Ratio	0.68		0.35	0.35	0.37	0.34
Control Delay (s/veh)	15.3		7.3	4.8	29.3	11.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.3		7.3	4.8	29.3	11.0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	B		A	A	C	B
Approach Delay (s/veh)	15.3			5.1	17.9	
Approach LOS	B			A	B	
Queue Length 50th (ft)	175		15	65	43	28
Queue Length 95th (ft)	278		36	114	97	80
Internal Link Dist (ft)	1255			319	514	
Turn Bay Length (ft)			150			
Base Capacity (vph)	2943		566	3449	439	749
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.40		0.23	0.26	0.27	0.26

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 62.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay (s/veh): 11.4		Intersection LOS: B	
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	49	1128	936	41	17	27
Future Volume (vph)	49	1128	936	41	17	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3606	0	1676	0
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	1734	3468	3606	0	1676	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	1213	1050	0	47	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

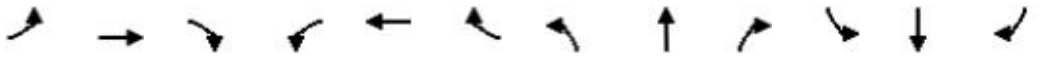
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	1128	936	41	17	27
Future Vol, veh/h	49	1128	936	41	17	27
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, %	-	4	-5	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	1213	1006	44	18	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1050	0	-	0	1741	525
Stage 1	-	-	-	-	1028	-
Stage 2	-	-	-	-	713	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	659	-	-	-	78	497
Stage 1	-	-	-	-	306	-
Stage 2	-	-	-	-	447	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	659	-	-	-	72	497
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	659	-	-	-	305
HCM Lane V/C Ratio	0.08	-	-	-	0.155
HCM Control Delay (s/veh)	10.9	-	-	-	19
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.3	-	-	-	0.5

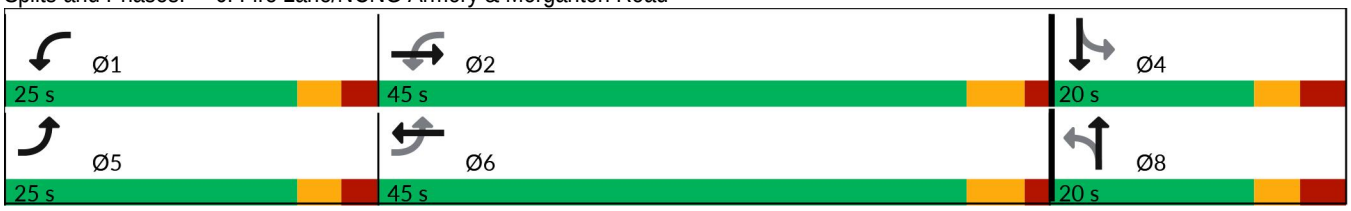


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1125	20	27	954	4	24	4	21	4	4	4
Future Volume (vph)	4	1125	20	27	954	4	24	4	21	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3476	0	1761	3518	0	0	1702	0	0	1750	0
Flt Permitted	0.243			0.173				0.838			0.868	
Satd. Flow (perm)	446	3476	0	321	3518	0	0	1462	0	0	1544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1			23			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1232	0	29	1030	0	0	53	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	33.7	33.8		32.9	35.7			9.2			9.2	
Actuated g/C Ratio	0.72	0.72		0.70	0.76			0.20			0.20	
v/c Ratio	0.01	0.49		0.06	0.38			0.17			0.04	
Control Delay (s/veh)	3.0	8.3		3.5	5.6			17.4			20.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.0	8.3		3.5	5.6			17.4			20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		8.3			5.6			17.4			20.0	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	84		3	64			7			2	
Queue Length 95th (ft)	2	248		9	190			40			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	946	2875		922	2914			537			554	
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	0.00	0.43		0.03	0.35			0.10			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 46.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 7.3		Intersection LOS: A	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Appendix H:
Synchro Output:
Background (2027)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	13	4	35	4	106	19	51	182	4
Future Volume (vph)	4	5	5	13	4	35	4	106	19	51	182	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1749	0	1770	1609	0	0	3373	0	1770	3529	0
Flt Permitted		0.986		0.950				0.999		0.950		
Satd. Flow (perm)	0	1749	0	1770	1609	0	0	3373	0	1770	3529	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	14	42	0	0	138	0	55	200	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	5	13	4	35	4	106	19	51	182	4
Future Vol, veh/h	4	5	5	13	4	35	4	106	19	51	182	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	2	2	2
Mvmt Flow	4	5	5	14	4	38	4	114	20	55	196	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	375	450	100	343	442	67	200	0	0	134	0	0
Stage 1	308	308	-	132	132	-	-	-	-	-	-	-
Stage 2	67	142	-	211	310	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	557	503	936	587	508	983	1362	-	-	1448	-	-
Stage 1	677	659	-	858	786	-	-	-	-	-	-	-
Stage 2	936	778	-	771	658	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	515	482	936	561	487	983	1362	-	-	1448	-	-
Mov Cap-2 Maneuver	515	482	-	561	487	-	-	-	-	-	-	-
Stage 1	675	634	-	855	784	-	-	-	-	-	-	-
Stage 2	893	776	-	731	633	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.2	9.8	0.2	1.6
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1362	-	-	596	561	890	1448	-	-
HCM Lane V/C Ratio	0.003	-	-	0.025	0.025	0.047	0.038	-	-
HCM Control Delay (s/veh)	7.7	0	-	11.2	11.6	9.2	7.6	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.1	0.1	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	699	8	47	825	154	0	0	24	0	0	19
Future Volume (vph)	0	699	8	47	825	154	0	0	24	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	736	8	49	868	162	0	0	25	0	0	20
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	699	8	47	825	154	0	0	24	0	0	19
Future Vol, veh/h	0	699	8	47	825	154	0	0	24	0	0	19
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	4	2	2	2
Mvmt Flow	0	736	8	49	868	162	0	0	25	0	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	744	0	0	-	-	368	-	-	434
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.98	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.34	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	859	-	-	0	0	623	0	0	570
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	859	-	-	-	-	623	-	-	570
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.4	11	11.5
HCM LOS			B	B

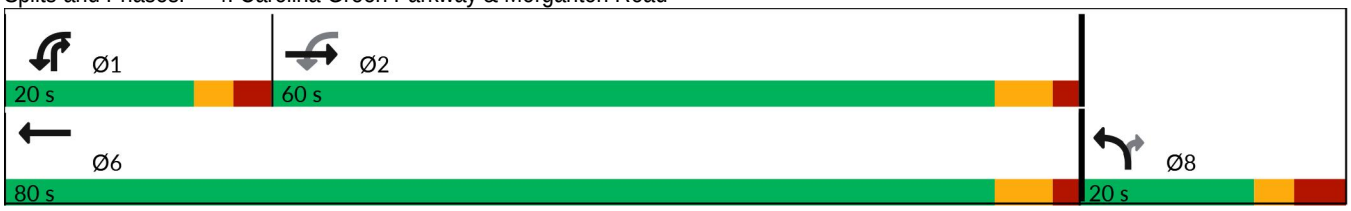
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	623	-	-	859	-	-	570
HCM Lane V/C Ratio	0.041	-	-	0.058	-	-	0.035
HCM Control Delay (s/veh)	11	-	-	9.4	-	-	11.5
HCM Lane LOS	B	-	-	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	0.2	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	677	47	107	999	35	64
Future Volume (vph)	677	47	107	999	35	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3451	0	1734	3468	1717	1537
Flt Permitted			0.331		0.950	
Satd. Flow (perm)	3451	0	604	3468	1717	1537
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11					66
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	1350	
Travel Time (s)	20.2			6.0	26.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	746	0	110	1030	36	66
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	22.9		28.1	35.9	9.5	12.7
Actuated g/C Ratio	0.55		0.67	0.86	0.23	0.30
v/c Ratio	0.39		0.17	0.35	0.09	0.13
Control Delay (s/veh)	9.3		3.6	2.9	18.5	4.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.3		3.6	2.9	18.5	4.2

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	A		A	A	B	A
Approach Delay (s/veh)	9.3			3.0	9.2	
Approach LOS	A			A	A	
Queue Length 50th (ft)	40		0	0	5	0
Queue Length 95th (ft)	131		23	100	32	19
Internal Link Dist (ft)	1255			319	1270	
Turn Bay Length (ft)			150			
Base Capacity (vph)	3433		895	3468	654	778
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.22		0.12	0.30	0.06	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 41.7			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay (s/veh): 5.7		Intersection LOS: A	
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	24	726	1084	20	10	22
Future Volume (vph)	24	726	1084	20	10	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3617	0	1664	0
Flt Permitted	0.950				0.985	
Satd. Flow (perm)	1734	3468	3617	0	1664	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	741	1126	0	32	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	726	1084	20	10	22
Future Vol, veh/h	24	726	1084	20	10	22
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, %	-	4	-5	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	741	1106	20	10	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1126	0	-	0	1535	563
Stage 1	-	-	-	-	1116	-
Stage 2	-	-	-	-	419	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	616	-	-	-	107	470
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	616	-	-	-	103	470
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	264	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.4	0	16.9
HCM LOS			C

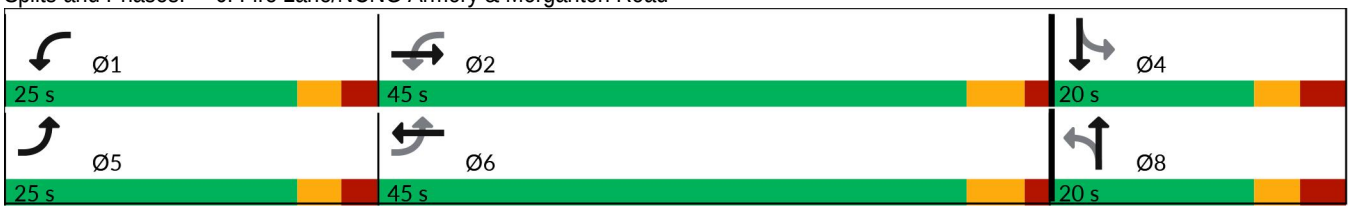
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	616	-	-	-	336
HCM Lane V/C Ratio	0.04	-	-	-	0.097
HCM Control Delay (s/veh)	11.1	-	-	-	16.9
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.1	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	725	13	17	1087	4	21	4	15	4	4	4
Future Volume (vph)	4	725	13	17	1087	4	21	4	15	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3476	0	1761	3518	0	0	1607	0	0	1750	0
Flt Permitted	0.211			0.355				0.854			0.873	
Satd. Flow (perm)	387	3476	0	658	3518	0	0	1409	0	0	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						15			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	9%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	760	0	18	1125	0	0	41	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	29.7	32.5		29.7	32.5			8.9			8.9	
Actuated g/C Ratio	0.74	0.81		0.74	0.81			0.22			0.22	
v/c Ratio	0.01	0.27		0.03	0.40			0.13			0.03	
Control Delay (s/veh)	3.3	4.7		3.2	5.5			15.0			16.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.3	4.7		3.2	5.5			15.0			16.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		4.6			5.4			15.0			16.3	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	0		1	0			4			1	
Queue Length 95th (ft)	2	130		6	215			33			16	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	1018	3217		1087	3255			574			625	
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	0.00	0.24		0.02	0.35			0.07			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 40.1			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay (s/veh): 5.4		Intersection LOS: A	
Intersection Capacity Utilization 44.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	25	87	12	9	158
Future Volume (vph)	31	25	87	12	9	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		4%			4%
Storage Length (ft)	0	0		0	125	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Satd. Flow (prot)	1702	0	3406	0	1734	3468
Flt Permitted	0.973				0.950	
Satd. Flow (perm)	1702	0	3406	0	1734	3468
Link Speed (mph)	25		35			35
Link Distance (ft)	329		680			1350
Travel Time (s)	9.0		13.2			26.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	110	0	10	176
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	25	87	12	9	158
Future Vol, veh/h	31	25	87	12	9	158
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	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	28	97	13	10	176

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	212	55	0	0	110	0
Stage 1	104	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	757	1000	-	-	1478	-
Stage 1	909	-	-	-	-	-
Stage 2	904	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	752	1000	-	-	1478	-
Mov Cap-2 Maneuver	752	-	-	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.6	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	846	1478	-
HCM Lane V/C Ratio	-	-	0.074	0.007	-
HCM Control Delay (s/veh)	-	-	9.6	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q (veh)	-	-	0.2	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	9	22	42	5	125	4	298	49	121	364	4
Future Volume (vph)	18	9	22	42	5	125	4	298	49	121	364	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1719	0	1770	1595	0	0	3410	0	1770	3536	0
Flt Permitted		0.982		0.950				0.999		0.950		
Satd. Flow (perm)	0	1719	0	1770	1595	0	0	3410	0	1770	3536	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	47	145	0	0	389	0	134	408	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	9	22	42	5	125	4	298	49	121	364	4
Future Vol, veh/h	18	9	22	42	5	125	4	298	49	121	364	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	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	20	10	24	47	6	139	4	331	54	134	404	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	851	1067	204	841	1042	193	408	0	0	385	0	0
Stage 1	674	674	-	366	366	-	-	-	-	-	-	-
Stage 2	177	393	-	475	676	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	253	221	803	258	228	816	1147	-	-	1170	-	-
Stage 1	410	452	-	626	621	-	-	-	-	-	-	-
Stage 2	808	604	-	539	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	187	195	803	219	201	816	1147	-	-	1170	-	-
Mov Cap-2 Maneuver	187	195	-	219	201	-	-	-	-	-	-	-
Stage 1	408	400	-	623	619	-	-	-	-	-	-	-
Stage 2	662	602	-	451	399	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	20.3	14.7	0.1	2.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1147	-	-	289	219	730	1170	-	-
HCM Lane V/C Ratio	0.004	-	-	0.188	0.213	0.198	0.115	-	-
HCM Control Delay (s/veh)	8.2	0	-	20.3	25.8	11.1	8.5	-	-
HCM Lane LOS	A	A	-	C	D	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.7	0.8	0.7	0.4	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1087	21	101	887	52	0	0	130	0	0	85
Future Volume (vph)	0	1087	21	101	887	52	0	0	130	0	0	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1156	22	107	944	55	0	0	138	0	0	90
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1087	21	101	887	52	0	0	130	0	0	85
Future Vol, veh/h	0	1087	21	101	887	52	0	0	130	0	0	85
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1156	22	107	944	55	0	0	138	0	0	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1178	0	0	-	-	578	-	-	472
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	589	-	-	0	0	459	0	0	538
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	589	-	-	-	-	459	-	-	538
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.2	16.2	13
HCM LOS			C	B

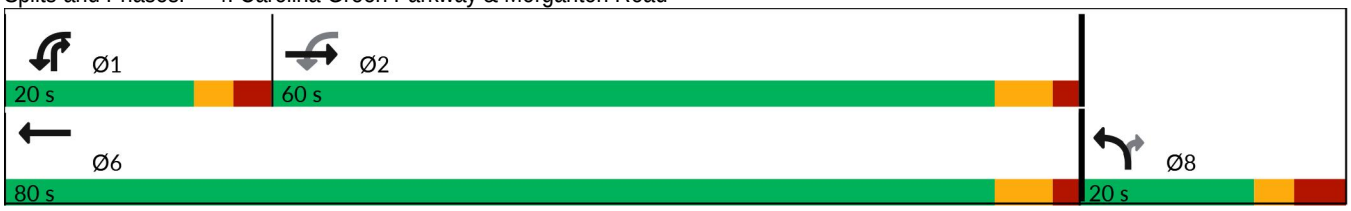
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	459	-	-	589	-	-	538
HCM Lane V/C Ratio	0.301	-	-	0.182	-	-	0.168
HCM Control Delay (s/veh)	16.2	-	-	12.5	-	-	13
HCM Lane LOS	C	-	-	B	-	-	B
HCM 95th %tile Q (veh)	1.3	-	-	0.7	-	-	0.6

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1090	130	171	927	127	228
Future Volume (vph)	1090	130	171	927	127	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3430	0	1734	3468	1734	1552
Flt Permitted			0.114		0.950	
Satd. Flow (perm)	3430	0	208	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	20					65
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	1350	
Travel Time (s)	20.2			6.0	26.3	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1298	0	182	986	135	243
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	35.2		44.8	49.9	11.9	26.6
Actuated g/C Ratio	0.49		0.62	0.69	0.17	0.37
v/c Ratio	0.77		0.55	0.41	0.47	0.40
Control Delay (s/veh)	18.7		16.8	5.4	35.7	15.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.7		16.8	5.4	35.7	15.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	B		B	A	D	B
Approach Delay (s/veh)	18.7			7.1	22.7	
Approach LOS	B			A	C	
Queue Length 50th (ft)	217		23	79	52	53
Queue Length 95th (ft)	364		91	124	131	138
Internal Link Dist (ft)	1255			319	1270	
Turn Bay Length (ft)			150			
Base Capacity (vph)	2692		468	3314	370	734
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.48		0.39	0.30	0.36	0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 72.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay (s/veh): 14.5		Intersection LOS: B	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	58	1286	1064	44	18	34
Future Volume (vph)	58	1286	1064	44	18	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3606	0	1668	0
Flt Permitted	0.950				0.983	
Satd. Flow (perm)	1734	3468	3606	0	1668	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	1383	1191	0	56	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	58	1286	1064	44	18	34
Future Vol, veh/h	58	1286	1064	44	18	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-5	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	1383	1144	47	19	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1191	0	-	0	1984	596
Stage 1	-	-	-	-	1168	-
Stage 2	-	-	-	-	816	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	582	-	-	-	53	447
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	395	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	582	-	-	-	47	447
Mov Cap-2 Maneuver	-	-	-	-	152	-
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	395	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	22
HCM LOS			C

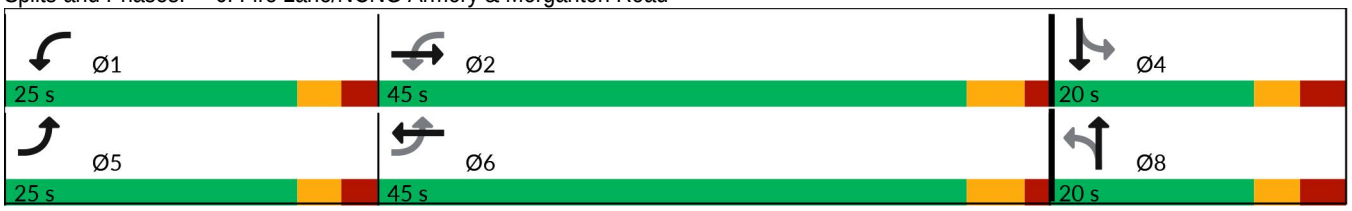
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	582	-	-	-	267
HCM Lane V/C Ratio	0.107	-	-	-	0.209
HCM Control Delay (s/veh)	11.9	-	-	-	22
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.4	-	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1283	21	29	1083	4	25	4	22	4	4	4
Future Volume (vph)	4	1283	21	29	1083	4	25	4	22	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3518	0	0	1702	0	0	1750	0
Flt Permitted	0.203			0.135				0.838			0.867	
Satd. Flow (perm)	372	3479	0	250	3518	0	0	1462	0	0	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						24			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1403	0	31	1169	0	0	55	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	38.0	38.2		37.2	40.1			9.3			9.3	
Actuated g/C Ratio	0.75	0.75		0.73	0.79			0.18			0.18	
v/c Ratio	0.01	0.54		0.07	0.42			0.19			0.04	
Control Delay (s/veh)	2.8	8.4		3.3	5.6			19.4			22.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	2.8	8.4		3.3	5.6			19.4			22.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			C	
Approach Delay (s/veh)		8.4			5.5			19.4			22.4	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	0	104		3	77			8			2	
Queue Length 95th (ft)	2	301		9	225			43			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	883	2740		852	2858			497			510	
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	0.00	0.51		0.04	0.41			0.11			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 51			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay (s/veh): 7.4		Intersection LOS: A	
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	9	371	19	15	314
Future Volume (vph)	12	9	371	19	15	314
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		4%			4%
Storage Length (ft)	0	0		0	125	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				75	
Satd. Flow (prot)	1706	0	3444	0	1734	3468
Flt Permitted	0.973				0.950	
Satd. Flow (perm)	1706	0	3444	0	1734	3468
Link Speed (mph)	25		35			35
Link Distance (ft)	329		680			1350
Travel Time (s)	9.0		13.2			26.3
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	433	0	17	349
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	9	371	19	15	314
Future Vol, veh/h	12	9	371	19	15	314
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	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	4	-	-	4
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	10	412	21	17	349

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	632	217	0	0	433	0
Stage 1	423	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	413	787	-	-	1123	-
Stage 1	629	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	407	787	-	-	1123	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	513	1123	-
HCM Lane V/C Ratio	-	-	0.045	0.015	-
HCM Control Delay (s/veh)	-	-	12.4	8.3	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.1	0	-

Appendix I:
Synchro Output:
Build-Out (2027)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	22	4	127	4	106	28	69	182	4
Future Volume (vph)	4	5	5	22	4	127	4	106	28	69	182	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1749	0	1770	1591	0	0	3345	0	1770	3529	0
Flt Permitted		0.986		0.950				0.999		0.950		
Satd. Flow (perm)	0	1749	0	1770	1591	0	0	3345	0	1770	3529	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	24	141	0	0	148	0	74	200	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	5	22	4	127	4	106	28	69	182	4
Future Vol, veh/h	4	5	5	22	4	127	4	106	28	69	182	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	2	2	2
Mvmt Flow	4	5	5	24	4	137	4	114	30	74	196	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	413	498	100	386	485	72	200	0	0	144	0	0
Stage 1	346	346	-	137	137	-	-	-	-	-	-	-
Stage 2	67	152	-	249	348	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	523	472	936	547	481	975	1362	-	-	1436	-	-
Stage 1	643	634	-	852	782	-	-	-	-	-	-	-
Stage 2	936	771	-	733	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	428	446	936	516	455	975	1362	-	-	1436	-	-
Mov Cap-2 Maneuver	428	446	-	516	455	-	-	-	-	-	-	-
Stage 1	641	601	-	849	780	-	-	-	-	-	-	-
Stage 2	798	769	-	685	600	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.8	9.9	0.2	2.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1362	-	-	541	516	942	1436	-	-
HCM Lane V/C Ratio	0.003	-	-	0.028	0.046	0.15	0.052	-	-
HCM Control Delay (s/veh)	7.7	0	-	11.8	12.3	9.5	7.6	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.1	0.5	0.2	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	44	134	10	33	5
Future Volume (vph)	4	44	134	10	33	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1846	0	1752	0
Flt Permitted	0.950				0.959	
Satd. Flow (perm)	1770	1863	1846	0	1752	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	49	160	0	43	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	44	134	10	33	5
Future Vol, veh/h	4	44	134	10	33	5
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	-	-	-	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	49	149	11	37	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	160	0	-	0	212	155
Stage 1	-	-	-	-	155	-
Stage 2	-	-	-	-	57	-
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	1419	-	-	-	776	891
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1419	-	-	-	774	891
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1419	-	-	-	788
HCM Lane V/C Ratio	0.003	-	-	-	0.054
HCM Control Delay (s/veh)	7.5	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	735	26	47	803	154	0	0	24	0	0	19
Future Volume (vph)	0	735	26	47	803	154	0	0	24	0	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	774	27	49	845	162	0	0	25	0	0	20
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	735	26	47	803	154	0	0	24	0	0	19
Future Vol, veh/h	0	735	26	47	803	154	0	0	24	0	0	19
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	4	2	2	2
Mvmt Flow	0	774	27	49	845	162	0	0	25	0	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	801	0	0	-	-	387	-	-	424
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.98	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.34	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	818	-	-	0	0	606	0	0	579
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	818	-	-	-	-	606	-	-	578
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.5	11.2	11.5
HCM LOS			B	B

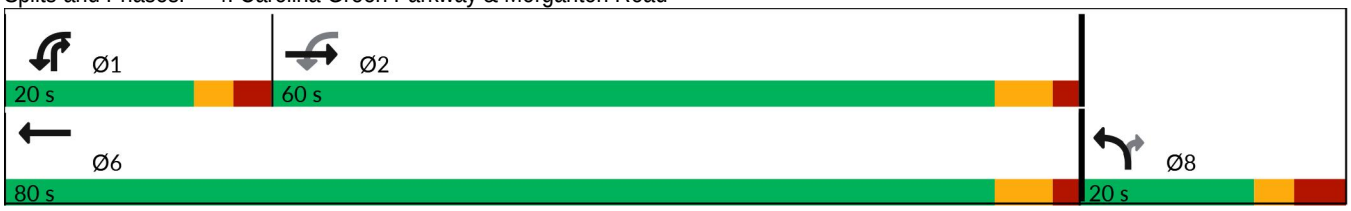
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	606	-	-	818	-	-	578
HCM Lane V/C Ratio	0.042	-	-	0.06	-	-	0.035
HCM Control Delay (s/veh)	11.2	-	-	9.7	-	-	11.5
HCM Lane LOS	B	-	-	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	0.2	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	646	114	201	969	48	160
Future Volume (vph)	646	114	201	969	48	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3406	0	1734	3468	1734	1552
Flt Permitted			0.293		0.950	
Satd. Flow (perm)	3406	0	535	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	32					165
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	784	0	207	999	49	165
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	19.3		28.4	37.8	9.9	13.4
Actuated g/C Ratio	0.44		0.65	0.87	0.23	0.31
v/c Ratio	0.51		0.35	0.33	0.13	0.28
Control Delay (s/veh)	10.7		4.7	2.8	20.7	4.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.7		4.7	2.8	20.7	4.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	B		A	A	C	A
Approach Delay (s/veh)	10.7			3.1	8.0	
Approach LOS	B			A	A	
Queue Length 50th (ft)	42		0	0	8	1
Queue Length 95th (ft)	151		43	101	42	30
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	3319		864	3468	649	820
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.24		0.24	0.29	0.08	0.20

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 43.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay (s/veh): 6.3		Intersection LOS: A	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	33	778	1139	20	10	31
Future Volume (vph)	33	778	1139	20	10	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3617	0	1651	0
Flt Permitted	0.950				0.988	
Satd. Flow (perm)	1734	3468	3617	0	1651	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	794	1182	0	42	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

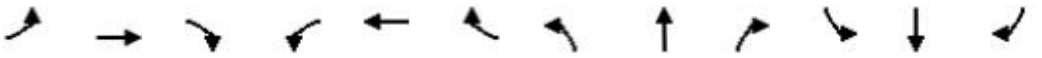
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	778	1139	20	10	31
Future Vol, veh/h	33	778	1139	20	10	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-5	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	794	1162	20	10	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1182	0	-	0	1637	591
Stage 1	-	-	-	-	1172	-
Stage 2	-	-	-	-	465	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	587	-	-	-	91	450
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	587	-	-	-	86	450
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	587	-	-	-	336
HCM Lane V/C Ratio	0.057	-	-	-	0.125
HCM Control Delay (s/veh)	11.5	-	-	-	17.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.2	-	-	-	0.4

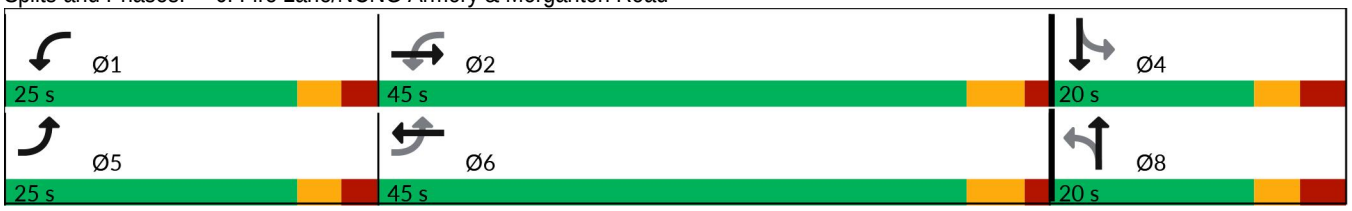


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	777	13	17	1142	4	21	4	15	4	4	4
Future Volume (vph)	4	777	13	17	1142	4	21	4	15	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3518	0	0	1607	0	0	1750	0
Flt Permitted	0.189			0.326				0.826			0.873	
Satd. Flow (perm)	347	3479	0	604	3518	0	0	1362	0	0	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						15			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	9%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	814	0	18	1181	0	0	41	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	30.4	32.2		30.4	32.2			9.0			9.0	
Actuated g/C Ratio	0.70	0.74		0.70	0.74			0.21			0.21	
v/c Ratio	0.01	0.32		0.03	0.45			0.14			0.04	
Control Delay (s/veh)	3.5	5.5		3.6	6.6			16.4			17.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.5	5.5		3.6	6.6			16.4			17.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		5.5			6.5			16.4			17.3	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	46		2	78			7			2	
Queue Length 95th (ft)	2	140		6	230			34			16	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	947	3047		1011	3081			521			586	
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	0.00	0.27		0.02	0.38			0.08			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 43.4			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay (s/veh): 6.4		Intersection LOS: A	
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	31	25	153	12	134	9	222
Future Volume (vph)	31	25	153	12	134	9	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%		4%				4%
Storage Length (ft)	0	0		0		125	
Storage Lanes	1	0		0		1	
Taper Length (ft)	25					100	
Satd. Flow (prot)	1702	0	3430	0	0	1734	3468
Flt Permitted	0.973					0.950	
Satd. Flow (perm)	1702	0	3430	0	0	1734	3468
Link Speed (mph)	25		35				35
Link Distance (ft)	329		680				819
Travel Time (s)	9.0		13.2				16.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%				0%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	62	0	183	0	0	159	247
Sign Control	Stop		Free				Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	31	25	153	12	134	9	222
Future Vol, veh/h	31	25	153	12	134	9	222
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	4	-	-	-	4
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	34	28	170	13	149	10	247

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	619	92	0	0	183	183	0
Stage 1	177	-	-	-	-	-	-
Stage 2	442	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	6.44	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.52	2.22	-
Pot Cap-1 Maneuver	421	947	-	-	1097	1389	-
Stage 1	836	-	-	-	-	-	-
Stage 2	615	-	-	-	-	-	-
Platoon blocked, %			-	-			-
Mov Cap-1 Maneuver	359	947	-	-	1084	1084	-
Mov Cap-2 Maneuver	359	-	-	-	-	-	-
Stage 1	836	-	-	-	-	-	-
Stage 2	525	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	13.3	0	3.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	497	1084	-
HCM Lane V/C Ratio	-	-	0.125	0.147	-
HCM Control Delay (s/veh)	-	-	13.3	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q (veh)	-	-	0.4	0.5	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	208	76	236	157	212
Future Volume (vph)	0	208	76	236	157	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			4%	4%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		100			
Satd. Flow (prot)	0	1611	1734	3468	3170	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1734	3468	3170	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	182			819	532	
Travel Time (s)	5.0			16.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	231	84	262	410	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	208	76	236	157	212
Future Vol, veh/h	0	208	76	236	157	212
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	4	4	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	231	84	262	174	236

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	205	410	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	802	1145	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	802	1145	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.3	2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1145	-	802	-	-
HCM Lane V/C Ratio	0.074	-	0.288	-	-
HCM Control Delay (s/veh)	8.4	-	11.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.2	-	1.2	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	39	58	80	208	150	88
Future Volume (vph)	39	58	80	208	150	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1825	1682	0	1715	0
Flt Permitted		0.980			0.969	
Satd. Flow (perm)	0	1825	1682	0	1715	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		159	182		187	
Travel Time (s)		4.3	5.0		5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	107	320	0	265	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.9%		ICU Level of Service A	
Analysis Period (min) 15			

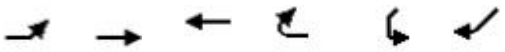
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	58	80	208	150	88
Future Vol, veh/h	39	58	80	208	150	88
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	43	64	89	231	167	98

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	320	0	-	0	355	205
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	150	-
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	1240	-	-	-	643	836
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	878	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1240	-	-	-	620	836
Mov Cap-2 Maneuver	-	-	-	-	620	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	878	-

Approach	EB	WB	SB
HCM Control Delay, s/v	3.2	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1240	-	-	-	685
HCM Lane V/C Ratio	0.035	-	-	-	0.386
HCM Control Delay (s/veh)	8	0	-	-	13.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	-	1.8



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	7	81	144	24	16	13
Future Volume (vph)	7	81	144	24	16	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1855	1827	0	1706	0
Flt Permitted		0.996			0.973	
Satd. Flow (perm)	0	1855	1827	0	1706	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		212	159		171	
Travel Time (s)		5.8	4.3		4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	98	187	0	32	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.1%		ICU Level of Service A	
Analysis Period (min) 15			

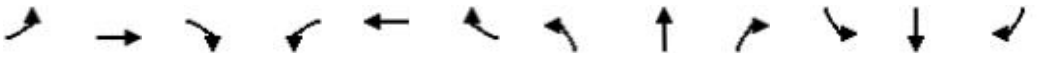
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	7	81	144	24	16	13
Future Vol, veh/h	7	81	144	24	16	13
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	8	90	160	27	18	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	187	0	-	0	280	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	106	-
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	1387	-	-	-	710	869
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1387	-	-	-	706	869
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	SW
HCM Control Delay, s/v	0.6	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1387	-	-	-	771
HCM Lane V/C Ratio	0.006	-	-	-	0.042
HCM Control Delay (s/veh)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	121	9	27	4	9	66	18	17	4
Future Volume (vph)	4	4	6	121	9	27	4	9	66	18	17	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1723	0	0	1753	0	0	1649	0	0	1796	0
Flt Permitted		0.987			0.963			0.998			0.977	
Satd. Flow (perm)	0	1723	0	0	1753	0	0	1649	0	0	1796	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		240			212			530			199	
Travel Time (s)		6.5			5.8			14.5			5.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	174	0	0	87	0	0	43	0
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	3.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	15	174	87	43
Demand Flow Rate, veh/h	15	178	88	43
Vehicles Circulating, veh/h	176	18	28	151
Vehicles Exiting, veh/h	18	98	163	45
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.2	3.8	3.2	3.4
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	15	178	88	43
Cap Entry Lane, veh/h	1153	1355	1341	1183
Entry HV Adj Factor	0.995	0.976	0.986	0.991
Flow Entry, veh/h	15	174	87	43
Cap Entry, veh/h	1147	1323	1323	1173
V/C Ratio	0.013	0.131	0.066	0.036
Control Delay, s/veh	3.2	3.8	3.2	3.4
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	9	22	49	5	209	4	298	56	134	364	4
Future Volume (vph)	18	9	22	49	5	209	4	298	56	134	364	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1719	0	1770	1591	0	0	3403	0	1770	3536	0
Flt Permitted		0.982		0.950				0.999		0.950		
Satd. Flow (perm)	0	1719	0	1770	1591	0	0	3403	0	1770	3536	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	54	238	0	0	397	0	149	408	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	9	22	49	5	209	4	298	56	134	364	4
Future Vol, veh/h	18	9	22	49	5	209	4	298	56	134	364	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	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	20	10	24	54	6	232	4	331	62	149	404	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	881	1105	204	875	1076	197	408	0	0	393	0	0
Stage 1	704	704	-	370	370	-	-	-	-	-	-	-
Stage 2	177	401	-	505	706	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	241	209	803	243	218	811	1147	-	-	1162	-	-
Stage 1	394	438	-	622	619	-	-	-	-	-	-	-
Stage 2	808	599	-	518	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	151	181	803	203	189	811	1147	-	-	1162	-	-
Mov Cap-2 Maneuver	151	181	-	203	189	-	-	-	-	-	-	-
Stage 1	392	382	-	619	616	-	-	-	-	-	-	-
Stage 2	569	596	-	426	381	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	23.4	15.2	0.1	2.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1147	-	-	250	203	753	1162	-	-
HCM Lane V/C Ratio	0.004	-	-	0.218	0.268	0.316	0.128	-	-
HCM Control Delay (s/veh)	8.2	0	-	23.4	29.1	12	8.6	-	-
HCM Lane LOS	A	A	-	C	D	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.8	1	1.4	0.4	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	53	154	25	44	11
Future Volume (vph)	10	53	154	25	44	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1827	0	1742	0
Flt Permitted	0.950				0.961	
Satd. Flow (perm)	1770	1863	1827	0	1742	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	59	199	0	61	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	53	154	25	44	11
Future Vol, veh/h	10	53	154	25	44	11
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	-	-	-	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	11	59	171	28	49	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	199	0	-	0	266	185
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	81	-
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	1373	-	-	-	723	857
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	942	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1373	-	-	-	717	857
Mov Cap-2 Maneuver	-	-	-	-	717	-
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	942	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.2	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1373	-	-	-	741
HCM Lane V/C Ratio	0.008	-	-	-	0.082
HCM Control Delay (s/veh)	7.6	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q (veh)	0	-	-	-	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1113	34	101	856	52	0	0	130	0	0	85
Future Volume (vph)	0	1113	34	101	856	52	0	0	130	0	0	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.94	0.90	0.90	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1184	36	107	911	55	0	0	138	0	0	90
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	1113	34	101	856	52	0	0	130	0	0	85
Future Vol, veh/h	0	1113	34	101	856	52	0	0	130	0	0	85
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	90	90	94	90	90	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1184	36	107	911	55	0	0	138	0	0	90

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1220	0	0	-	-	592	-	-	456
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	567	-	-	0	0	449	0	0	551
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	567	-	-	-	-	449	-	-	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.3	16.5	12.8
HCM LOS			C	B

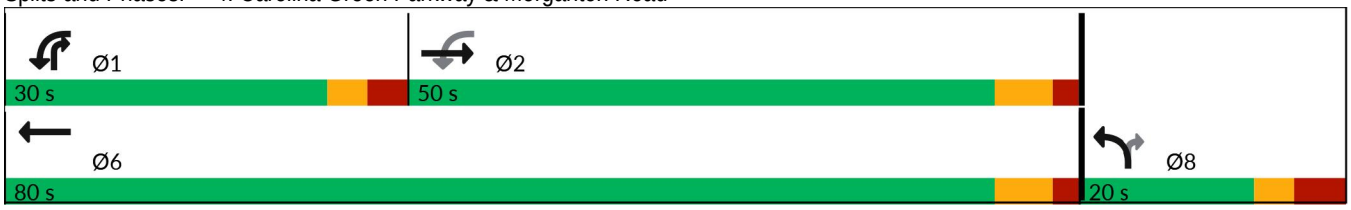
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	449	-	-	567	-	-	551
HCM Lane V/C Ratio	0.308	-	-	0.19	-	-	0.164
HCM Control Delay (s/veh)	16.5	-	-	12.8	-	-	12.8
HCM Lane LOS	C	-	-	B	-	-	B
HCM 95th %tile Q (veh)	1.3	-	-	0.7	-	-	0.6

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1052	193	253	890	139	317
Future Volume (vph)	1052	193	253	890	139	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3406	0	1734	3468	1734	1552
Flt Permitted			0.107		0.950	
Satd. Flow (perm)	3406	0	195	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	27					38
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1324	0	269	947	148	337
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	50.0		30.0	80.0	20.0	30.0
Total Split (%)	50.0%		30.0%	80.0%	20.0%	30.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	37.6		52.1	57.2	12.7	32.4
Actuated g/C Ratio	0.47		0.65	0.71	0.16	0.40
v/c Ratio	0.82		0.67	0.38	0.54	0.52
Control Delay (s/veh)	24.2		24.7	5.0	42.5	19.3
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	24.2		24.7	5.0	42.5	19.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	C		C	A	D	B
Approach Delay (s/veh)	24.2			9.3	26.4	
Approach LOS	C			A	C	
Queue Length 50th (ft)	289		73	84	70	107
Queue Length 95th (ft)	461		163	116	m150	204
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	1987		633	3117	335	863
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.67		0.42	0.30	0.44	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 80.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 18.6		Intersection LOS: B	
Intersection Capacity Utilization 69.5%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	1327	1104	44	18	41
Future Volume (vph)	65	1327	1104	44	18	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3606	0	1662	0
Flt Permitted	0.950				0.985	
Satd. Flow (perm)	1734	3468	3606	0	1662	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	1427	1234	0	63	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

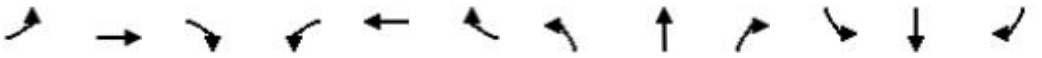
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	1327	1104	44	18	41
Future Vol, veh/h	65	1327	1104	44	18	41
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, %	-	4	-5	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	1427	1187	47	19	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1234	0	-	0	2065	617
Stage 1	-	-	-	-	1211	-
Stage 2	-	-	-	-	854	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	560	-	-	-	47	433
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	377	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	560	-	-	-	41	433
Mov Cap-2 Maneuver	-	-	-	-	142	-
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	22.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	560	-	-	-	266
HCM Lane V/C Ratio	0.125	-	-	-	0.238
HCM Control Delay (s/veh)	12.3	-	-	-	22.7
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.4	-	-	-	0.9

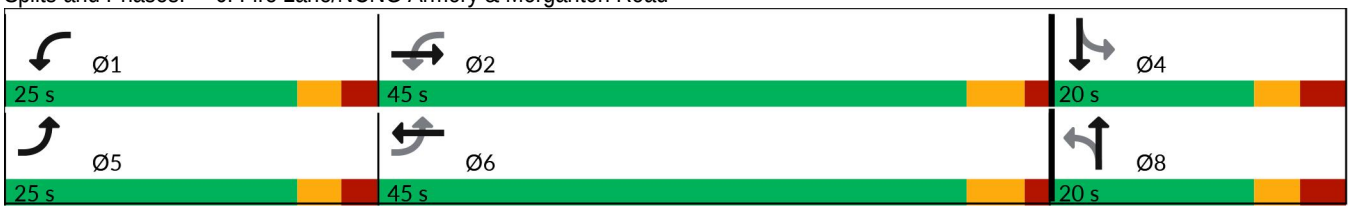


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1324	21	29	1123	4	25	4	22	4	4	4
Future Volume (vph)	4	1324	21	29	1123	4	25	4	22	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3522	0	0	1702	0	0	1750	0
Flt Permitted	0.192			0.128				0.838			0.867	
Satd. Flow (perm)	352	3479	0	237	3522	0	0	1462	0	0	1542	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						24			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1447	0	31	1212	0	0	55	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	39.7	39.7		38.9	41.6			9.2			9.2	
Actuated g/C Ratio	0.75	0.75		0.74	0.79			0.17			0.17	
v/c Ratio	0.01	0.55		0.08	0.44			0.20			0.04	
Control Delay (s/veh)	2.8	8.4		3.3	5.6			19.9			22.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	2.8	8.4		3.3	5.6			19.9			22.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			C	
Approach Delay (s/veh)		8.4			5.5			19.9			22.7	
Approach LOS		A			A			B			C	
Queue Length 50th (ft)	0	109		3	81			9			2	
Queue Length 95th (ft)	2	318		9	237			43			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	852	2705		820	2845			475			487	
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	0.00	0.53		0.04	0.43			0.12			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 52.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay (s/veh): 7.4		Intersection LOS: A	
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	12	9	459	19	144	15	403
Future Volume (vph)	12	9	459	19	144	15	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12
Grade (%)	0%		4%				4%
Storage Length (ft)	0	0		0		125	
Storage Lanes	1	0		0		1	
Taper Length (ft)	25					100	
Satd. Flow (prot)	1706	0	3448	0	0	1734	3468
Flt Permitted	0.973					0.950	
Satd. Flow (perm)	1706	0	3448	0	0	1734	3468
Link Speed (mph)	25		35				35
Link Distance (ft)	329		680				819
Travel Time (s)	9.0		13.2				16.0
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%				0%
Shared Lane Traffic (%)							
Lane Group Flow (vph)	23	0	531	0	0	177	448
Sign Control	Stop		Free				Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	12	9	459	19	144	15	403
Future Vol, veh/h	12	9	459	19	144	15	403
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	-	None
Storage Length	0	-	-	-	-	125	-
Veh in Median Storage, #	0	-	0	-	-	-	0
Grade, %	0	-	4	-	-	-	4
Peak Hour Factor	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	13	10	510	21	160	17	448

Major/Minor	Minor1		Major1		Major2		
Conflicting Flow All	1099	266	0	0	531	531	0
Stage 1	521	-	-	-	-	-	-
Stage 2	578	-	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	6.44	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.52	2.22	-
Pot Cap-1 Maneuver	207	732	-	-	662	1033	-
Stage 1	561	-	-	-	-	-	-
Stage 2	524	-	-	-	-	-	-
Platoon blocked, %			-	-			-
Mov Cap-1 Maneuver	153	732	-	-	677	677	-
Mov Cap-2 Maneuver	153	-	-	-	-	-	-
Stage 1	561	-	-	-	-	-	-
Stage 2	387	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	22.3	0	3.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	231	677	-
HCM Lane V/C Ratio	-	-	0.101	0.261	-
HCM Control Delay (s/veh)	-	-	22.3	12.2	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q (veh)	-	-	0.3	1	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	246	101	511	316	223
Future Volume (vph)	0	246	101	511	316	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			4%	4%	
Storage Length (ft)	0	0	100			0
Storage Lanes	0	1	1			0
Taper Length (ft)	25		100			
Satd. Flow (prot)	0	1611	1734	3468	3253	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	1611	1734	3468	3253	0
Link Speed (mph)	25			35	35	
Link Distance (ft)	182			819	532	
Travel Time (s)	5.0			16.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	273	112	568	599	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	246	101	511	316	223
Future Vol, veh/h	0	246	101	511	316	223
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	4	4	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	273	112	568	351	248

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	300	599	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	696	974	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	696	974	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.5	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	974	-	696	-	-
HCM Lane V/C Ratio	0.115	-	0.393	-	-
HCM Control Delay (s/veh)	9.2	-	13.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q (veh)	0.4	-	1.9	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	86	102	222	160	97
Future Volume (vph)	32	86	102	222	160	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1839	1690	0	1715	0
Flt Permitted		0.987			0.970	
Satd. Flow (perm)	0	1839	1690	0	1715	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		159	182		187	
Travel Time (s)		4.3	5.0		5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	132	360	0	286	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			

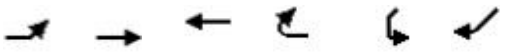
Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	86	102	222	160	97
Future Vol, veh/h	32	86	102	222	160	97
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	36	96	113	247	178	108

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	360	0	-	0	405	237
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	168	-
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	1199	-	-	-	602	802
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1199	-	-	-	583	802
Mov Cap-2 Maneuver	-	-	-	-	583	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	862	-

Approach	EB	WB	SB
HCM Control Delay, s/v	2.2	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1199	-	-	-	650
HCM Lane V/C Ratio	0.03	-	-	-	0.439
HCM Control Delay (s/veh)	8.1	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	-	2.2



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	6	101	177	22	17	12
Future Volume (vph)	6	101	177	22	17	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1857	1835	0	1709	0
Flt Permitted		0.997			0.971	
Satd. Flow (perm)	0	1857	1835	0	1709	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		212	159		171	
Travel Time (s)		5.8	4.3		4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	119	221	0	32	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	6	101	177	22	17	12
Future Vol, veh/h	6	101	177	22	17	12
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	7	112	197	24	19	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	221	0	-	0	335	209
Stage 1	-	-	-	-	209	-
Stage 2	-	-	-	-	126	-
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	1348	-	-	-	660	831
Stage 1	-	-	-	-	826	-
Stage 2	-	-	-	-	900	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1348	-	-	-	656	831
Mov Cap-2 Maneuver	-	-	-	-	656	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	900	-

Approach	EB	WB	SW
HCM Control Delay, s/v	0.4	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1348	-	-	-	719
HCM Lane V/C Ratio	0.005	-	-	-	0.045
HCM Control Delay (s/veh)	7.7	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	158	8	23	4	7	88	15	15	4
Future Volume (vph)	4	4	6	158	8	23	4	7	88	15	15	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1723	0	0	1758	0	0	1636	0	0	1796	0
Flt Permitted		0.987			0.960			0.998			0.978	
Satd. Flow (perm)	0	1723	0	0	1758	0	0	1636	0	0	1796	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		240			212			530			199	
Travel Time (s)		6.5			5.8			14.5			5.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	211	0	0	110	0	0	38	0
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	15	211	110	38
Demand Flow Rate, veh/h	15	216	112	38
Vehicles Circulating, veh/h	214	16	25	193
Vehicles Exiting, veh/h	17	121	204	39
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.4	4.0	3.4	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	15	216	112	38
Cap Entry Lane, veh/h	1109	1358	1345	1133
Entry HV Adj Factor	0.995	0.976	0.981	0.991
Flow Entry, veh/h	15	211	110	38
Cap Entry, veh/h	1103	1325	1319	1123
V/C Ratio	0.014	0.159	0.083	0.034
Control Delay, s/veh	3.4	4.0	3.4	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Appendix J:
Synchro Output:
Background (2034)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	18	4	51	4	149	20	55	204	4
Future Volume (vph)	4	5	5	18	4	51	4	149	20	55	204	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1749	0	1770	1602	0	0	3387	0	1770	3529	0
Flt Permitted		0.986		0.950				0.999		0.950		
Satd. Flow (perm)	0	1749	0	1770	1602	0	0	3387	0	1770	3529	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	19	59	0	0	186	0	59	223	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	5	18	4	51	4	149	20	55	204	4
Future Vol, veh/h	4	5	5	18	4	51	4	149	20	55	204	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	2	2	2
Mvmt Flow	4	5	5	19	4	55	4	160	22	59	219	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	429	529	112	409	520	91	223	0	0	182	0	0
Stage 1	339	339	-	179	179	-	-	-	-	-	-	-
Stage 2	90	190	-	230	341	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	510	454	920	527	459	949	1336	-	-	1391	-	-
Stage 1	649	638	-	805	750	-	-	-	-	-	-	-
Stage 2	907	742	-	752	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	461	434	920	501	438	949	1336	-	-	1391	-	-
Mov Cap-2 Maneuver	461	434	-	501	438	-	-	-	-	-	-	-
Stage 1	647	611	-	803	748	-	-	-	-	-	-	-
Stage 2	847	740	-	710	610	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.8	10.2	0.2	1.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	546	501	875	1391	-	-
HCM Lane V/C Ratio	0.003	-	-	0.028	0.039	0.068	0.043	-	-
HCM Control Delay (s/veh)	7.7	0	-	11.8	12.5	9.4	7.7	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.1	0.2	0.1	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	12	20	10	10	5
Future Volume (vph)	4	12	20	10	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1779	0	1718	0
Flt Permitted	0.950				0.969	
Satd. Flow (perm)	1770	1863	1779	0	1718	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	13	33	0	17	0
Sign Control		Free	Free		Stop	

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	12	20	10	10	5
Future Vol, veh/h	4	12	20	10	10	5
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	-	-	-	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	13	22	11	11	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	49	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	21	-
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	1579	-	-	-	960	1047
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1579	-	-	-	957	1047
Mov Cap-2 Maneuver	-	-	-	-	957	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.8	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	985
HCM Lane V/C Ratio	0.003	-	-	-	0.017
HCM Control Delay (s/veh)	7.3	-	-	-	8.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	775	8	47	895	227	0	0	24	0	0	42
Future Volume (vph)	0	775	8	47	895	227	0	0	24	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	816	8	49	942	239	0	0	25	0	0	44
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	775	8	47	895	227	0	0	24	0	0	42
Future Vol, veh/h	0	775	8	47	895	227	0	0	24	0	0	42
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	4	2	2	2
Mvmt Flow	0	816	8	49	942	239	0	0	25	0	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	824	0	0	-	-	408	-	-	472
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.98	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.34	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	802	-	-	0	0	587	0	0	538
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	802	-	-	-	-	587	-	-	537
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.4	11.4	12.3
HCM LOS			B	B

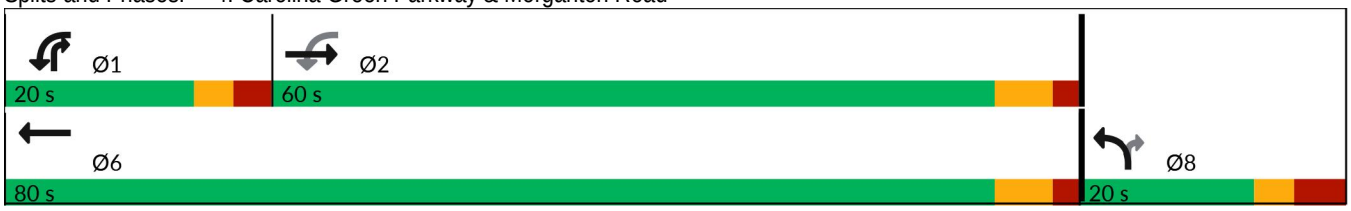
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	587	-	-	802	-	-	537
HCM Lane V/C Ratio	0.043	-	-	0.062	-	-	0.082
HCM Control Delay (s/veh)	11.4	-	-	9.8	-	-	12.3
HCM Lane LOS	B	-	-	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	0.2	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	736	64	148	1134	54	107
Future Volume (vph)	736	64	148	1134	54	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3444	0	1734	3468	1734	1552
Flt Permitted			0.277		0.950	
Satd. Flow (perm)	3444	0	506	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	14					110
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	825	0	153	1169	56	110
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	22.9		31.3	39.1	9.6	16.0
Actuated g/C Ratio	0.46		0.63	0.79	0.19	0.32
v/c Ratio	0.51		0.29	0.42	0.17	0.19
Control Delay (s/veh)	11.9		5.1	4.3	21.7	3.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.9		5.1	4.3	21.7	3.9

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	B		A	A	C	A
Approach Delay (s/veh)	11.9			4.4	9.9	
Approach LOS	B			A	A	
Queue Length 50th (ft)	100		15	83	15	0
Queue Length 95th (ft)	158		33	130	47	25
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	3356		764	3468	550	788
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.25		0.20	0.34	0.10	0.14

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 49.3			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay (s/veh): 7.5		Intersection LOS: A	
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	827	1260	22	10	29
Future Volume (vph)	28	827	1260	22	10	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3617	0	1655	0
Flt Permitted	0.950				0.988	
Satd. Flow (perm)	1734	3468	3617	0	1655	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	844	1308	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.5%		ICU Level of Service A	
Analysis Period (min) 15			

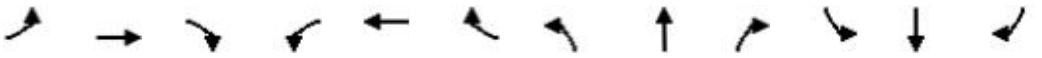
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	827	1260	22	10	29
Future Vol, veh/h	28	827	1260	22	10	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	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-5	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	844	1286	22	10	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1308	0	-	0	1777	654
Stage 1	-	-	-	-	1297	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	525	-	-	-	74	409
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	588	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	525	-	-	-	70	409
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.4	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	525	-	-	-	295
HCM Lane V/C Ratio	0.054	-	-	-	0.135
HCM Control Delay (s/veh)	12.3	-	-	-	19.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.2	-	-	-	0.5

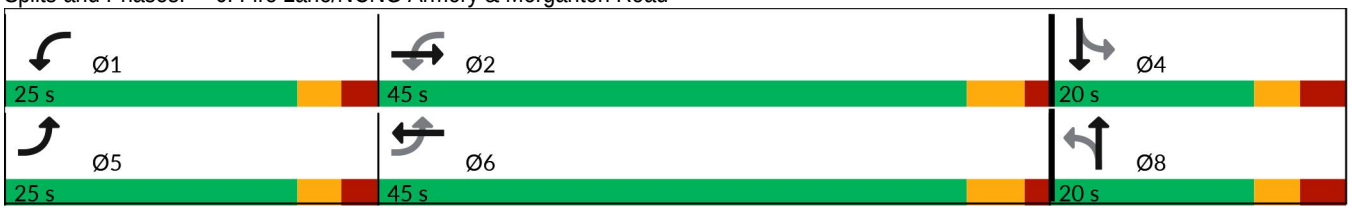


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	826	14	18	1263	4	23	4	16	4	4	4
Future Volume (vph)	4	826	14	18	1263	4	23	4	16	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3522	0	0	1605	0	0	1750	0
Flt Permitted	0.157			0.305				0.824			0.872	
Satd. Flow (perm)	288	3479	0	565	3522	0	0	1359	0	0	1551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						16			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	9%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	866	0	19	1306	0	0	44	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	32.5	34.5		32.5	34.5			9.1			9.1	
Actuated g/C Ratio	0.71	0.76		0.71	0.76			0.20			0.20	
v/c Ratio	0.01	0.33		0.03	0.49			0.15			0.04	
Control Delay (s/veh)	3.3	5.3		3.4	6.6			17.7			18.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.3	5.3		3.4	6.6			17.7			18.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		5.3			6.6			17.7			18.8	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	51		2	92			8			2	
Queue Length 95th (ft)	2	151		6	266			38			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	911	2953		988	2989			501			564	
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	0.00	0.29		0.02	0.44			0.09			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 45.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay (s/veh): 6.4		Intersection LOS: A	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	4	27	31	4	25	8	202	12	9	220	6
Future Volume (vph)	22	4	27	31	4	25	8	202	12	9	220	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			4%			4%	
Storage Length (ft)	0		0	0		0	100		0	125		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			100		
Satd. Flow (prot)	0	1698	0	0	1713	0	1734	3441	0	1734	3455	0
Flt Permitted		0.980			0.975		0.950			0.950		
Satd. Flow (perm)	0	1698	0	0	1713	0	1734	3441	0	1734	3455	0
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		275			329			680			819	
Travel Time (s)		6.3			9.0			13.2			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	66	0	9	237	0	10	251	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	4	27	31	4	25	8	202	12	9	220	6
Future Vol, veh/h	22	4	27	31	4	25	8	202	12	9	220	6
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	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	4	-	-	4	-
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	24	4	30	34	4	28	9	224	13	10	244	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	400	523	126	393	520	119	251	0	0	237	0	0
Stage 1	268	268	-	249	249	-	-	-	-	-	-	-
Stage 2	132	255	-	144	271	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	535	457	901	541	459	910	1311	-	-	1327	-	-
Stage 1	714	686	-	733	699	-	-	-	-	-	-	-
Stage 2	858	695	-	844	684	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	509	450	901	513	452	910	1311	-	-	1327	-	-
Mov Cap-2 Maneuver	509	450	-	513	452	-	-	-	-	-	-	-
Stage 1	709	681	-	728	694	-	-	-	-	-	-	-
Stage 2	821	690	-	804	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.1	11.5	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1311	-	-	646	620	1327	-	-
HCM Lane V/C Ratio	0.007	-	-	0.091	0.108	0.008	-	-
HCM Control Delay (s/veh)	7.8	-	-	11.1	11.5	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.3	0.4	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	0	32	0	0	46	30	27	144	47	67	173
Future Volume (vph)	0	0	32	0	0	46	30	27	144	47	67	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%				4%			4%
Storage Length (ft)	0		0	0		0		100		0	100	
Storage Lanes	0		1	0		1		1		0	1	
Taper Length (ft)	25			25				100			100	
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1734	3340	0	1734	3458
Flt Permitted								0.950			0.950	
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1734	3340	0	1734	3458
Link Speed (mph)		25			30				35			35
Link Distance (ft)		182			203				819			532
Travel Time (s)		5.0			4.6				16.0			10.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	36	0	0	51	0	63	212	0	74	196
Sign Control		Stop			Stop				Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	32	0	0	46	30	27	144	47	67	173	4
Future Vol, veh/h	0	0	32	0	0	46	30	27	144	47	67	173	4
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	4	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	0	0	36	0	0	51	33	30	160	52	74	192	4

Major/Minor	Minor2			Minor1				Major1			Major2		
Conflicting Flow All	-	-	98	-	-	106	197	196	0	0	212	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	6.44	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.52	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	939	0	0	928	1075	1374	-	-	1356	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	-	-	939	-	-	928	1174	1174	-	-	1356	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9	9.1	1.9	2.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1174	-	-	939	928	1356	-	-
HCM Lane V/C Ratio	0.054	-	-	0.038	0.055	0.055	-	-
HCM Control Delay (s/veh)	8.2	-	-	9	9.1	7.8	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q (veh)	0.2	-	-	0.1	0.2	0.2	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	20	4	5	23	7	12
Future Volume (vph)	20	4	5	23	7	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Satd. Flow (prot)	1824	0	0	1846	1674	0
Flt Permitted				0.991	0.981	
Satd. Flow (perm)	1824	0	0	1846	1674	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	212			159	174	
Travel Time (s)	5.8			4.3	4.7	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	0	32	21	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	4	5	23	7	12
Future Vol, veh/h	20	4	5	23	7	12
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	22	4	6	26	8	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	26	0	62	24
Stage 1	-	-	-	-	24	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1588	-	944	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1588	-	940	1052
Mov Cap-2 Maneuver	-	-	-	-	940	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	980	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.3	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1008	-	-	1588	-
HCM Lane V/C Ratio	0.021	-	-	0.003	-
HCM Control Delay (s/veh)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	9	22	47	5	135	4	342	52	144	448	4
Future Volume (vph)	18	9	22	47	5	135	4	342	52	144	448	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1719	0	1770	1595	0	0	3416	0	1770	3536	0
Flt Permitted		0.982		0.950						0.950		
Satd. Flow (perm)	0	1719	0	1770	1595	0	0	3416	0	1770	3536	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	52	156	0	0	442	0	160	502	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	9	22	47	5	135	4	342	52	144	448	4
Future Vol, veh/h	18	9	22	47	5	135	4	342	52	144	448	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	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	20	10	24	52	6	150	4	380	58	160	498	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1021	1266	251	991	1239	219	502	0	0	438	0	0
Stage 1	820	820	-	417	417	-	-	-	-	-	-	-
Stage 2	201	446	-	574	822	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	191	168	749	200	174	785	1059	-	-	1118	-	-
Stage 1	335	387	-	584	590	-	-	-	-	-	-	-
Stage 2	782	572	-	471	386	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	133	143	749	163	148	785	1059	-	-	1118	-	-
Mov Cap-2 Maneuver	133	143	-	163	148	-	-	-	-	-	-	-
Stage 1	333	332	-	581	587	-	-	-	-	-	-	-
Stage 2	623	569	-	379	331	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	27.3	18.3	0.1	2.1
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	215	163	680	1118	-	-
HCM Lane V/C Ratio	0.004	-	-	0.253	0.32	0.229	0.143	-	-
HCM Control Delay (s/veh)	8.4	0	-	27.3	37.2	11.9	8.8	-	-
HCM Lane LOS	A	A	-	D	E	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	1	1.3	0.9	0.5	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	32	35	25	25	11
Future Volume (vph)	10	32	35	25	25	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1758	0	1726	0
Flt Permitted	0.950				0.966	
Satd. Flow (perm)	1770	1863	1758	0	1726	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	36	67	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	32	35	25	25	11
Future Vol, veh/h	10	32	35	25	25	11
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	-	-	-	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	11	36	39	28	28	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	67	0	-	0	111	53
Stage 1	-	-	-	-	53	-
Stage 2	-	-	-	-	58	-
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	1535	-	-	-	886	1014
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1535	-	-	-	880	1014
Mov Cap-2 Maneuver	-	-	-	-	880	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.8	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1535	-	-	-	917
HCM Lane V/C Ratio	0.007	-	-	-	0.044
HCM Control Delay (s/veh)	7.4	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1289	21	101	964	103	0	0	130	0	0	225
Future Volume (vph)	0	1289	21	101	964	103	0	0	130	0	0	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)	1					1						
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1371	22	107	1026	110	0	0	138	0	0	239
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1289	21	101	964	103	0	0	130	0	0	225
Future Vol, veh/h	0	1289	21	101	964	103	0	0	130	0	0	225
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1371	22	107	1026	110	0	0	138	0	0	239

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1393	0	0	-	-	686	-	-	514
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	487	-	-	0	0	390	0	0	505
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	487	-	-	-	-	390	-	-	505
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.3	19.2	18.4
HCM LOS			C	C

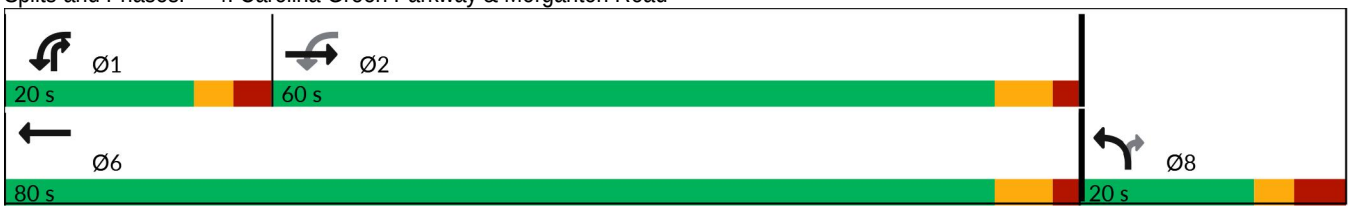
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	390	-	-	487	-	-	505
HCM Lane V/C Ratio	0.355	-	-	0.221	-	-	0.474
HCM Control Delay (s/veh)	19.2	-	-	14.5	-	-	18.4
HCM Lane LOS	C	-	-	B	-	-	C
HCM 95th %tile Q (veh)	1.6	-	-	0.8	-	-	2.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1279	144	204	1037	146	279
Future Volume (vph)	1279	144	204	1037	146	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3434	0	1734	3468	1734	1552
Flt Permitted			0.092		0.950	
Satd. Flow (perm)	3434	0	168	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	19					39
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1514	0	217	1103	155	297
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	43.8		55.7	60.8	12.8	29.9
Actuated g/C Ratio	0.52		0.66	0.72	0.15	0.36
v/c Ratio	0.84		0.65	0.44	0.58	0.51
Control Delay (s/veh)	22.4		26.7	5.2	45.7	23.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	22.4		26.7	5.2	45.7	23.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	C		C	A	D	C
Approach Delay (s/veh)	22.4			8.8	31.1	
Approach LOS	C			A	C	
Queue Length 50th (ft)	348		57	106	78	106
Queue Length 95th (ft)	478		141	142	160	212
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	2325		405	3042	319	642
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.65		0.54	0.36	0.49	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 84			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 18.1		Intersection LOS: B	
Intersection Capacity Utilization 71.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	1536	1212	47	19	38
Future Volume (vph)	66	1536	1212	47	19	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3606	0	1666	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1734	3468	3606	0	1666	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	71	1652	1354	0	61	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.5%		ICU Level of Service A	
Analysis Period (min) 15			

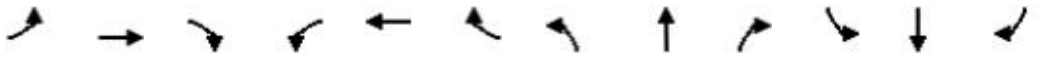
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	1536	1212	47	19	38
Future Vol, veh/h	66	1536	1212	47	19	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-5	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	1652	1303	51	20	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1354	0	-	0	2297	677
Stage 1	-	-	-	-	1329	-
Stage 2	-	-	-	-	968	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	504	-	-	-	33	395
Stage 1	-	-	-	-	212	-
Stage 2	-	-	-	-	329	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	504	-	-	-	28	395
Mov Cap-2 Maneuver	-	-	-	-	119	-
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	329	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	27.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	504	-	-	-	223
HCM Lane V/C Ratio	0.141	-	-	-	0.275
HCM Control Delay (s/veh)	13.3	-	-	-	27.2
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q (veh)	0.5	-	-	-	1.1

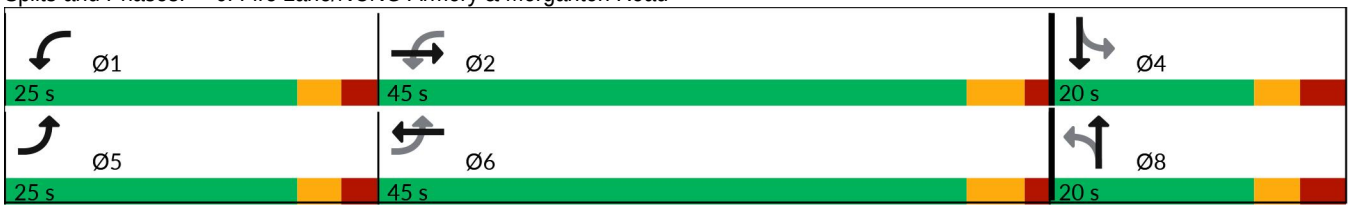


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1532	23	31	1233	4	27	4	24	4	4	4
Future Volume (vph)	4	1532	23	31	1233	4	27	4	24	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3522	0	0	1702	0	0	1750	0
Flt Permitted	0.169			0.094				0.838			0.886	
Satd. Flow (perm)	310	3479	0	174	3522	0	0	1462	0	0	1576	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						26			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1672	0	33	1330	0	0	59	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	52.0	50.6		51.1	52.9			8.6			8.6	
Actuated g/C Ratio	0.79	0.77		0.78	0.80			0.13			0.13	
v/c Ratio	0.01	0.63		0.11	0.47			0.28			0.06	
Control Delay (s/veh)	2.8	9.7		3.5	5.7			21.8			23.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	2.8	9.7		3.5	5.7			21.8			23.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			C			C	
Approach Delay (s/veh)		9.7			5.7			21.8			23.8	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)	0	142		3	94			12			3	
Queue Length 95th (ft)	2	#423		9	275			45			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	687	2675		625	2831			355			364	
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	0.01	0.63		0.05	0.47			0.17			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 65.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay (s/veh): 8.2		Intersection LOS: A	
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	4	17	12	4	9	28	485	19	15	414	19
Future Volume (vph)	13	4	17	12	4	9	28	485	19	15	414	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			4%			4%	
Storage Length (ft)	0		0	0		0	100		0	125		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			100		
Satd. Flow (prot)	0	1701	0	0	1727	0	1734	3448	0	1734	3444	0
Flt Permitted		0.981			0.976		0.950			0.950		
Satd. Flow (perm)	0	1701	0	0	1727	0	1734	3448	0	1734	3444	0
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		228			329			680			819	
Travel Time (s)		6.2			9.0			13.2			16.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	27	0	31	560	0	17	481	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	4	17	12	4	9	28	485	19	15	414	19
Future Vol, veh/h	13	4	17	12	4	9	28	485	19	15	414	19
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	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	4	-	-	4	-
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	14	4	19	13	4	10	31	539	21	17	460	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	839	1127	241	878	1127	280	481	0	0	560	0	0
Stage 1	505	505	-	612	612	-	-	-	-	-	-	-
Stage 2	334	622	-	266	515	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	259	203	760	242	203	717	1078	-	-	1007	-	-
Stage 1	518	539	-	447	482	-	-	-	-	-	-	-
Stage 2	653	477	-	716	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	242	194	760	224	194	717	1078	-	-	1007	-	-
Mov Cap-2 Maneuver	242	194	-	224	194	-	-	-	-	-	-	-
Stage 1	503	530	-	434	468	-	-	-	-	-	-	-
Stage 2	619	463	-	681	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	16.5	18.8	0.4	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1078	-	-	352	288	1007	-	-
HCM Lane V/C Ratio	0.029	-	-	0.107	0.096	0.017	-	-
HCM Control Delay (s/veh)	8.4	-	-	16.5	18.8	8.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q (veh)	0.1	-	-	0.4	0.3	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	0	58	0	0	70	42	19	113	26	42	112
Future Volume (vph)	0	0	58	0	0	70	42	19	113	26	42	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%				4%			4%
Storage Length (ft)	0		0	0		0		100		0	100	
Storage Lanes	0		1	0		1		1		0	1	
Taper Length (ft)	25			25				100			100	
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1734	3371	0	1734	3437
Flt Permitted								0.950			0.950	
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1734	3371	0	1734	3437
Link Speed (mph)		25			30				35			35
Link Distance (ft)		182			223				819			532
Travel Time (s)		5.0			5.1				16.0			10.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	64	0	0	78	0	68	155	0	47	132
Sign Control		Stop			Stop				Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	7
Future Volume (vph)	7
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Sign Control	

Intersection Summary

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	58	0	0	70	42	19	113	26	42	112	7
Future Vol, veh/h	0	0	58	0	0	70	42	19	113	26	42	112	7
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	4	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	0	0	64	0	0	78	47	21	126	29	47	124	8

Major/Minor	Minor2			Minor1			Major1				Major2		
Conflicting Flow All	-	-	66	-	-	78	132	132	0	0	155	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	6.44	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.52	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	984	0	0	967	1181	1451	-	-	1423	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	-	-	984	-	-	967	1198	1198	-	-	1423	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.9	9	2.5	2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1198	-	-	984	967	1423	-	-
HCM Lane V/C Ratio	0.057	-	-	0.065	0.08	0.033	-	-
HCM Control Delay (s/veh)	8.2	-	-	8.9	9	7.6	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q (veh)	0.2	-	-	0.2	0.3	0.1	-	-

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Volume (vph)	50	7	20	56	4	8
Future Volume (vph)	50	7	20	56	4	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Satd. Flow (prot)	1831	0	0	1839	1664	0
Flt Permitted				0.987	0.985	
Satd. Flow (perm)	1831	0	0	1839	1664	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	212			159	176	
Travel Time (s)	5.8			4.3	4.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	84	13	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	50	7	20	56	4	8
Future Vol, veh/h	50	7	20	56	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	56	8	22	62	4	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	64	0	166	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	106	-
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	-	-	1538	-	824	1005
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1538	-	812	1005
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	904	-

Approach	EB	WB	NE
HCM Control Delay, s/v	0	1.9	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	931	-	-	1538	-
HCM Lane V/C Ratio	0.014	-	-	0.014	-
HCM Control Delay (s/veh)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q (veh)	0	-	-	0	-

Appendix K:
Synchro Output:
Build-Out (2034)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	26	4	143	4	149	29	72	204	4
Future Volume (vph)	4	5	5	26	4	143	4	149	29	72	204	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1749	0	1770	1591	0	0	3366	0	1770	3529	0
Flt Permitted		0.986		0.950				0.999		0.950		
Satd. Flow (perm)	0	1749	0	1770	1591	0	0	3366	0	1770	3529	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	28	158	0	0	195	0	77	223	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	5	5	26	4	143	4	149	29	72	204	4
Future Vol, veh/h	4	5	5	26	4	143	4	149	29	72	204	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	3	3	3	2	2	2
Mvmt Flow	4	5	5	28	4	154	4	160	31	77	219	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	465	574	112	450	561	96	223	0	0	191	0	0
Stage 1	375	375	-	184	184	-	-	-	-	-	-	-
Stage 2	90	199	-	266	377	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.23	-	-	2.22	-	-
Pot Cap-1 Maneuver	481	428	920	493	435	942	1336	-	-	1380	-	-
Stage 1	618	615	-	800	746	-	-	-	-	-	-	-
Stage 2	907	735	-	716	614	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	381	403	920	463	409	942	1336	-	-	1380	-	-
Mov Cap-2 Maneuver	381	403	-	463	409	-	-	-	-	-	-	-
Stage 1	616	581	-	798	744	-	-	-	-	-	-	-
Stage 2	752	733	-	666	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.5	10.3	0.2	2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	494	463	910	1380	-	-
HCM Lane V/C Ratio	0.003	-	-	0.03	0.06	0.174	0.056	-	-
HCM Control Delay (s/veh)	7.7	0	-	12.5	13.3	9.8	7.8	-	-
HCM Lane LOS	A	A	-	B	B	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.2	0.6	0.2	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	44	145	10	31	5
Future Volume (vph)	4	44	145	10	31	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1846	0	1751	0
Flt Permitted	0.950				0.959	
Satd. Flow (perm)	1770	1863	1846	0	1751	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	49	172	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	44	145	10	31	5
Future Vol, veh/h	4	44	145	10	31	5
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	-	-	-	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	49	161	11	34	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	172	0	-	0	224	167
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	57	-
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	1405	-	-	-	764	877
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1405	-	-	-	762	877
Mov Cap-2 Maneuver	-	-	-	-	762	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1405	-	-	-	776
HCM Lane V/C Ratio	0.003	-	-	-	0.052
HCM Control Delay (s/veh)	7.6	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q (veh)	0	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	809	25	47	867	227	0	0	24	0	0	42
Future Volume (vph)	0	809	25	47	867	227	0	0	24	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1580	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	852	26	49	913	239	0	0	25	0	0	44
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	809	25	47	867	227	0	0	24	0	0	42
Future Vol, veh/h	0	809	25	47	867	227	0	0	24	0	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	4	2	2	2
Mvmt Flow	0	852	26	49	913	239	0	0	25	0	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	878	0	0	-	-	426	-	-	457
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.98	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.34	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	765	-	-	0	0	571	0	0	551
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	765	-	-	-	-	571	-	-	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0.4	11.6	12.1
HCM LOS			B	B

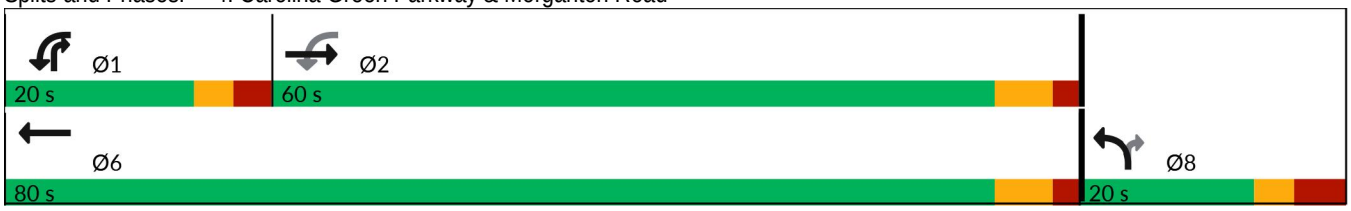
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	-	-	765	-	-	551
HCM Lane V/C Ratio	0.044	-	-	0.065	-	-	0.08
HCM Control Delay (s/veh)	11.6	-	-	10	-	-	12.1
HCM Lane LOS	B	-	-	B	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	0.2	-	-	0.3

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	700	134	243	1099	66	203
Future Volume (vph)	700	134	243	1099	66	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3402	0	1734	3468	1734	1552
Flt Permitted			0.252		0.950	
Satd. Flow (perm)	3402	0	460	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	35					196
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	860	0	251	1133	68	209
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	60.0		20.0	80.0	20.0	20.0
Total Split (%)	60.0%		20.0%	80.0%	20.0%	20.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	22.1		31.8	40.3	10.3	17.1
Actuated g/C Ratio	0.44		0.63	0.80	0.21	0.34
v/c Ratio	0.57		0.47	0.41	0.19	0.32
Control Delay (s/veh)	12.9		7.1	4.1	24.3	4.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.9		7.1	4.1	24.3	4.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	B		A	A	C	A
Approach Delay (s/veh)	12.9			4.6	9.3	
Approach LOS	B			A	A	
Queue Length 50th (ft)	106		26	79	20	3
Queue Length 95th (ft)	181		56	130	57	36
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	3210		757	3468	568	839
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.27		0.33	0.33	0.12	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 50.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 7.9		Intersection LOS: A	
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	875	1311	22	10	38
Future Volume (vph)	36	875	1311	22	10	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3620	0	1647	0
Flt Permitted	0.950				0.990	
Satd. Flow (perm)	1734	3468	3620	0	1647	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	893	1360	0	49	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.9%		ICU Level of Service A	
Analysis Period (min) 15			

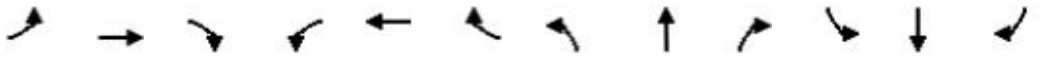
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	875	1311	22	10	38
Future Vol, veh/h	36	875	1311	22	10	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	4	-5	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	893	1338	22	10	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1360	0	-	0	1870	680
Stage 1	-	-	-	-	1349	-
Stage 2	-	-	-	-	521	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	501	-	-	-	64	393
Stage 1	-	-	-	-	206	-
Stage 2	-	-	-	-	561	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	501	-	-	-	59	393
Mov Cap-2 Maneuver	-	-	-	-	149	-
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	561	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	501	-	-	-	293
HCM Lane V/C Ratio	0.073	-	-	-	0.167
HCM Control Delay (s/veh)	12.8	-	-	-	19.7
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q (veh)	0.2	-	-	-	0.6

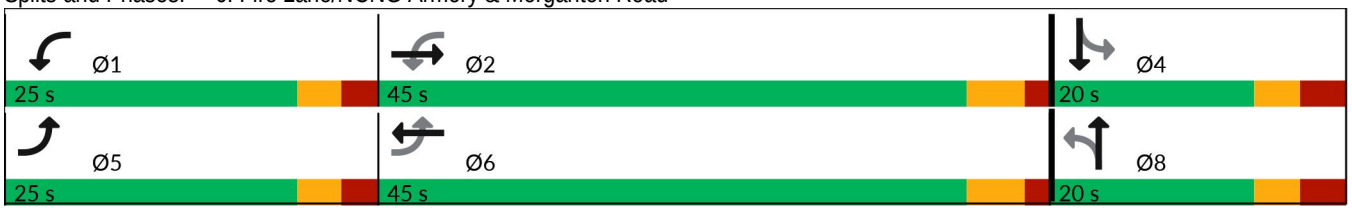


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	874	14	18	1314	4	23	4	16	4	4	4
Future Volume (vph)	4	874	14	18	1314	4	23	4	16	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3522	0	0	1605	0	0	1750	0
Flt Permitted	0.146			0.286				0.824			0.872	
Satd. Flow (perm)	268	3479	0	530	3522	0	0	1359	0	0	1551	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						16			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	9%	9%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	915	0	19	1359	0	0	44	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	33.8	35.9		33.8	35.9			9.2			9.2	
Actuated g/C Ratio	0.72	0.77		0.72	0.77			0.20			0.20	
v/c Ratio	0.01	0.34		0.03	0.50			0.16			0.04	
Control Delay (s/veh)	3.3	5.3		3.3	6.6			18.5			19.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	3.3	5.3		3.3	6.6			18.5			19.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	A			B			B	
Approach Delay (s/veh)		5.3			6.6			18.5			19.7	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	0	54		2	97			8			2	
Queue Length 95th (ft)	2	161		6	282			39			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	893	2903		970	2938			491			551	
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	0.00	0.32		0.02	0.46			0.09			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 46.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay (s/veh): 6.3		Intersection LOS: A	
Intersection Capacity Utilization 50.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	22	4	27	31	4	25	8	244	12	136	9	261
Future Volume (vph)	22	4	27	31	4	25	8	244	12	136	9	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			4%				4%
Storage Length (ft)	0		0	0		0	100		0		125	
Storage Lanes	0		0	0		0	1		0		1	
Taper Length (ft)	25			25			100				100	
Satd. Flow (prot)	0	1698	0	0	1713	0	1734	3444	0	0	1734	3455
Flt Permitted		0.980			0.975		0.950				0.950	
Satd. Flow (perm)	0	1698	0	0	1713	0	1734	3444	0	0	1734	3455
Link Speed (mph)		25			25			35				35
Link Distance (ft)		230			329			680				819
Travel Time (s)		6.3			9.0			13.2				16.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	66	0	9	284	0	0	161	297
Sign Control		Stop			Stop			Free				Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	22	4	27	31	4	25	8	244	12	136	9	261	6
Future Vol, veh/h	22	4	27	31	4	25	8	244	12	136	9	261	6
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	4	-	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	24	4	30	34	4	28	9	271	13	151	10	290	7

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	772	918	149	765	915	142	297	0	0	284	284	0	0
Stage 1	616	616	-	296	296	-	-	-	-	-	-	-	-
Stage 2	156	302	-	469	619	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	289	270	871	293	271	880	1261	-	-	948	1275	-	-
Stage 1	445	480	-	688	667	-	-	-	-	-	-	-	-
Stage 2	831	663	-	544	478	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	238	222	871	241	223	880	1261	-	-	937	937	-	-
Mov Cap-2 Maneuver	238	222	-	241	223	-	-	-	-	-	-	-	-
Stage 1	442	397	-	683	662	-	-	-	-	-	-	-	-
Stage 2	794	658	-	430	396	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	16.4	18	0.2	3.4
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	375	343	937	-	-
HCM Lane V/C Ratio	0.007	-	-	0.157	0.194	0.172	-	-
HCM Control Delay (s/veh)	7.9	-	-	16.4	18	9.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q (veh)	0	-	-	0.6	0.7	0.6	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	0	220	0	0	46	30	80	269	47	67	162
Future Volume (vph)	0	0	220	0	0	46	30	80	269	47	67	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%				4%			4%
Storage Length (ft)	0		0	0		0		100		0	100	
Storage Lanes	0		1	0		1		1		0	1	
Taper Length (ft)	25			25				100			100	
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1734	3392	0	1734	3167
Flt Permitted								0.950			0.950	
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1734	3392	0	1734	3167
Link Speed (mph)		25			30				35			35
Link Distance (ft)		182			216				819			532
Travel Time (s)		5.0			4.9				16.0			10.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	244	0	0	51	0	122	351	0	74	426
Sign Control		Stop			Stop				Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	220	0	0	46	30	80	269	47	67	162	221
Future Vol, veh/h	0	0	220	0	0	46	30	80	269	47	67	162	221
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	4	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	0	0	244	0	0	51	33	89	299	52	74	180	246

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	-	-	213	-	-	176	426	426	0	0	351	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	6.44	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.52	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	792	0	0	837	771	1130	-	-	1204	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	-	-	792	-	-	837	882	882	-	-	1204	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.6	9.6	2.5	1.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	882	-	-	792	837	1204	-	-
HCM Lane V/C Ratio	0.139	-	-	0.309	0.061	0.062	-	-
HCM Control Delay (s/veh)	9.7	-	-	11.6	9.6	8.2	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q (veh)	0.5	-	-	1.3	0.2	0.2	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	68	85	215	152	91
Future Volume (vph)	36	68	85	215	152	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1831	1682	0	1715	0
Flt Permitted		0.983			0.970	
Satd. Flow (perm)	0	1831	1682	0	1715	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		159	182		187	
Travel Time (s)		4.3	5.0		5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	116	333	0	270	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	68	85	215	152	91
Future Vol, veh/h	36	68	85	215	152	91
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	40	76	94	239	169	101

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	333	0	-	0	370	214
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	156	-
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	1226	-	-	-	630	826
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1226	-	-	-	609	826
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	872	-

Approach	EB	WB	SB
HCM Control Delay, s/v	2.8	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1226	-	-	-	675
HCM Lane V/C Ratio	0.033	-	-	-	0.4
HCM Control Delay (s/veh)	8	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q (veh)	0.1	-	-	-	1.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	76	4	5	148	23	7	4	12	16	4	12
Future Volume (vph)	6	76	4	5	148	23	7	4	12	16	4	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1844	0	0	1826	0	0	1705	0	0	1725	0
Flt Permitted		0.996			0.998			0.984			0.975	
Satd. Flow (perm)	0	1844	0	0	1826	0	0	1705	0	0	1725	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		212			159			176			171	
Travel Time (s)		5.8			4.3			4.8			4.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	196	0	0	25	0	0	35	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	76	4	5	148	23	7	4	12	16	4	12
Future Vol, veh/h	6	76	4	5	148	23	7	4	12	16	4	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	7	84	4	6	164	26	8	4	13	18	4	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	190	0	0	88	0	0	298	302	86	298	291	177
Stage 1	-	-	-	-	-	-	100	100	-	189	189	-
Stage 2	-	-	-	-	-	-	198	202	-	109	102	-
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	1384	-	-	1508	-	-	654	611	973	654	619	866
Stage 1	-	-	-	-	-	-	906	812	-	813	744	-
Stage 2	-	-	-	-	-	-	804	734	-	896	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1384	-	-	1508	-	-	636	606	973	637	613	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	636	606	-	637	613	-
Stage 1	-	-	-	-	-	-	901	808	-	809	741	-
Stage 2	-	-	-	-	-	-	784	731	-	874	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.5	0.2	9.8	10.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	768	1384	-	-	1508	-	-	703
HCM Lane V/C Ratio	0.033	0.005	-	-	0.004	-	-	0.051
HCM Control Delay (s/veh)	9.8	7.6	0	-	7.4	0	-	10.4
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	133	8	26	4	9	64	16	16	4
Future Volume (vph)	4	4	6	133	8	26	4	9	64	16	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1723	0	0	1754	0	0	1649	0	0	1796	0
Flt Permitted		0.987			0.962			0.998			0.978	
Satd. Flow (perm)	0	1723	0	0	1754	0	0	1649	0	0	1796	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		240			212			530			199	
Travel Time (s)		6.5			5.8			14.5			5.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	186	0	0	85	0	0	40	0
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	3.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	15	186	85	40
Demand Flow Rate, veh/h	15	190	86	40
Vehicles Circulating, veh/h	187	18	26	164
Vehicles Exiting, veh/h	17	94	176	44
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.9	3.2	3.4
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	15	190	86	40
Cap Entry Lane, veh/h	1140	1355	1344	1167
Entry HV Adj Factor	0.995	0.978	0.986	0.991
Flow Entry, veh/h	15	186	85	40
Cap Entry, veh/h	1134	1325	1325	1157
V/C Ratio	0.013	0.140	0.064	0.034
Control Delay, s/veh	3.3	3.9	3.2	3.4
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	9	22	53	5	220	4	342	58	156	448	4
Future Volume (vph)	18	9	22	53	5	220	4	342	58	156	448	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			3%			0%	
Storage Length (ft)	0		0	50		0	0		0	50		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			75		
Satd. Flow (prot)	0	1719	0	1770	1591	0	0	3413	0	1770	3536	0
Flt Permitted		0.982		0.950						0.950		
Satd. Flow (perm)	0	1719	0	1770	1591	0	0	3413	0	1770	3536	0
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		333			1281			754			501	
Travel Time (s)		6.5			34.9			14.7			9.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	59	250	0	0	448	0	173	502	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	9	22	53	5	220	4	342	58	156	448	4
Future Vol, veh/h	18	9	22	53	5	220	4	342	58	156	448	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	3	-	-	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	20	10	24	59	6	244	4	380	64	173	498	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1047	1298	251	1020	1268	222	502	0	0	444	0	0
Stage 1	846	846	-	420	420	-	-	-	-	-	-	-
Stage 2	201	452	-	600	848	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	182	160	749	191	167	782	1059	-	-	1112	-	-
Stage 1	323	377	-	581	588	-	-	-	-	-	-	-
Stage 2	782	569	-	455	376	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	134	749	153	140	782	1059	-	-	1112	-	-
Mov Cap-2 Maneuver	106	134	-	153	140	-	-	-	-	-	-	-
Stage 1	321	318	-	578	585	-	-	-	-	-	-	-
Stage 2	530	566	-	360	317	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	32.6	18.5	0.1	2.3
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	184	153	710	1112	-	-
HCM Lane V/C Ratio	0.004	-	-	0.296	0.385	0.352	0.156	-	-
HCM Control Delay (s/veh)	8.4	0	-	32.6	42.5	12.8	8.8	-	-
HCM Lane LOS	A	A	-	D	E	B	A	-	-
HCM 95th %tile Q (veh)	0	-	-	1.2	1.6	1.6	0.6	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	57	165	25	42	11
Future Volume (vph)	10	57	165	25	42	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1770	1863	1829	0	1744	0
Flt Permitted	0.950				0.962	
Satd. Flow (perm)	1770	1863	1829	0	1744	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		1281	530		734	
Travel Time (s)		34.9	14.5		20.0	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	63	211	0	59	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

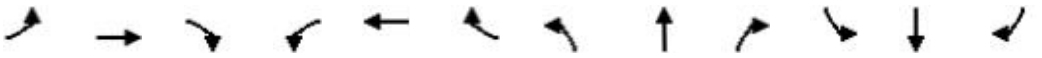
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	57	165	25	42	11
Future Vol, veh/h	10	57	165	25	42	11
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	-	-	-	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	11	63	183	28	47	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	211	0	-	0	282	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	85	-
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	1360	-	-	-	708	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	938	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1360	-	-	-	702	844
Mov Cap-2 Maneuver	-	-	-	-	702	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	938	-

Approach	EB	WB	SB
HCM Control Delay, s/v	1.1	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1360	-	-	-	727
HCM Lane V/C Ratio	0.008	-	-	-	0.081
HCM Control Delay (s/veh)	7.7	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q (veh)	0	-	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1313	33	101	927	103	0	0	130	0	0	225
Future Volume (vph)	0	1313	33	101	927	103	0	0	130	0	0	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			-5%			0%			0%	
Storage Length (ft)	0		225	225		200	0		0	0		0
Storage Lanes	0		1	1		1	0		1	0		1
Taper Length (ft)	25			150			25			25		
Satd. Flow (prot)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Flt Permitted				0.950								
Satd. Flow (perm)	0	3539	1583	1814	3628	1623	0	0	1611	0	0	1611
Link Speed (mph)		45			45			25			25	
Link Distance (ft)		796			1335			734			449	
Travel Time (s)		12.1			20.2			20.0			12.2	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1397	35	107	986	110	0	0	138	0	0	239
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑	↱			↱			↱
Traffic Vol, veh/h	0	1313	33	101	927	103	0	0	130	0	0	225
Future Vol, veh/h	0	1313	33	101	927	103	0	0	130	0	0	225
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	-	-	225	225	-	200	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	-5	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1397	35	107	986	110	0	0	138	0	0	239

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1432	0	0	-	-	699	-	-	493
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	470	-	-	0	0	382	0	0	522
Stage 1	0	-	-	-	-	-	0	0	-	0	0	-
Stage 2	0	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	470	-	-	-	-	382	-	-	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	1.3	19.7	17.6
HCM LOS			C	C

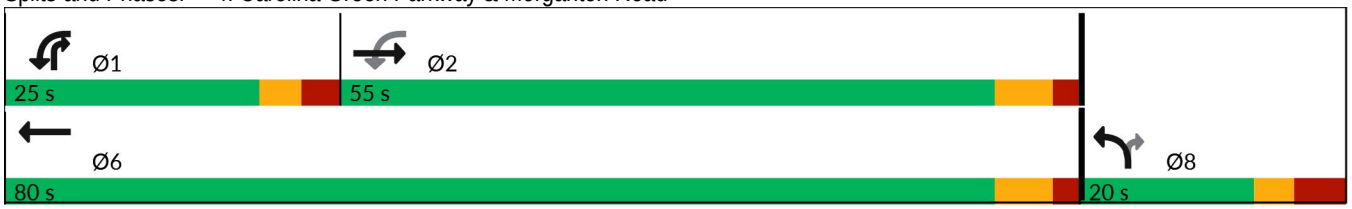
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	-	-	470	-	-	522
HCM Lane V/C Ratio	0.362	-	-	0.229	-	-	0.459
HCM Control Delay (s/veh)	19.7	-	-	14.9	-	-	17.6
HCM Lane LOS	C	-	-	B	-	-	C
HCM 95th %tile Q (veh)	1.6	-	-	0.9	-	-	2.4

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1236	212	288	995	157	370
Future Volume (vph)	1236	212	288	995	157	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	3%			4%	4%	
Storage Length (ft)		0	150		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			100		25	
Satd. Flow (prot)	3409	0	1734	3468	1734	1552
Flt Permitted			0.089		0.950	
Satd. Flow (perm)	3409	0	162	3468	1734	1552
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	28					31
Link Speed (mph)	45			45	35	
Link Distance (ft)	1335			399	532	
Travel Time (s)	20.2			6.0	10.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1541	0	306	1059	167	394
Turn Type	NA		D.P+P	NA	Prot	pm+ov
Protected Phases	2		1	6	8	1
Permitted Phases			2			8
Detector Phase	2		1	6	8	1
Switch Phase						
Minimum Initial (s)	12.0		7.0	12.0	7.0	7.0
Minimum Split (s)	41.2		12.9	24.2	32.9	12.9
Total Split (s)	55.0		25.0	80.0	20.0	25.0
Total Split (%)	55.0%		25.0%	80.0%	20.0%	25.0%
Yellow Time (s)	4.3		3.0	4.3	3.0	3.0
All-Red Time (s)	1.9		2.9	1.9	3.9	2.9
Lost Time Adjust (s)	-1.2		-0.9	-1.2	-1.9	-0.9
Total Lost Time (s)	5.0		5.0	5.0	5.0	5.0
Lead/Lag	Lag		Lead			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Recall Mode	Min		None	Min	None	None
Act Effct Green (s)	45.1		61.3	66.4	13.3	34.6
Actuated g/C Ratio	0.50		0.68	0.74	0.15	0.38
v/c Ratio	0.89		0.78	0.41	0.65	0.64
Control Delay (s/veh)	28.7		36.7	5.0	51.1	26.5
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay (s/veh)	28.7		36.7	5.0	51.1	26.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
LOS	C		D	A	D	C
Approach Delay (s/veh)	28.7			12.1	33.8	
Approach LOS	C			B	C	
Queue Length 50th (ft)	427		123	105	100	179
Queue Length 95th (ft)	#570		#223	134	m#174	m281
Internal Link Dist (ft)	1255			319	452	
Turn Bay Length (ft)			150			
Base Capacity (vph)	1951		472	2876	296	688
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.79		0.65	0.37	0.56	0.57

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 90			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay (s/veh): 23.0		Intersection LOS: C	
Intersection Capacity Utilization 78.1%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Carolina Green Parkway & Morganton Road



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	72	1572	1247	47	19	44
Future Volume (vph)	72	1572	1247	47	19	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		4%	-5%		0%	
Storage Length (ft)	50			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Satd. Flow (prot)	1734	3468	3610	0	1660	0
Flt Permitted	0.950				0.985	
Satd. Flow (perm)	1734	3468	3610	0	1660	0
Link Speed (mph)		45	45		35	
Link Distance (ft)		399	580		501	
Travel Time (s)		6.0	8.8		9.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	77	1690	1392	0	67	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

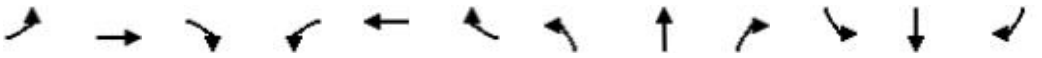
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	72	1572	1247	47	19	44
Future Vol, veh/h	72	1572	1247	47	19	44
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, %	-	4	-5	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	1690	1341	51	20	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1392	0	-	0	2366	696
Stage 1	-	-	-	-	1367	-
Stage 2	-	-	-	-	999	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	487	-	-	-	29	384
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	317	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	487	-	-	-	24	384
Mov Cap-2 Maneuver	-	-	-	-	111	-
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	317	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.6	0	28.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	487	-	-	-	220
HCM Lane V/C Ratio	0.159	-	-	-	0.308
HCM Control Delay (s/veh)	13.8	-	-	-	28.5
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q (veh)	0.6	-	-	-	1.3

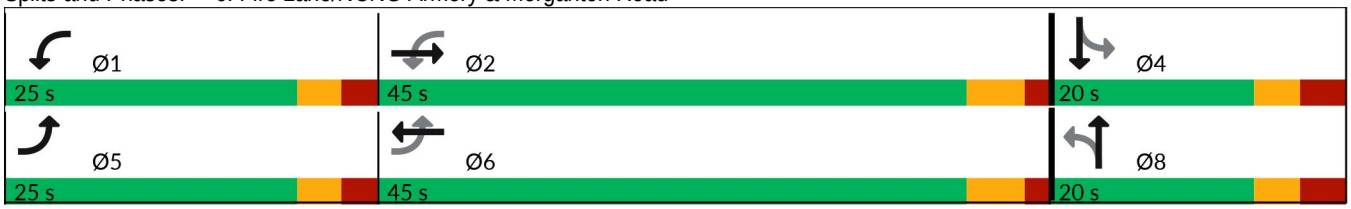


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1568	23	31	1268	4	27	4	24	4	4	4
Future Volume (vph)	4	1568	23	31	1268	4	27	4	24	4	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		3%			1%			1%			0%	
Storage Length (ft)	100		0	125		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			125			25			25		
Satd. Flow (prot)	1743	3479	0	1761	3522	0	0	1702	0	0	1750	0
Flt Permitted	0.160			0.088				0.838			0.886	
Satd. Flow (perm)	294	3479	0	163	3522	0	0	1462	0	0	1576	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						26			4	
Link Speed (mph)		45			45			20			30	
Link Distance (ft)		580			999			499			163	
Travel Time (s)		8.8			15.1			17.0			3.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	1711	0	33	1367	0	0	59	0	0	12	0
Turn Type	D.P+P	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	6			2			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	13.0	16.0		13.0	16.0		14.0	14.0		14.0	14.0	
Total Split (s)	25.0	45.0		25.0	45.0		20.0	20.0		20.0	20.0	
Total Split (%)	27.8%	50.0%		27.8%	50.0%		22.2%	22.2%		22.2%	22.2%	
Yellow Time (s)	3.0	3.8		3.0	3.8		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	1.6		2.3	1.6		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	-0.3	-0.4		-0.3	-0.4			-1.1			-1.1	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	52.0	50.6		51.1	52.9			8.6			8.6	
Actuated g/C Ratio	0.79	0.77		0.78	0.80			0.13			0.13	
v/c Ratio	0.01	0.64		0.11	0.48			0.28			0.06	
Control Delay (s/veh)	2.8	10.1		3.5	5.8			21.8			23.8	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay (s/veh)	2.8	10.1		3.5	5.8			21.8			23.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B		A	A			C			C	
Approach Delay (s/veh)		10.1			5.8			21.8			23.8	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)	0	148		3	98			12			3	
Queue Length 95th (ft)	2	#469		9	288			45			17	
Internal Link Dist (ft)		500			919			419			83	
Turn Bay Length (ft)	100			125								
Base Capacity (vph)	679	2675		620	2831			355			364	
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	0.01	0.64		0.05	0.48			0.17			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 65.8			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 8.5		Intersection LOS: A	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	13	4	17	12	4	9	28	519	19	145	15	449
Future Volume (vph)	13	4	17	12	4	9	28	519	19	145	15	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			4%				4%
Storage Length (ft)	0		0	0		0	100		0		125	
Storage Lanes	0		0	0		0	1		0		1	
Taper Length (ft)	25			25			100				100	
Satd. Flow (prot)	0	1701	0	0	1727	0	1734	3451	0	0	1734	3448
Flt Permitted		0.981			0.976		0.950				0.950	
Satd. Flow (perm)	0	1701	0	0	1727	0	1734	3451	0	0	1734	3448
Link Speed (mph)		25			25			35				35
Link Distance (ft)		233			329			680				819
Travel Time (s)		6.4			9.0			13.2				16.0
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	37	0	0	27	0	31	598	0	0	178	520
Sign Control		Stop			Stop			Free				Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	19
Future Volume (vph)	19
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Sign Control	

Intersection Summary

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	13	4	17	12	4	9	28	519	19	145	15	449	19
Future Vol, veh/h	13	4	17	12	4	9	28	519	19	145	15	449	19
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	125	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	4	-	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	14	4	19	13	4	10	31	577	21	161	17	499	21

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	1219	1526	260	1258	1526	299	520	0	0	598	598	0	0
Stage 1	866	866	-	650	650	-	-	-	-	-	-	-	-
Stage 2	353	660	-	608	876	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	136	117	739	128	117	697	1042	-	-	600	975	-	-
Stage 1	314	369	-	424	463	-	-	-	-	-	-	-	-
Stage 2	637	458	-	450	365	-	-	-	-	-	-	-	-
Platoon blocked, %								-	-			-	-
Mov Cap-1 Maneuver	98	81	739	91	81	697	1042	-	-	615	615	-	-
Mov Cap-2 Maneuver	98	81	-	91	81	-	-	-	-	-	-	-	-
Stage 1	305	262	-	411	449	-	-	-	-	-	-	-	-
Stage 2	603	444	-	306	259	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	33	40.4	0.4	3.4
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1042	-	-	166	129	615	-	-
HCM Lane V/C Ratio	0.03	-	-	0.228	0.215	0.289	-	-
HCM Control Delay (s/veh)	8.6	-	-	33	40.4	13.2	-	-
HCM Lane LOS	A	-	-	D	E	B	-	-
HCM 95th %tile Q (veh)	0.1	-	-	0.8	0.8	1.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	0	254	0	0	70	42	118	538	26	42	333
Future Volume (vph)	0	0	254	0	0	70	42	118	538	26	42	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%				4%			4%
Storage Length (ft)	0		0	0		0		100		0	100	
Storage Lanes	0		1	0		1		1		0	1	
Taper Length (ft)	25			25				100			100	
Satd. Flow (prot)	0	0	1611	0	0	1611	0	1734	1813	0	1734	3253
Flt Permitted								0.950			0.950	
Satd. Flow (perm)	0	0	1611	0	0	1611	0	1734	1813	0	1734	3253
Link Speed (mph)		25			25				35			35
Link Distance (ft)		182			187				819			532
Travel Time (s)		5.0			5.1				16.0			10.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	282	0	0	78	0	178	627	0	47	634
Sign Control		Stop			Stop				Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	SBR
Lane Configurations	
Traffic Volume (vph)	238
Future Volume (vph)	238
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	2%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Sign Control	

Intersection Summary

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations													
Traffic Vol, veh/h	0	0	254	0	0	70	42	118	538	26	42	333	238
Future Vol, veh/h	0	0	254	0	0	70	42	118	538	26	42	333	238
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	4	-	-	4	-
Peak Hour Factor	90	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	2
Mvmt Flow	0	0	282	0	0	78	47	131	598	29	47	370	264

Major/Minor	Minor2			Minor1			Major1			Major2			
Conflicting Flow All	-	-	317	-	-	613	634	634	0	0	627	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.93	-	-	6.23	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.319	-	-	3.319	3.119	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	0	0	680	0	0	492	443	947	-	-	953	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-		-	-
Mov Cap-1 Maneuver	-	-	680	-	-	492	580	580	-	-	953	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	14	13.7	3.1	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	580	-	-	680	492	953	-	-
HCM Lane V/C Ratio	0.307	-	-	0.415	0.158	0.049	-	-
HCM Control Delay (s/veh)	13.9	-	-	14	13.7	9	-	-
HCM Lane LOS	B	-	-	B	B	A	-	-
HCM 95th %tile Q (veh)	1.3	-	-	2	0.6	0.2	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	29	92	124	232	162	101
Future Volume (vph)	29	92	124	232	162	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	0			0	0	0
Storage Lanes	0			0	1	0
Taper Length (ft)	25				25	
Satd. Flow (prot)	0	1840	1699	0	1713	0
Flt Permitted		0.988			0.970	
Satd. Flow (perm)	0	1840	1699	0	1713	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		159	182		187	
Travel Time (s)		4.3	5.0		5.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	134	396	0	292	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	92	124	232	162	101
Future Vol, veh/h	29	92	124	232	162	101
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	32	102	138	258	180	112

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	396	0	-	0	433	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	166	-
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	1163	-	-	-	580	772
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1163	-	-	-	563	772
Mov Cap-2 Maneuver	-	-	-	-	563	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	SB
HCM Control Delay, s/v	2	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1163	-	-	-	628
HCM Lane V/C Ratio	0.028	-	-	-	0.465
HCM Control Delay (s/veh)	8.2	0	-	-	15.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0.1	-	-	-	2.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	96	7	20	184	21	4	4	8	17	4	10
Future Volume (vph)	5	96	7	20	184	21	4	4	8	17	4	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1842	0	0	1833	0	0	1710	0	0	1733	0
Flt Permitted		0.998			0.996			0.988			0.973	
Satd. Flow (perm)	0	1842	0	0	1833	0	0	1710	0	0	1733	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		212			159			167			171	
Travel Time (s)		5.8			4.3			4.6			4.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	0	0	249	0	0	17	0	0	34	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

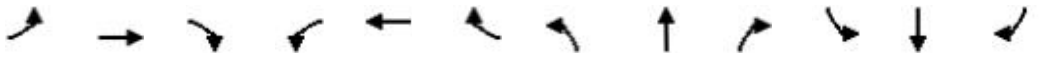
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	96	7	20	184	21	4	4	8	17	4	10
Future Vol, veh/h	5	96	7	20	184	21	4	4	8	17	4	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	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	107	8	22	204	23	4	4	9	19	4	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	227	0	0	115	0	0	390	394	111	390	387	216
Stage 1	-	-	-	-	-	-	123	123	-	260	260	-
Stage 2	-	-	-	-	-	-	267	271	-	130	127	-
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	1341	-	-	1474	-	-	569	542	942	569	547	824
Stage 1	-	-	-	-	-	-	881	794	-	745	693	-
Stage 2	-	-	-	-	-	-	738	685	-	874	791	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1341	-	-	1474	-	-	549	530	942	551	535	824
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	530	-	551	535	-
Stage 1	-	-	-	-	-	-	877	790	-	741	681	-
Stage 2	-	-	-	-	-	-	711	673	-	857	787	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.4	0.7	10.4	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	686	1341	-	-	1474	-	-	614
HCM Lane V/C Ratio	0.026	0.004	-	-	0.015	-	-	0.056
HCM Control Delay (s/veh)	10.4	7.7	0	-	7.5	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	5	171	7	20	4	6	91	14	14	4
Future Volume (vph)	4	4	5	171	7	20	4	6	91	14	14	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1730	0	0	1761	0	0	1632	0	0	1794	0
Flt Permitted		0.986			0.959			0.998			0.978	
Satd. Flow (perm)	0	1730	0	0	1761	0	0	1632	0	0	1794	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		240			212			530			199	
Travel Time (s)		6.5			5.8			14.5			5.4	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	220	0	0	112	0	0	36	0
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Roundabout			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	14	220	112	36
Demand Flow Rate, veh/h	14	224	114	36
Vehicles Circulating, veh/h	226	15	24	206
Vehicles Exiting, veh/h	16	123	216	33
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.4	4.1	3.4	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	14	224	114	36
Cap Entry Lane, veh/h	1096	1359	1346	1118
Entry HV Adj Factor	0.994	0.981	0.981	0.991
Flow Entry, veh/h	14	220	112	36
Cap Entry, veh/h	1090	1334	1321	1109
V/C Ratio	0.013	0.165	0.085	0.032
Control Delay, s/veh	3.4	4.1	3.4	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Appendix L:
Signal Plans and Timings

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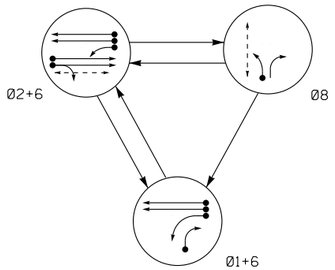
PROJECT REFERENCE NO.	SHEET NO.
Pine Ridge	Sig. 2.0

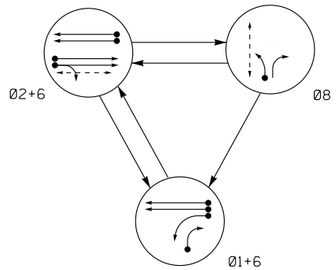
DEFAULT PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø8	PHASE FLASH
11	←	F Y	~~R~~	~~Y~~
21,22	R	G	R	Y
61,62	G	G	R	Y
81	~~R~~	~~R~~	F Y	~~R~~
82,83	F Y	R	F Y	R
P21,P22	DW	W	DW	DRK
P81,P82	DW	DW	W	DRK

ALTERNATE PHASING DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	PHASE Ø2+6	PHASE Ø8	PHASE FLASH
11	←	~~R~~	~~R~~	~~Y~~
21,22	R	G	R	Y
61,62	G	G	R	Y
81	~~R~~	~~R~~	F Y	~~R~~
82,83	F Y	R	F Y	R
P21,P22	DW	W	DW	DRK
P81,P82	DW	DW	W	DRK

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	15*	-	Y
					6#	Y	Y	Y	-	3	-	Y
1B	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	-	-	Y

* Disable Delay during Alternate Phasing operation.
\# Disable Phase call for loop during Alternate Phasing operation.

3 Phase
Fully Actuated
Isolated

NOTES

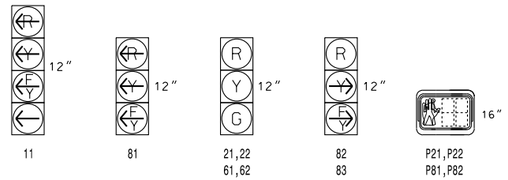
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018, "Standard Specifications for Roads and Structures" dated January 2018, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. The Division Traffic Engineer will determine the hours of use for each phasing plan.

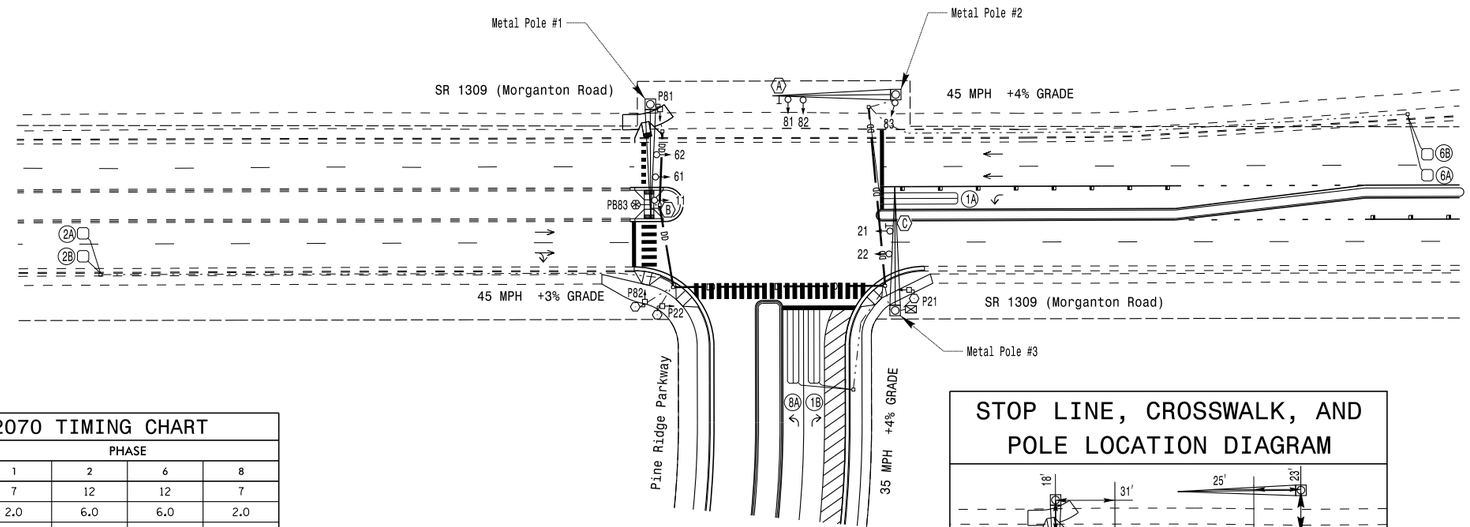
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

All Heads L.E.D.





LEGEND

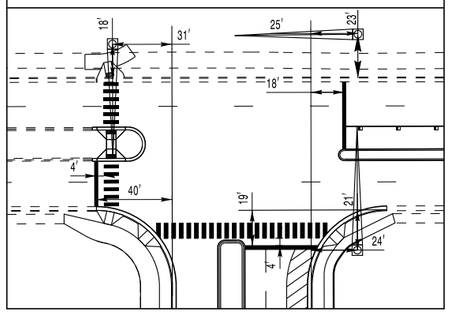
PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□↓	Pedestrian Signal Head With Push Button & Sign	■↓
⬡	Type II Signal Pedestal	⬢
○—	Signal Pole with Guy	●—
○—⌐	Signal Pole with Sidewalk Guy	●—⌐
▭	Metal Pole with Mastarm	▭
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
-----	2-in Underground Conduit	-----
N/A	Right of Way	------
→	Directional Arrow	→
Ⓐ	Left "TURNING VEHICLES YIELD TO PEDESTRIANS" Sign (R10-15)	Ⓐ
Ⓑ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓑ
Ⓒ	No U-Turn/ No Left Turn Sign (R3-18)	Ⓒ

OASIS 2070 TIMING CHART

FEATURE	PHASE 1	PHASE 2	PHASE 6	PHASE 8
Min Green 1 *	7	12	12	7
Extension 1 *	2.0	6.0	6.0	2.0
Max Green 1 *	20	60	60	20
Yellow Clearance	3.0	4.3	4.3	3.0
Red Clearance	2.9	1.9	1.9	3.9
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	-	7	-	7
Don't Walk 1	-	28	-	19
Seconds Per Actuation *	-	1.5	1.5	-
Max Variable Initial *	-	34	34	-
Time Before Reduction *	-	15	15	-
Time To Reduce *	-	45	45	-
Minimum Gap	-	3.0	3.0	-
Recall Mode	-	MIN RECALL	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	YELLOW	-
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

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

STOP LINE, CROSSWALK, AND POLE LOCATION DIAGRAM



NC Dept of Transportation
Division of Highways
Final Drawing Date: 7/14/2022
ITS & Signals Unit

New Installation

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

Prepared For:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1309 (Morganton Road)
at
Pine Ridge Parkway

Division 8 Moore County Southern Pines
PLAN DATE: February 2022 REVIEWED BY: SL Phillips
PREPARED BY: DW Curri REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
7/14/2022
SIGNATURE DATE
SIG. INVENTORY NO. 08-0301

7/14/2022 11:39:46 AM Danielle.Curri K:\RAL_TPTD_SIGNALS\#018923019 Pine Ridge\54 - Signal Design\Morganton_20220214g.dgn

08-0301 Morganton @ Pkwy

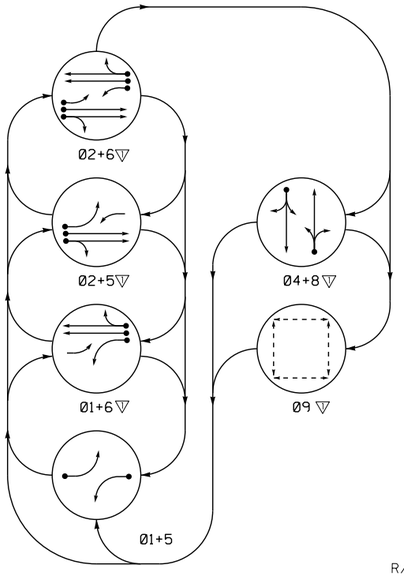
FREE SQ1 TM1

Φ1 leads

	1	2	6	8
Min Green	7	12	12	7
Ext	2	6	6	2
Max Green	20	60	60	20
Y	3.0	4.3	4.3	3.0
R	2.9	1.9	1.9	3.9
W		7		7
DW		28		19
Sec/Act		1.5	1.5	
TBR		15	15	
TTR		45	45	
Min Gap		3.0	3.0	

PROJECT REFERENCE NO.	SHEET NO.
SS-4908AV	Sig. 1

▽PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

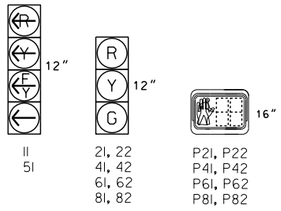
TABLE OF OPERATION▽

	SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	▽09	FLASH
	11	←	←	F Y	F Y	~~R~~	~~R~~	~~Y~~
	21, 22	R	R	G	G	R	R	Y
	41, 42	R	R	R	R	G	R	R
	51	←	F Y	←	F Y	~~R~~	~~R~~	~~Y~~
	61, 62	R	G	R	G	R	R	Y
	81, 82	R	R	R	R	G	R	R
▽	P21, P22	DW	DW	DW	DW	DW	W	DRK
▽	P41, P42	DW	DW	DW	DW	DW	W	DRK
▽	P61, P62	DW	DW	DW	DW	DW	W	DRK
▽	P81, P82	DW	DW	DW	DW	DW	W	DRK
▽	SIGN A	OFF	OFF	OFF	OFF	OFF	ON	OFF

W - Walk
DW - Don't Walk
DRK - Dark

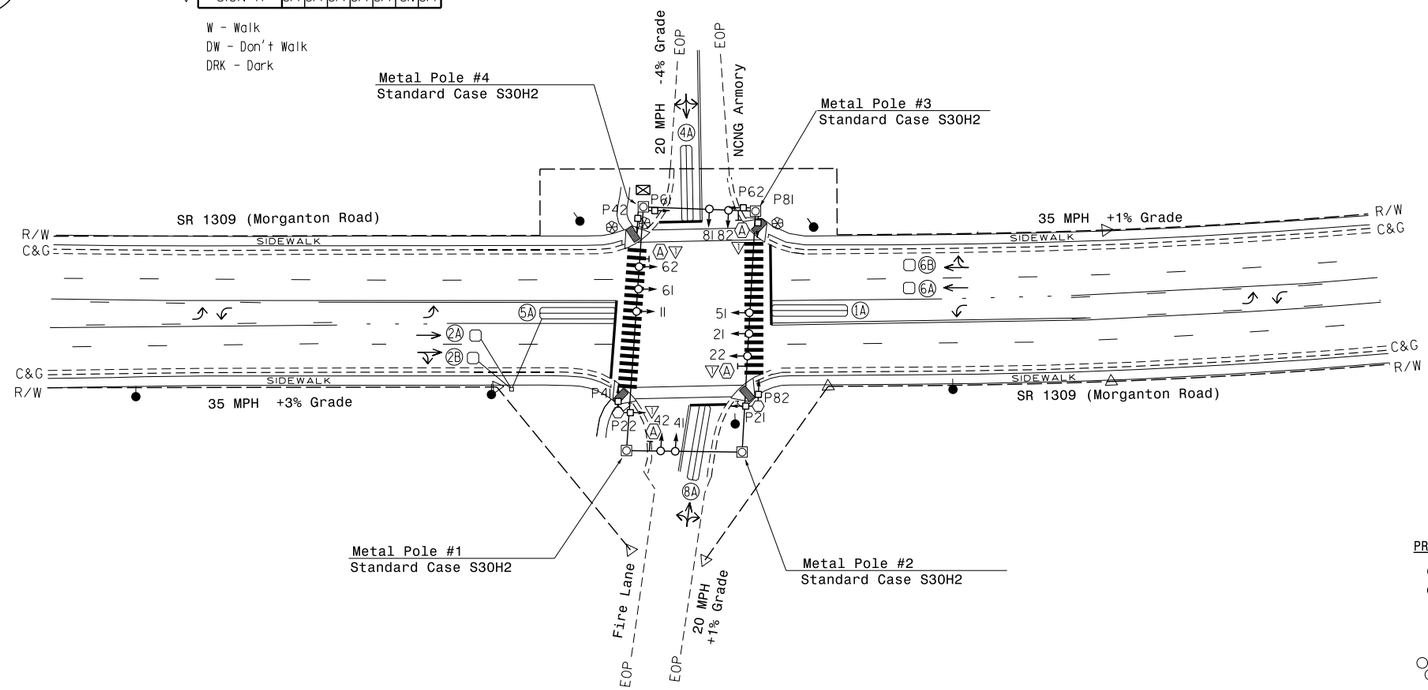
SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

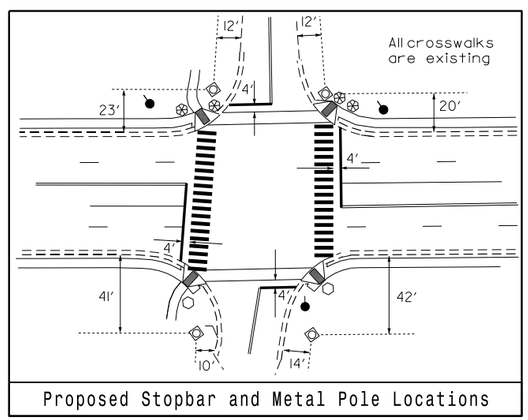
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
					6	Y	Y	-	-	-	-	Y
2A, 2B	6X6	70	4	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	15	-	Y
					2	Y	Y	-	-	-	-	Y
6A, 6B	6X6	70	4	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	Y



OASIS 2070 TIMING CHART

	FEATURE	PHASE 1	2	4	5	6	8	9 ▽
	Min Green 1 *	7	10	7	7	10	7	7
	Extension 1 *	2.0	3.0	2.0	2.0	3.0	2.0	-
	Max Green 1 *	25	45	20	25	45	20	25
	Yellow Clearance	3.0	3.8	3.0	3.0	3.8	3.0	3.0
	Red Clearance	2.3	1.6	3.1	2.3	1.6	3.1	1.0
▽	Advance Walk	-	-	-	-	-	-	-
▽	Walk 1 *	-	-	-	-	-	-	7
▽	Don't Walk 1	-	-	-	-	-	-	20
	Seconds Per Actuation *	-	-	-	-	-	-	-
	Max Variable Initial *	-	-	-	-	-	-	-
	Time Before Reduction *	-	-	-	-	-	-	-
	Time To Reduce *	-	-	-	-	-	-	-
	Minimum Gap	-	-	-	-	-	-	-
	Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-	-
	Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-	-
	Dual Entry	-	-	ON	-	-	ON	-
	Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON

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



Proposed Stopbar and Metal Pole Locations

▽ 6 Phase
Fully Actuated
(Isolated)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. ▽ Omit "WALK" and flashing "DON'T WALK" (Phase 9) with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
9. Pavement markings are existing unless otherwise shown.
10. ▽ The order of phase 4+8 and phase 9 may be reversed.
11. ▽ Illuminate sign A at the beginning of the preceeding red clearance interval. This sign will remain illuminated until the beginning of the suceeding green phase.

LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□	Pedestrian Signal Head With Push Button & Sign	■
○	Signal Pole with Guy	●
○	Signal Pole with Sidewalk Guy	●
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
----------	2-in Underground Conduit	----------
N/A	Right of Way	----------
→	Directional Arrow	→
◎	Metal Strain Pole	◘
N/A	Curb Ramp	◢
⊛	Type I Pushbutton Post	⊛
⬡	Type II Signal Pedestal	⬢
▽Ⓐ	"NO TURN ON RED" L.E.D. Blankout Sign	Ⓐ

New Installation

Prepared in the Offices of:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1309 (Morganton Road)
at
Fire Lane/NCNG Armory

Division 8 Moore County Southern Pines

PLAN DATE: June 2015 REVIEWED BY:
PREPARED BY: C.E. Carter REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE
▽ Remove Advance Walk and Add Exclusive Ped Phase 9 with NTOR Blankout Signs	RB	10/2/15

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA
DocuSigned by: Robert J. Ziemba 6/22/2015
Signature DATE

SIG. INVENTORY NO. 08-1075

09-OCT-2015 09:39
S:\TISGUI\TISignals\Signal Design Section\Central Region\Div 8\08-1075\081075_sig_dsn_20151002.dgn
rziemba

08-1075 Morganton @ Fire Ln

Manual override active

SQ1 Ø1 TM1

6:45 - 9 1/1
2:30 - 6:45 4/1

1: 100 sec Offset = 17 SQ4

	1	2	4	5	6	8
SPLITS	15	39	15	15	39	15

4: 110 sec Off = 23 SQ4

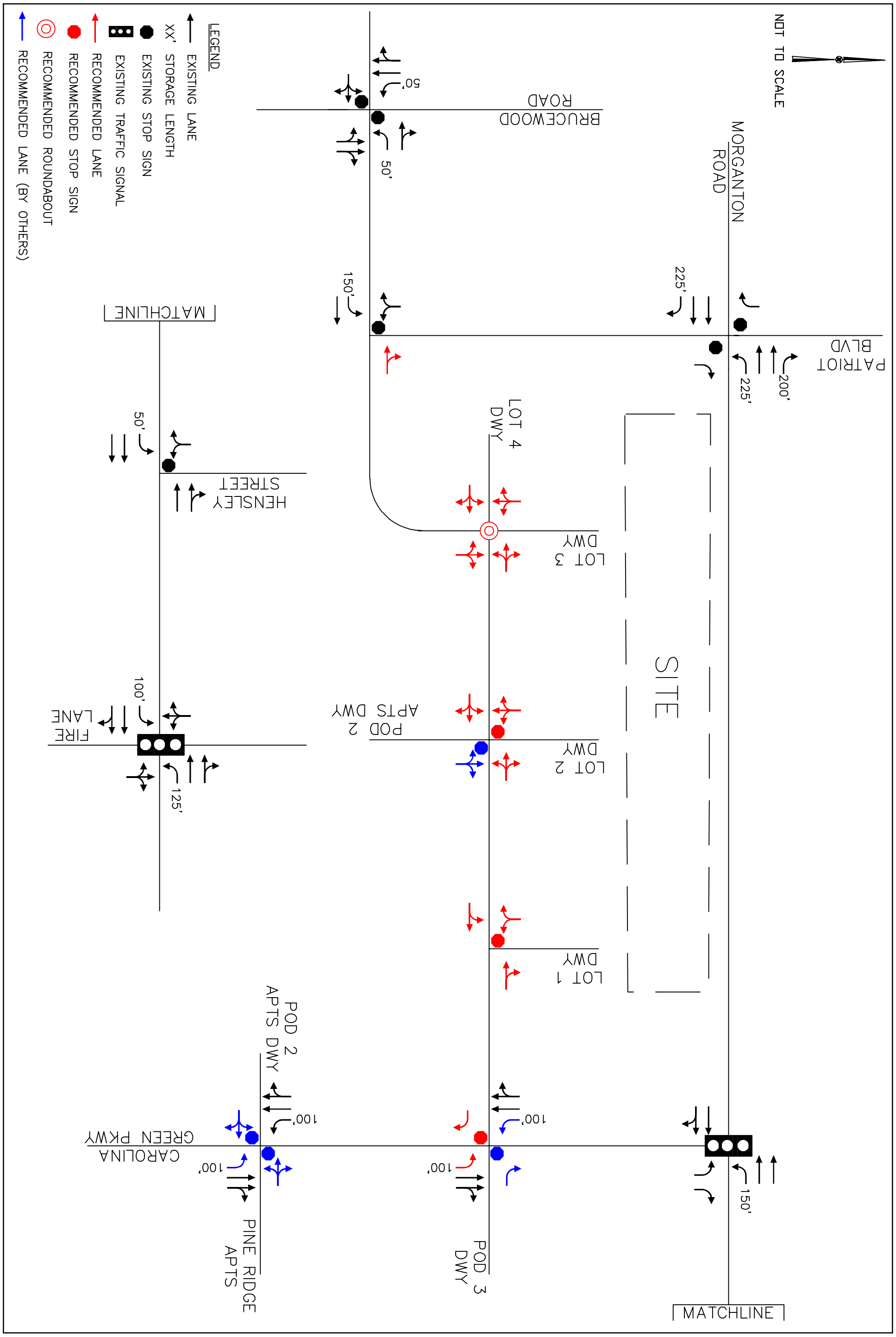
	1	2	4	5	6	8
SPLITS	13	46	20	13	46	20

Scramble ped phase 9 7 green / 20 FDW
- No RTOR boxes light up

SQ1: 1/5 lead
SQ4: 1/5 lag

TM1

	1	2	4	5	6	8
MIN GREEN	7	10	7	7	10	7
EXT	2	3	2	2	3	2
MAX GREEN	25	45	20	25	45	20
Y	3	3.8	3	3	3.8	3
R	2.5	1.6	3.1	2.3	1.6	3.1



Kimley»Horn	MORGANTON PARK SOUTH PHASE 4 SOUTHERN PINES, NC TRAFFIC IMPACT ANALYSIS	RECOMMENDED ROADWAY LANEAGE	FIGURE ES-1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

SITE PLAN LEGEND

PROPERTY LINE

LIMIT OF DISTURBANCE

PROVIDE AND INSTALL 4' CHAIN LINK FENCE

PROVIDE AND INSTALL STANDARD DUTY CONCRETE SIDEWALK

PROVIDE AND INSTALL HEAVY DUTY CONCRETE DUMPSTER PAD

PROVIDE AND INSTALL FULL DEPTH HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE

PROVIDE AND INSTALL FULL DEPTH STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT STRUCTURE

PROVIDE AND INSTALL MODULAR BLOCK RETAINING WALL

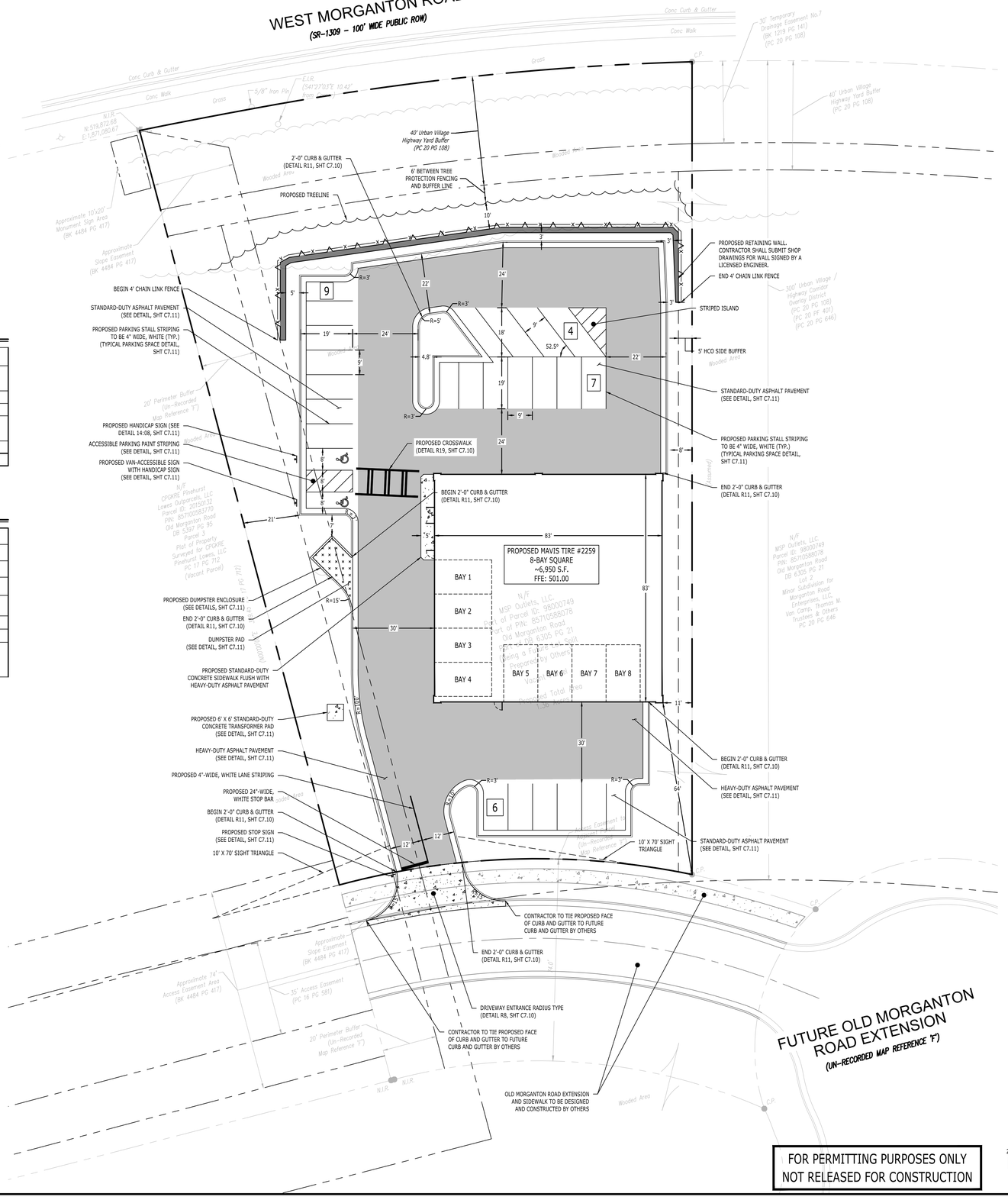
PROVIDE AND INSTALL SIGN

SITE PLAN LEGEND

ITEM	REQUIREMENTS	REQUIRED	PROPOSED	VARIANCE
PARKING REQUIRED	RETAIL: 1 SPACE PER 200 S.F. OF GROSS FLOOR AREA	35 SPACES	26 SPACES	YES
MINIMUM ADA PARKING SPACES REQUIRED	2 TYPICAL SPACE PER ADA	2 SPACES	2 SPACES	NO
MINIMUM PARKING DIMENSIONS	9 FEET X 19 FEET	9 FEET X 19 FEET	9 FEET X 19 FEET	NO
MINIMUM AISLE WIDTH	22 FEET - 2-WAY ANGLED PARKING 24 FEET - 2-WAY 90° PARKING	22 FEET - 2 WAY 52.5° 24 FEET - 2 WAY 90°	22 FEET - 2-WAY 52.5° 24 FEET - 2-WAY 90°	NO
MINIMUM INTERIOR LANDSCAPING	ONE TREE PER 250 S.F.	TBD	TBD	NO
OPEN SPACE	10%	5,940 SF	~23,000 SF (38%)	NO

PARKING INFORMATION

LOCATION: SOUTHERN PINES, MOORE COUNTY			
ZONE: PD (PLANNED DEVELOPMENT)			
USE: AUTOMOBILE SALES AND SERVICE ESTABLISHMENT			
ITEM	REQUIREMENTS	PROPOSED	VARIANCE
MINIMUM LOT AREA	NONE REQUIRED	59,396 S.F. (±1.36 AC.)	NO
MAXIMUM BUILDING HEIGHT	45 FEET	35 FEET	NO
FRONT LANDSCAPE BUFFER	40 FEET (HIGHWAY CORRIDOR OVERLAY)	47 FEET	NO
SIDE LANDSCAPE BUFFER	EAST - 5 FEET (HIGHWAY CORRIDOR OVERLAY) WEST - 20 FEET (EXTERIOR PERIMETER BUFFER FOR CDP)	EAST - 5 FEET WEST - 21 FEET	NO



Architecture
Engineering
Environmental
Land Surveying

BL Companies

3420 Toringdon Way
Suite 210
Charlotte, NC 28277
(704) 565-7070
NC ENGINEERING FIRM
LIC. #C-4082

MAVIS TIRES #2354
WEST MORGANTON ROAD
SOUTHERN PINES, NC 28387

REVISIONS

No.	Date	Desc.

Designed	A.R.M.
Drawn	P.R.J.
Reviewed	J.A.B.
Scale	1"=20'
Project No.	2501762
Date	03/04/2026

CAD File: C2501762-10

Title

SITE PLAN

Sheet No.

C1.00

Xref(s): ..\C2501762-10 - XYZ2017620.1 - XB2501762-00 - XC2501762-11

3/4/2026, PJOYCE, G:\JOBS\2501762\DWG\C2501762-10.DWG C1.00 24X36 20DC

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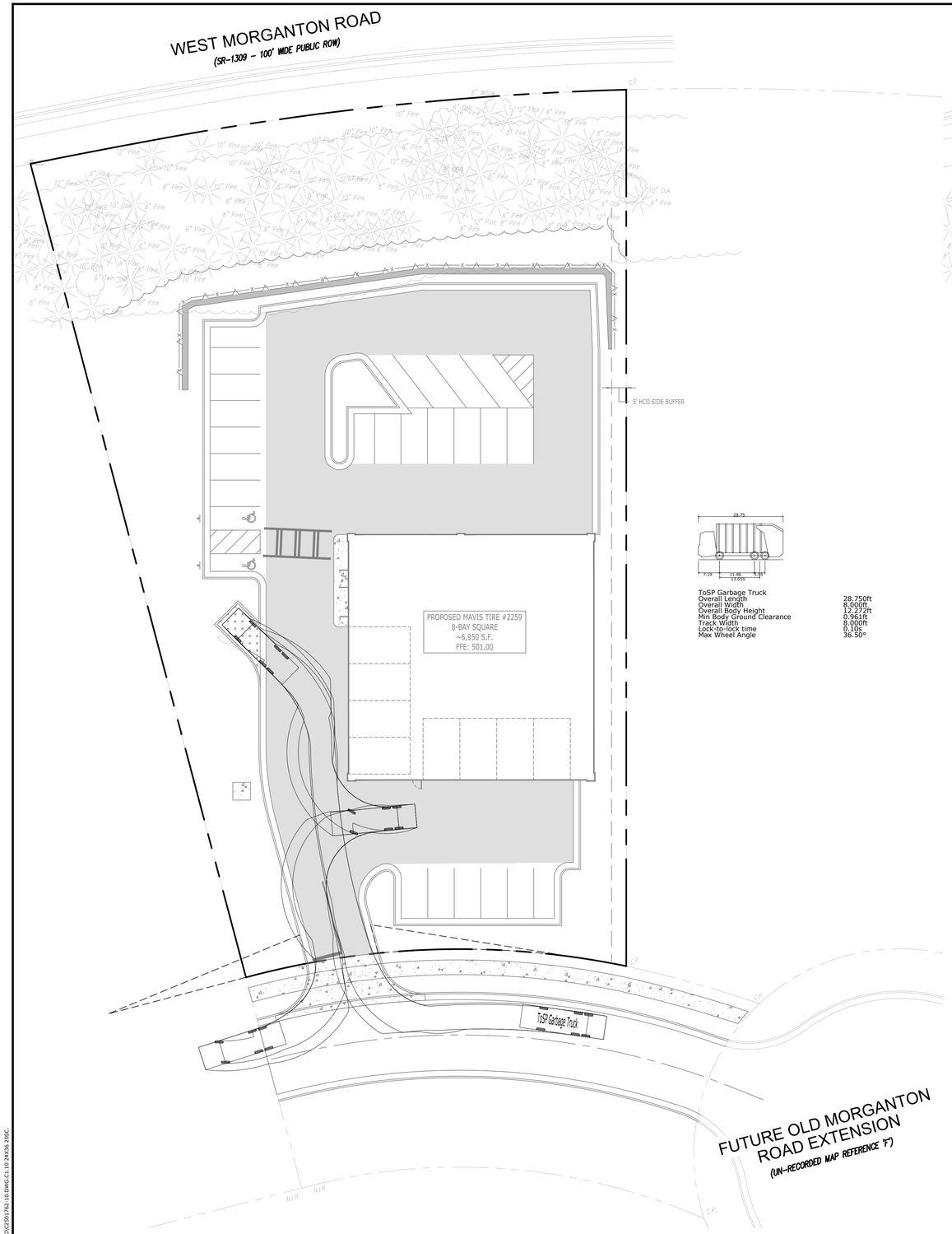
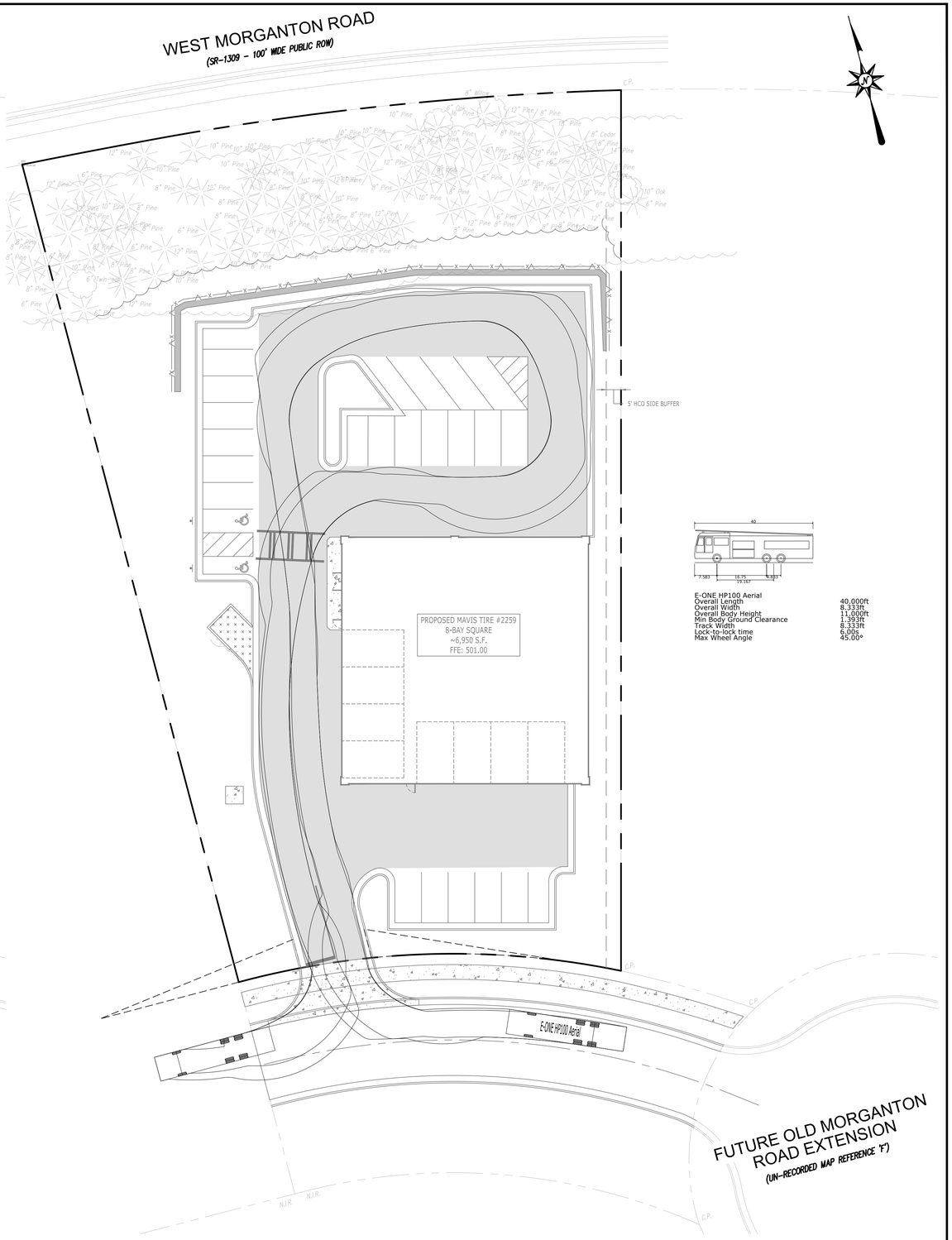


ToSP Garbage Truck	
Overall Length	28.750ft
Overall Width	8.000ft
Overall Body Height	12.272ft
Min Body Ground Clearance	0.961ft
Track Width	8.000ft
Lock-to-lock time	6.10s
Max Wheel Angle	36.50°



E-ONE HP100 Aerial	
Overall Length	40.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

GRAPHIC SCALE
20 10 0 20
SCALE IN FEET

Architecture
Engineering
Environmental
Land Surveying
BL Companies
3420 Toringdon Way
Suite 210
Charlotte, NC 28277
(704) 565-7070
NC ENGINEERING FIRM
LIC. #C-4082

MAVIS TIRES #2354
WEST MORGANTON ROAD
SOUTHERN PINES, NC 28387

REVISIONS
No. Date Desc.

Designed	A.R.M.
Drawn	P.R.J.
Reviewed	J.A.B.
Scale	1"=20'
Project No.	2501762
Date	03/04/2026

CAD File: C2501762-10

Title
TRUCK TURN PLAN

Sheet No.
C1.10

Xref (s): ..\C2501762-10 XYZ\2017620 1 XR\2017624-20 ; XC2501762-11

3/4/2026, P:\DYCE, C:\USERS\316\2501762\DWG\C2501762-10.DWG,C1.10 24X36 2.DSC

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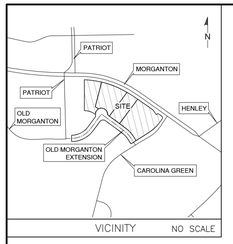


TITLE REFERENCE:
PARCEL ID 98000749
DEED BOOK 5919 PAGE 576
MOORE COUNTY REGISTRY

OWNER:
MORGANTON ROAD ENTERPRISES, LLC
PO BOX 1389
PINEHURST, NC 28370

SUBDIVISION OWNER	MIDLAND ATLANTIC PROPERTIES
APPLICANT	MIDLAND ATLANTIC PROPERTIES
DEVELOPER	MIDLAND ATLANTIC PROPERTIES

PRELIMINARY PLAT PREPARED BY:
ROBERTO RODRIGUEZ, JR., PLS
LICENSE # S428
140 AQUA SHED COURT
ABERDEEN, NC 28315
910-420-1437

SITE DATA:
JURISDICTION: SOUTHERN PINES
ADDRESS: 1700 OLD MORGANTON RD
ZONING: PD (PLANNED DEVELOPMENT)
MRO (MORGANTON ROAD OVERLAY)
URBAN VILLAGE HIGHWAY CORRIDOR

TRACT ACREAGE CALCULATIONS

PARCEL ID 98000749	33.24 ACRES	(1,448,112 SF)
SITE TOTAL	9.03 ACRES	(393,500 SF)
COMMERCIAL LOTS	7.25 ACRES	(316,016 SF)
RIGHT-OF-WAY	1.78 ACRES	(77,484 SF)
OPEN SPACE BUFFERS		
• URBAN VILLAGE HIGHWAY YARD BUFFER	0.96 ACRES	(41,885 SF)
• LINEAR PARK	0.36 ACRES	(14,950 SF)

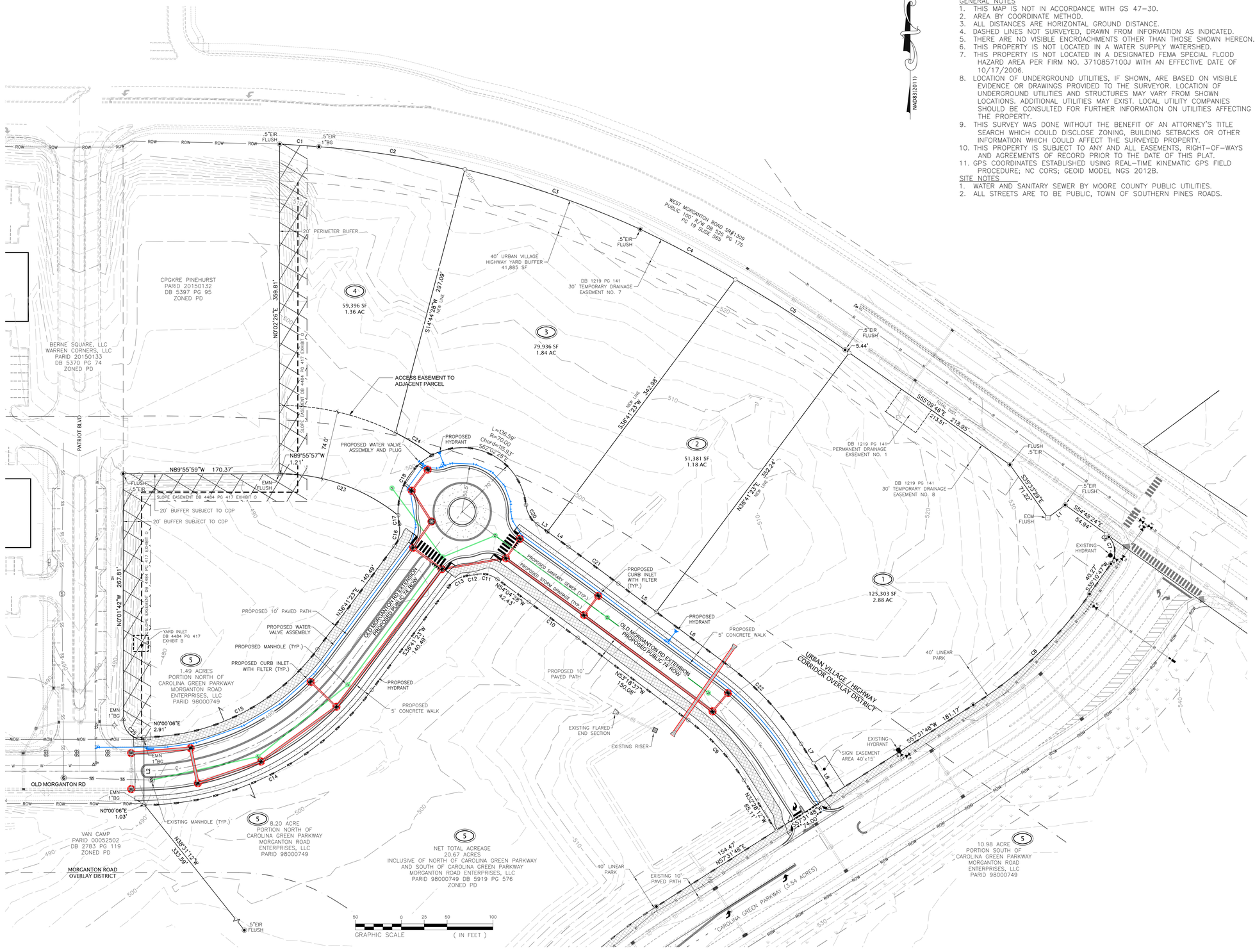
COMMERCIAL LOT DATA
5 LOTS TOTAL; ONE PHASE
• 4 BUILDABLE LOTS = COMMERCIAL USE
• 1 LOT REMAINDER 20.67 ACRES
(NOT INCLUSIVE OF CAROLINA GREEN PARKWAY)

LEGEND

○	= .5" IRON ROD SET FLUSH
EIR ◉	= EXISTING IRON ROD
EIP ○	= EXISTING IRON PIPE
ECM □	= EXISTING MONUMENT
EMN ⁂	= EXISTING MAG NAIL
ROW	= EXISTING RIGHT OF WAY
ROW	= FUTURE RIGHT OF WAY
	= BOUNDARY LINE
	= PROPERTY BARB
	= BOUNDARY NOT SURVEYED
	= EDGE OF PAVEMENT
	= EDGE OF CONCRETE
SS	= EXISTING SANITARY SEWER
SD	= EXISTING STORM DRAINAGE
W	= EXISTING WATERLINE

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	N53°36'33"E	23.46
L2	N0°00'06"E	70.06
L3	S54°04'28"E	13.78
L4	S54°04'28"E	28.65
L5	S53°18'37"E	51.61
L6	S53°18'37"E	98.47
L7	S32°28'12"E	25.11
L8	S32°28'12"E	40.00

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD DISTANCE
C1	42.85	2056.05	S86°01'32"E	42.85
C2	161.36	1036.13	S81°11'55"E	161.20
C3	202.61	1036.13	S71°08'06"E	202.28
C4	117.14	1544.46	S62°07'07"E	117.11
C5	142.37	1544.46	S57°18'18"E	142.32
C6	4.19	35.00	S40°13'45"E	4.19
C7	31.88	23.17	S4°14'26"E	29.42
C8	176.32	452.00	S46°21'17"W	175.20
C9	89.84	247.00	N42°53'25"W	89.35
C10	66.18	4963.00	N53°41'33"W	66.17
C11	25.10	30.00	N78°02'27"W	24.37
C12	8.10	70.00	S81°18'27"W	8.10
C13	25.10	30.00	S60°39'22"W	24.37
C14	288.55	312.00	N63°11'05"E	278.38
C15	219.70	238.00	N63°08'05"E	211.98
C16	25.10	30.00	N12°43'23"E	24.37
C17	9.92	70.00	N7°10'56"W	9.92
C18	79.63	70.00	N29°28'08"E	75.41
C20	25.10	30.00	S30°06'28"E	24.37
C21	67.16	5037.00	S53°41'33"E	67.16
C22	116.76	321.00	S42°53'25"E	116.12
C23	138.55	205.31	N70°36'01"W	135.94
C24	46.74	280.00	N58°32'02"W	46.68
C25	35.35	22.50	N44°58'41"W	31.83



REVISIONS			
SYM.	DESCRIPTION	DATE	BY
	TOSP REVIEW COMMENTS (11/19/2024) MAPP-04-24	11/25/2024	RR
	• OLD MORGANTON ROAD EXTENSION RIGHT-OF-WAY 74' WIDTH EAST OF TRAFFIC CIRCLE • AREA CALCULATIONS UPDATE	12/10/2024	RR
	• 20' BUFFER SUBJECT TO CDP	01/06/2025	RR

GENERAL NOTES
1. THIS MAP IS NOT IN ACCORDANCE WITH GS 47-30.
2. AREA BY COORDINATE METHOD.
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCE.
4. DASHED LINES NOT SURVEYED, DRAWN FROM INFORMATION AS INDICATED.
5. THERE ARE NO VISIBLE ENCROACHMENTS OTHER THAN THOSE SHOWN HEREON.
6. THIS PROPERTY IS NOT LOCATED IN A WATER SUPPLY WATERSHED.
7. THIS PROPERTY IS NOT LOCATED IN A DESIGNATED FEMA SPECIAL FLOOD HAZARD AREA PER FIRM NO. 3710857100J WITH AN EFFECTIVE DATE OF 10/17/2006.
8. LOCATION OF UNDERGROUND UTILITIES, IF SHOWN, ARE BASED ON VISIBLE EVIDENCE OR DRAWINGS PROVIDED TO THE SURVEYOR. LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM SHOWN LOCATIONS. ADDITIONAL UTILITIES MAY EXIST. LOCAL UTILITY COMPANIES SHOULD BE CONSULTED FOR FURTHER INFORMATION ON UTILITIES AFFECTING THE PROPERTY.
9. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF AN ATTORNEY'S TITLE SEARCH WHICH COULD DISCLOSE ZONING, BUILDING SETBACKS OR OTHER INFORMATION WHICH COULD AFFECT THE SURVEYED PROPERTY.
10. THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHT-OF-WAYS AND AGREEMENTS OF RECORD PRIOR TO THE DATE OF THIS PLAT.
11. GPS COORDINATES ESTABLISHED USING REAL-TIME KINEMATIC GPS FIELD PROCEDURE; NC CORS; GEOID MODEL NGS 2012B.

SITE NOTES
1. WATER AND SANITARY SEWER BY MOORE COUNTY PUBLIC UTILITIES.
2. ALL STREETS ARE TO BE PUBLIC, TOWN OF SOUTHERN PINES ROADS.

LKC Engineering, pllc
140 Aqua Shed Court
Aberdeen, NC 28315
O: 910.420.1437
lkcengineering.com
License No. P-1095

Engineering
Landscape Architecture
Surveying

LKC

PRELIMINARY PLAT
MORGANTON PARK SOUTH
PHASE 4

SOUTHERN PINES, NORTH CAROLINA

DATE: JANUARY 6, 2025
DESIGNED:
DRAWN: RR
CHECKED:
NO.

L:\MAP-24.02 Morganton Road Ext\800 Drawings\850 Survey\Preliminary Plat - Morganton Park South Phase 4\MAP-24.02 Preliminary Plat - Morganton Park South Phase 4_rev03.dwg

MIDLAND ATLANTIC
PROPERTIES

March 4, 2026

VIA E-MAIL TO: rhowell@celticbank.com

LMH Investment Company
378 East Capiton Oaks Lane
Salt Lake City, UT 84103
Attn: Reese S. Howell, Jr.

RE: **Slope Easement – Southern Pines, NC**

Dear Reese,

Please allow this letter to summarize our Teams conversation on Monday, March 2, 2026 regarding the Slope Easement impacting our adjoining parcels in Morganton Park South and your willingness to cooperate.

Your entity, LMH Investment Company, is the fee owner of an approximate 1.45-acre parcel of land (Parcel ID 20150132) located at the southeast corner of West Morganton Road and Patriot Boulevard in the Town of Southern Pines (the "LMH Property").

MSP Outlots, LLC (an affiliate of Midland Atlantic Properties) is the fee owner of an adjacent 9.03-acre parcel of land (Parcel ID 20250175) which is being developed as a four (4) lot subdivision including the construction of Old Morganton and Northern Roads in the Town of Sothern Pines ("MPS – Phase 4").

MSP Outlots has entered into a Ground Lease with Mavis Southeast LLC ("Mavis") to lease a 1.36-acre portion of MPS – Phase 4 (the "Lot 4 Property").

The LMH Property and the Lot 4 Property share a common property line. Both properties are subject to that certain Declaration of Easements, Covenants, Conditions and Restrictions dated April 30, 2015 and recorded with the Moore County Register of Deed on May 1, 2015 in Book 4484, Page 417, as amended (the "Declaration").

Article VII, Section 17 of the Declaration establishes a "permanent non-exclusive easement" ("Slope Easement") benefiting the LMH Property and burdening the Lot 4 Property for the sole purpose of allowing grading, filling and maintenance of a slope in the Slope Easement Area on the Lot 4 Property. The "Slope Easement Area" is depicted on Exhibit O to the Declaration and located along the western property line of the Lot 4 Property and is of an unspecified width. Per the Declaration: *"The Slope Easement is granted solely for the purpose of grade transition in accordance with plans and specifications as approved by the Town of Southern Pines."* Construction of the slope was completed years ago and the Slope Easement Area is stabilized.

As I explained on our call, Mavis is currently developing their site plan for the Lot 4 Property and working toward obtaining Preliminary Development Plan approval from the Town of Southern Pines. In order to fit their building and associated improvements on the site, Mavis has requested your acknowledgement that Mavis is permitted to locate a portion of its entrance drive, dumpster enclosure and a few parking spaces

MIDLAND ATLANTIC
PROPERTIES

within the non-exclusive Slope Easement Area as shown cross-hatched in red on the attached Concept Site Plan. Mavis will regrade the slope and/or install retaining walls as required.

Per our conversation, I understand you are agreeable to such items being located in the non-exclusive Slope Easement Area provided: (a) a stable grade transition is maintained between the LMH Property and the Lot 4 Property, (b) such items do not adversely impact stormwater runoff onto or off of the LMH Property, and (c) plans and specification for all improvements within the Slope Easement Area on the Lot 4 Property are approved by the Town of Southern Pines.

If my understanding is correct, could you please indicate your acknowledgement and agreement below and e-mail a countersigned copy of this letter to me at wmees@midlandatlantic.com. Reese, we appreciate your cooperation on this matter.

Regards,

MIDLAND ATLANTIC PROPERTIES

William M. Mees, Jr.
Director of Development

Encl: Mavis Concept Site Plan

CC: Kristen Morse – Mavis Tire
Andrew Mueller – BL Companies
Tim Carpenter – LKC Engineering

ACKNOWLEDGED & AGREED

LMH INVESTMENT COMPANY

Reese S. Howell, Jr.