



AGENDA

Thursday, December 19, 2024: 6:00 PM

Planning Board

Douglass Community Center: 1185 W. Pennsylvania Ave

1. CALL TO ORDER

2. APPROVAL OF MINUTES

a. November Regular Meeting

3. PRELIMINARY FORUMS

a. MAPP-04-24 Morganton Park South North Lots Major Subdivision Preliminary Plat

b. PD-07-24 New York Place Preliminary Development Plan

c. PD-08-24 Ace Hardware Southern Pines Phase 2 Preliminary Development Plan

4. PUBLIC HEARING

a. Z-06-24 Request to Rezone Five Parcels on SW Broad Street from GB to GBCD to Develop a Mixed-Use Food Truck Campus

5. UNFINISHED BUSINESS

6. NEW BUSINESS

7. PUBLIC COMMENTS

8. ADJOURNMENT

MINUTES
Planning Board Regular Meeting
E.S. Douglass Community Center, 1185 W. Pennsylvania Avenue
Thursday, November 21, 2024, at 6:00 PM

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

Chair Diane Westbrook, Vice Chair Kim Wade, Andy Bleggi, Matthew Walden, Jennifer Garner and Monica Harvey were present.

Andy Bleggi made a motion, which was seconded by Monica Harvey, to approve the Minutes of the October 2024 regular meeting with noted corrections. The motion carried.

PUBLIC HEARING:

Z-05-24: Request to Rezone Three Parcels from RS-1 to RS-1 Conditional Zoning District;
Applicant: Tony and Sandra Fairley

Tony and Sandra Fairley submitted a request to rezone three parcels from RS-1 to RS-1 Conditional Zoning District to allow for the development of a duplex on each parcel. The subject parcels are identified as PIN 858200023471 (PARID 00037070); PIN 858200024317 (PARID 00036484); and PIN 858213023794 (PARID 00035309).

Matthew Walden made a motion, which was seconded by Monica Harvey, to open the public hearing. The motion carried.

Planner Alaina Mallette provided an overview of staff report Z-05-24 accompanied by a Power Point presentation and stated that the proposed use and architecture are consistent with the Comprehensive Plan's vision for the area and no inconsistencies or adverse effects were identified. The applicant is proposing 34% impervious surface which requires Town Council approval of a Watershed Protection Permit.

Mr. Fairley stated that each unit will have three bedrooms as opposed to one two-bedroom and one three-bedroom units.

Member Garner asked if the change from two to three-bedroom units required an amendment to the application and Ms. Mallette responded that no action was required.

Matthew Walden made a motion, which was seconded by Andy Bleggi, to close the public hearing. The motion carried by a 6-0 vote.

Kim Wade made a motion, which was seconded by Monica Harvey, that after reviewing the proposed amendments to the Town of Southern Pines Zoning Map and after considering the criteria for approval of map amendments found in UDO §2.17.9, the proposed amendments are consistent with the 2040 Comprehensive Plan for the reasons set forth in Attachment 1 of staff report Z-05-24 and therefore, to recommend approval of Z-05-24 and WPP-05-24 to the Town Council with the following conditions:

1. that the land use shall be limited to: Land-Based Classification Standard (LBCS) 11202: Two-family (double or Duplex),” which may be manufactured and permanently affixed to the ground or built on-site;
2. that the manufactured Duplexes created on lots 9, 10 and 174 shall be built within the setbacks shown on preliminary surveys for Tony Fairley and Wife Sandra Fairly, dated 09/25/2024 and submitted with this application. This shall include a reduction in the minimum lot size requirement to 8,100 square feet for each lot; and
3. that the architecture and design shall be consistent with attachment #5 of staff report Z-05-24.

The motion carried by a 6-0 vote.

PRELIMINARY FORUM:

PD-06-24 Planned Development - Preliminary Development Plan for Phase 4 of Morganton Park South; Applicant: Whataburger Restaurant, LLC

Wesley William of Whataburger Restaurants, LLC submitted a Preliminary Development Plan application pursuant to §2.18.5 of the Town of Southern Pines Unified Development Ordinance for a ±3,305 square foot restaurant on the parcel identified as PIN 857100478061 (PARID 20230956). Per the Moore County tax record, the subject property is owned by MSP Retail II, LLC.

Matthew Walden made a motion, which was seconded by Andy Bleggi, to open the preliminary forum. The motion carried.

Planner Gene Ruiz provided an overview of staff report PD-06-24 accompanied by a Power Point presentation and stated that the approved Conceptual Development Plan (PD-08-21) authorizes 17 parking spaces for the site and the applicant has requested 42 spaces. The CDP also requires that a 20’ foot buffer along the perimeter of the development be preserved and the applicant has proposed a retaining wall within that buffer. Also, a retaining wall that is taller than 6’ is considered a structure and is therefore subject to the 25’ minimum setback requirement. Planning staff requests that the applicant move the retaining wall to meet the setback standard and also to retain the natural buffer.

Member Harvey requested clarification regarding disturbance of the buffer.

Mr. Ruiz responded the buffer could be undisturbed or planted. The applicant wants to clear cut the existing vegetation and plant trees on the other side of the retaining wall but the Town Arborist recommends that the buffer remain undisturbed to preserve the existing pine trees, hardwoods and other quality vegetation.

Member Bleggi inquired about staff's position regarding the number of parking spaces.

Mr. Ruiz responded that staff felt that 42 parking spaces is excessive, but if the restaurant was located outside of the Morganton Overlay and the Planned Development, the minimum number of spaces would be 33, so staff has proposed a maximum of 33 spaces.

Mr. Bleggi asked if a railing along the top of the retaining wall would be required given the elevation and Mr. Ruiz responded that would be a building code question.

Mr. Ruiz stated that the proposal met the intent of the PD district for the most part, but it is inconsistent with regard to the requested number of parking spaces and placement of the retaining wall within the buffer.

Member Bleggi asked if staff had any issues regarding ingress and egress and the roads matching other roads.

Mr. Ruiz responded that Town Engineer James Michel had asked the applicant to provide a stacking analysis and based on the information that was provided, there would be no issue with stacking in the drive through lane, and there will be two points of ingress and egress.

Lee Bakely with BL Companies stated that the 3,300 SF restaurant will have 58 seats in the dining room and that the general rule of thumb for a restaurant is one parking space for every four seats but they want to make sure the restaurant is sufficiently staffed to accommodate customers during the maximum shift, so they have up to 18 employees on that shift. They would need 34 or 35 spaces with 14 or 15 parking spaces just for the dining room at a ratio of 1:4 seats plus 18 employee spaces and 2 dedicated spaces for delivery drivers. A maximum of 42 spaces would work for the site and the low 40's is the sweet spot for parking spaces they typically see in a development of similar size.

Member Bleggi asked if moving the retaining wall would affect the number of parking spaces.

Mr. Blakely responded that they have done enough grading analysis on the site to know that the retaining wall will likely be in excess of 6' so if that requires the wall to be moved outside of the 25' building setback, they could lose three parking spaces.

Wes Williams, Project Manager for Whataburger, stated that Whataburger would be agreeable to moving the retaining wall outside of the 25' setback, lose the three parking spaces, which takes it down to 38 or 39 spaces. He would want to retain as many of the hardwoods and pine trees, which would be advantageous to Whataburger as well as provide a buffer the adjacent power station.

Chair Westbrook inquired about a railing along the top of the retaining wall.

Mr. Williams responded that building code requires that anything over 3 ft. high have a railing that cannot be climbed.

Member Garner inquired about the hours of operation of a Whataburger.

Mr. Williams responded that the restaurant would be open 24 hours a day, 364 days a year.

Chair Westbrook inquired about the drive through traffic pattern.

Mr. Blakely responded that there would be two drive through lanes that would merge for pick up and Mr. Williams stated that typically only the interior lane operates during non-peak hours.

Mr. Blakely stated that the CDP originally had the use of the 2.2 acre parcel identified as Retail which has a parking ratio is 1 space per 200 SF. They understand and recognize the importance of cross-access shared parking but this parcel is separated from the rest of the development by Southern Road, so 35 to 40 parking spaces will work better for their customers and employees.

Member Garner asked if any improvements were required as a result of the traffic study.

Mr. Ruiz responded that the traffic study that was originally conducted for the development accounted for the retail use. It was reviewed by the Town Engineer and no additional mitigation would be required.

Mr. Blakely stated that the peak traffic numbers for 20,000 of retail that was proposed for the lot are actually slightly higher than what the 3,300 SF restaurant will generate.

James Michel stated that BJ's and Starbucks will also generate less traffic than the TIA estimated. The net overall amount of traffic from what has been approved and what is currently being requested is less than the original report.

Mr. Williams stated that given the length of Southern Road and the size of their parking lot, obviously depending on the approved number of spaces, will help get traffic off the road.

Chair Westbrook asked Mr. Williams how many parking spaces he was proposing.

Mr. Williams responded they were requesting 39 spaces if they move the retaining wall.

Mr. Blakely stated if the 39 spaces were approved they would be willing to add additional vegetation along Southern Road.

Andy Bleggi made a motion, which was seconded by Matthew Walden, to close the preliminary forum. The motion carried.

Monica Harvey made a motion, which was seconded by Matthew Walden, to adopt the following for transmission to the Town Council as a result of the November 23, 2024 Preliminary Forum on application PD-06-24 for Morganton Park South, Phase 4:

The information presented at the forum indicated that the following issues be considered in applying the criteria for a PDP to application PD-06-24:

1. moving the retaining wall;
2. directional signage for drive through traffic so that traffic does not go through the middle lane;
3. retain undisturbed buffer with native trees; and
4. allow up to 42 parking spaces.

In addition, the following concerns were raised during the forum but do not seem to apply in determining whether the PDP criteria are satisfied:

- that the applicant continues to work with staff re: perimeter landscape screening.

The motion carried by a 6-0 vote.

UNFINISHED BUSINESS

Town Engineer James Michel was present to address questions from the Board.

Member Bleggi inquired about the Town's ability to support current and future water and sewer demands and Mr. Michel explained the Town's capital improvement plan, which includes improvements to water and sewer infrastructure over the next 10 to 15 years. The Board discussed the need for better communication with homeowners about water pressure issues and the Town's responsibilities for maintaining infrastructure and agreed to share the information with the community.

Member Bleggi inquired about the Town's plans for expanding water and sewer infrastructure to underserved areas and Mr. Michel clarified that the capital improvement plan is focused on replacing and rehabilitating existing infrastructure - not on expanding it.

The Board discussed the need for better coordination with developers to ensure roads meet Town standards. Mr. Michel stated that many roads in Town do not meet modern standards and improvements are made as funding allows. He said there is not a dedicated fund for curb and gutter improvements, but those improvements are made in conjunction with sidewalk projects and that the Town Council allocates approximately \$200,000.00 annually for sidewalks and road improvements.

Member Wade raised concerns regarding cleared vegetation being discarded on vacant lots and Mr. Michel responded that Duke Energy and the fiber optic companies are responsible for vegetation management. He said the Town has assigned inspectors to monitor those companies but cleanup issues persist.

Traffic studies, including bicycle traffic studies, were discussed. Mr. Michel stated that Morganton Park South was undergoing a new traffic analysis and that a new Safe Street Study was being conducted, focusing on safety rather than comprehensive bike path planning.

NEW BUSINESS

Ms. Mallette stated that the Town Council prioritized five projects from the Comprehensive Plan: parking reform to reduce parking, housing reform, applying for a multi-modal grant through NCDOT for a streetscape project for a section of Pennsylvania Avenue, residential accessory commercial units for small business startups and technical UDO cleanup/updates.

Matthew Walden made a motion, which was seconded by Monica Harvey, to adjourn the meeting. The motion carried.

The meeting adjourned at 7:50 PM.

Respectfully submitted:

Cindy Williams
Secretary to the Planning Board

An audio recording of the meeting is available upon request.

Agenda Item

To: Planning Board

From: James Broadwell, Planner I

Subject: MAPP-04-24: Major Subdivision Preliminary Plat for four commercial lots on the North side of the Morganton Park South Planned Development; Petitioner: Midland Atlantic Properties, by Koontz Jones Design, PLLC, Agent

Date: December 19, 2024

1. SUMMARY OF APPLICATION REQUEST

Mr. Bob Koontz of Koontz Jones Design, LLC, on behalf of Midland Atlantic Properties and Morganton Road Enterprises, LLC, has submitted a Major Subdivision Preliminary Plat application pursuant to the Town of Southern Pines Unified Development Ordinance (UDO) §2.20. The plat intends to subdivide one parent tract into four smaller commercial out-parcels and one larger tract (20.69 acres). The parent tract contains natural wooded areas, an existing stormwater pond, the northern portion of Carolina Green Pkwy, and part of the Morganton Park South Linear Park. The subject property is surrounded by W Morganton Road to the north and Old Morganton Road to the west. Per the Moore County tax records, the property identified as PARID 98000749 is owned by Morganton Road Enterprises, LLC.

2. PROJECT INFORMATION

A. Property Owner & Applicant Information

Property Owner/Applicant	Authorized Agent
Morganton Road Enterprises, LLC	Bob Koontz
PO Box 1389	Koontz Jones Design, PLLC
Pinehurst, NC 28374	140 Applecross Road, Suite B
	Pinehurst, NC 28374

B. Project History and Site Information

i. Location, Zoning, Comprehensive Plan Designations

The subject property is located at the corner of W Morganton Road and Carolina Green Parkway. The property's is zoned PD (planned development) and is also located with the Urban Village Highway Corridor Overlay (HCO). The General Framework Map and Conservation and Development Maps from the Comprehensive Plan categorize the site as an "Area to Transform" and "Mixed-Use Area" respectively. The Mixed-Use Area is intended to serve a broad mix of economic, entertainment, and housing needs, and especially "missing middle" home choices. Walkability and well-connected open spaces should be incorporated.

Figure 1: Immediate Vicinity Map. Parent tract boundary indicated by thick orange line.



Figure 2: Zoning and HCO Map. The parent tract is outlined in orange.

- The brown zoning color indicates PD (planned development) zoning (being within the Morganton Park South CDP).
- The green zoning color to the east indicates FRR (facilities resource and recreation) zoning.
- The green lines mark the Urban Village HCO (300 feet on each side of the W Morganton Rd right-of-way).

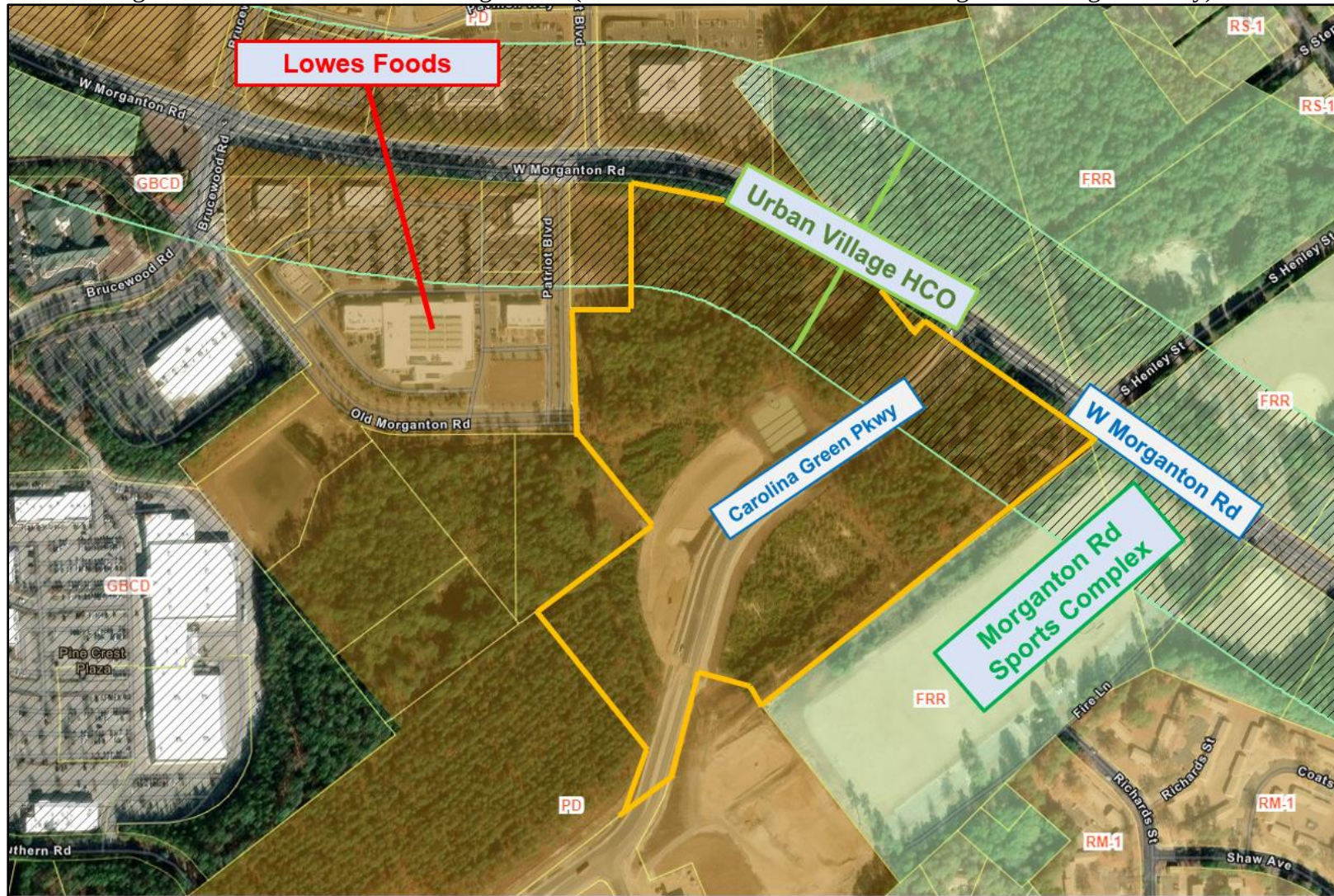
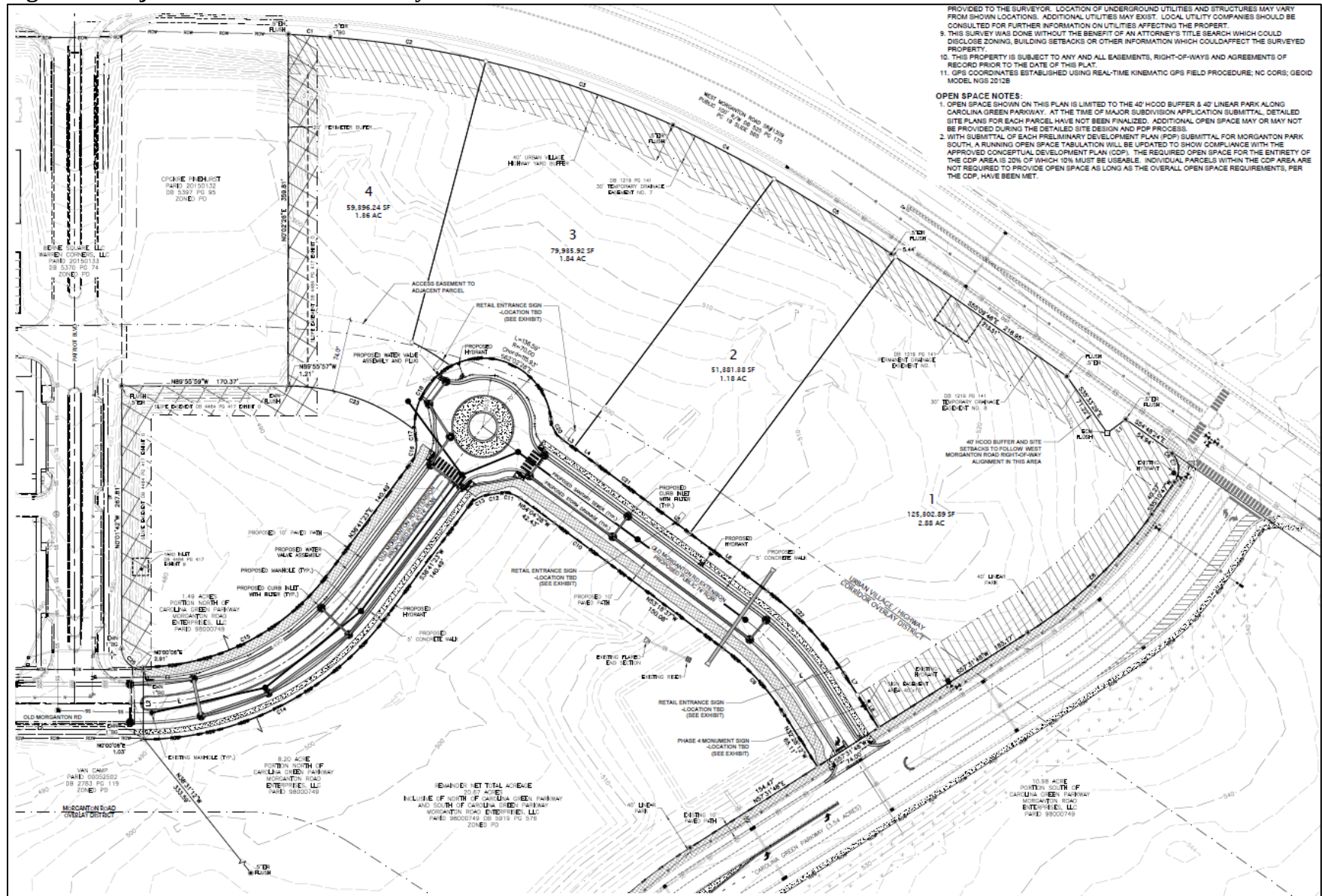


Figure 3: Major Subdivision Preliminary Plat.



3. STAFF REVIEW

A. Application Review Dates

- MAPP Application Submitted: **November 13, 2024**
- Application Deemed Incomplete: **November 19, 2024**
- Application Deemed Complete: **November 26, 2024**
- TRC Staff Review: **December 3, 2024**
- Notice of Planning Board Preliminary Forum:
 - Posted On-site: **December 3, 2024**
 - Mailed: **December 5, 2024**
 - Internet: **December 3, 2024**
- Consultation with the Technical Review Committee: **December 3, 2024**
- Call with the applicant to review issues: **December 6, 2024**
- Revised materials submitted: **December 10, 2024**
- Additional revised materials submitted: **December 12, 2024**
- Planning Board Preliminary Forum: **December 19, 2024**

B. Process of Review

Per UDO §2.19 General Subdivision Regulations and §2.20 Major Subdivision, the procedures for review and approval of a major subdivision require adherence to supplemental conditions. These sections of the UDO establish a process and standards to plat and approve new commercial lots.

C. Standards for Review

UDO standards for Supplemental Conditions Criteria for a Major Subdivision Preliminary Plat are found in UDO §2.20.4(G), and apply to the review of this Major Subdivision Preliminary Plat.

D. Compliance with UDO §2.20.4(G) Major Subdivision Preliminary Plat Criteria. A major subdivision is permitted only if the applicant demonstrates that:

1. *The application is consistent with the Comprehensive Plan, as well as any other adopted plans for streets, alleys, parks, playgrounds, and public utility facilities;*

In line with the applicant's narrative, all site design details will be reviewed, modified as needed, and approved during each sub-phase's Preliminary Development Plan (PDP) and site plan review.

Planning staff agree with the applicant's narrative that the proposed subdivision is consistent with the Comprehensive Plan's vision, and will ultimately (following PDP review) provide additional mixed commercial land use in the area. It is also consistent with the General Framework Map and Conservation and Development Maps, which each categorize the site as an "Area to Transform" and "Mixed-Use Area."

This major subdivision sets conditions for the series of PDPs within the Morganton Park South (MPS) Conceptual Development Plan (CDP) – PD-08-21. The PDPs reviews will address site design, while this major subdivision review addresses infrastructure common to all four northern outparcels, primarily being:

- The Old Morganton Rd extension, traffic circle, and future connections,
- Vehicular and pedestrian connectivity,
- Establishing the 40’ HCO buffer fronting W Morganton Rd and the 40’ linear park along Carolina Green Pkwy, and
- Delineating and dividing the parcels to inform subsequent site design for PDP review.

Pursuant to this criterion, staff recommend a condition of approval that both the 40’ HCO vegetated buffer and 40’ Linear Park vegetated buffer remain undisturbed. *Comprehensive Plan policies 4.9 and 4.10* call for safeguarding natural areas, minimizing development’s impact on the environment, and minimizing tree loss during development. Staff assess these natural tree stands within the Urban Village HCO and Linear Park buffers as natural, character-defining features. If the applicant retains these trees along both buffers, then this criterion of being consistent with the Comprehensive plan will be met.

2. *The proposed Subdivision complies with the UDO and applicable state and federal regulations;*

The application is compliant with all UDO requirements that apply to the Major Subdivision aspect of this development. The application is also compliant with federal Endangered Species Act regulation by providing a Red Cockaded Woodpecker and endangered species study.

The subject property is within the Urban Village Highway Corridor Overlay (HCO), which requires a 40’ landscaping buffer, 40’ building setback, and 40’ parking area setback. Other HCO requirements will be reviewed during the PDP process.

UDO Open Space standards pursuant to UDO §4.9 call for 20% open space in Planned Developments. This means the entirety of the MPS development requires 20% open space. The applicant has not submitted an overall open space tabulation for this phase, and instead will submit the tabulation with each subsequent PDP. For the major subdivision application, the applicant has depicted 1.33 acres of open space associated with the major subdivision—as the buffers and linear park are required regardless of specific lot site design. Additionally, staff will review all other applicable UDO and applicable regulatory standards during PDP and site plan review. These include, but are not limited to, UDO §4.3 Landscaping Code, §4.8 Lighting Code, and §4.10 Development Design Standards.

Additionally, the applicant intends to execute a Minor Subdivision of approximately 9 acres following the approval of this proposed Major Subdivision. The Minor Subdivision will separate the proposed four outparcels from the current 32.65-acre parent tract as one approximately 9-acre parcel. This intends to facilitate the sale and transfer of control of the proposed outparcel area in the meantime – prior to applying for a Final Plat and/or PDP. Though an atypical series of events, staff agree the applicant’s plan does not violate subdivision statutes or standards.

Staff agree the Major Subdivision application complies with this criterion.

3. *The proposed Subdivision, including its lot sizes, density, access, and circulation, is compatible with the existing and/or permissible zoning and future land use of adjacent property;*

Planning staff concur that the proposed development is compatible with the PD zoning. It’s also compliant with the area’s vision and generally gives proper access and circulation alongside the existing PD and FRR developments. Additionally, with the inclusion of an access easement that traverses outparcel 4, this Major Subdivision meets criterion 3. The easement will ensure that a future roadway connects between the proposed traffic circle and Patriot Blvd (see attachment 5).

Finally, given the location of the development, future retail/office uses will be within walking/biking distance of Morganton Park South, Morganton Park North, and some neighborhoods.

4. *The proposed Subdivision will not have detrimental impacts on the safety or viability of permitted uses on adjacent properties; and*

The Technical Review Committee noted at its December 3, 2024 meeting that vehicular path control measures ensuring traffic can only take right turns (when moving from the proposed Old Morganton Rd Extension to Carolina Green Parkway) must be present. The TIA calls for this control measure, using hard medians, barriers, etc., to ensure a viable traffic pattern within the MPS development. The committee also noted that a stub out for a street connection between the proposed traffic circle and Patriot Blvd., also including an access easement, is required for this development in line with the CDP. Staff informed the applicant of these notes during their call on December 6, 2024, and to anticipate them during the road’s site plan review.

With the modifications mentioned above being verified during PDP and site plan review, staff feel the application meets criterion 4.

5. *The proposed public facilities are adequate to serve the normal and emergency demands of the proposed Development, and to provide for the efficient and timely extension to serve future Development.*

Site access is sufficient to address safety at this site and town utilities are readily available for extension to these proposed units. The Town Engineer has also confirmed that by the applicant adhering to all requirements in the

provided TIA (attachment 9) that public access will be adequate to meet routine and emergency demands. Town staff confirm that the application is compliant with Criterion 5.

E. General Staff Comments

- **Highway Corridor Buffer and Linear Park Buffers**

Staff recommend a condition that the 40' Highway and Linear Park buffers remain undisturbed.

The Urban Village Highway Corridor Overlay (HCO) overlaps with the subject property. For that reason, a 40' vegetated buffer and site setbacks are shown on the plat. The Morganton Park South (MPS) CDP calls for an 80' wide linear park along Carolina Green Pkwy. The 40' linear park buffer required on the NW side of Carolina Green Pkwy is not shown as undisturbed. Though much clearing has occurred parallel to the parkway, the approximately 365' long tree stand parallel to Carolina Green Parkway (between W Morganton Rd and the existing stormwater pond) has remained undisturbed (See Figure 4 and 5 below).

Comprehensive Plan policies 4.9 and 4.10 call for safeguarding natural areas, minimizing development's impact on the environment, and minimizing tree loss during development. Many of the existing trees along W Morganton Rd and Carolina Green Pkwy are mature and reflect the town's natural character. If the applicant retains the 40' HCO and Linear Park buffers as undisturbed (buffer locations depicted on figure 3 and attachment 5), then staff assess Criterion 1 – of being consistent with the Comprehensive plan – is met. To ensure this occurs, staff recommend a condition directing both 40' buffers to remain undisturbed. Additionally, that condition should include the requirement of Tree Protection Fencing installation pursuant to UDO §4.3.11(D) and §4.3.13.

Because the buffer and linear park standards are required as part of the site's base design common to all four outparcels, they are included in this preliminary plat instead of the sites' PDP review.

Figure 4: Natural Tree Stand within the 40' Linear Park.



Figure 5: Natural Tree Stand – HCO Buffer Fronting W Morganton Rd.



- **Access Easement to Connect Patriot Blvd and the Proposed Traffic Circle**

The applicant has included an access easement that will connect Patriot Blvd to the proposed traffic circle, traversing Outparcel 4 (see attachment 5). This easement will ensure necessary site access and circulation to all future commercial sites – pursuant to the *MPS CDP Conceptual Transportation Plan*, *MAPP Criterion 3*, and *UDO Exhibit 3-13 and §4.11.6*.

The applicant also noted on a phone call on 12/11/24 that they are working with the property owner of PARID 20150132 (to the immediate west of outparcel 4) for permission to install the future roadway connection. With this easement in place, staff find that the right access conditions are set to facilitate the future connection.

- **Old Morganton Rd Extension and Traffic Impact Analysis (TIA)**

The applicant intends to extend the Old Morganton Rd Extension to Carolina Green Pkwy. The applicant has also provided a Traffic Impact Analysis (TIA) detailing the effects of this addition on the surrounding community and developments (attachment 9). The street extension will connect to Old Morganton Road, behind Lowes Foods, and Carolina Green Pkwy. Eventually, as mentioned above, an additional connection between the proposed traffic circle and patriot Blvd. will also be installed (see figure 6 below for those stub outs on Old Morganton Rd and Patriot Blvd as they are today).

The TIA also calls for only right turns for traffic moving from the Old Morganton Rd Extension to Carolina Green Parkway. Staff will verify that physical barriers (medians, etc.) obstruct left turns and direct right turns during site plan review.

Figure 6: Old Morganton Rd Ext Connection (left) and Patriot Blvd (right)



○ **20' Linear Park Along Old Morganton Rd Extension**

The applicant's original narrative included a 20' Linear Park along Old Morganton Rd (figure 7) as a voluntary addition to the project. Staff agreed that the addition would further align the development with Criterion 1 (*the application is consistent with the Comprehensive Plan, as well as any other adopted plans for streets, alleys, parks, playgrounds, and public utility facilities*).

Staff also find that the 20' Linear Park would align with:

- Comprehensive Plan Policy 4.12 (*Lead a town-wide initiative to encourage "active living" in Southern Pines, including plans and policies that promote more walkable development*),
- UDO §3.5.14(9) (*Foster Development of a network of open space to serve a variety of recreational and environmental purposes designed and located with respect to existing unique natural features and environmentally sensitive areas*), and
- The purpose of a CDP (*The Conceptual Development Plan represents an overall development pattern that is consistent with the goals and policies of the Comprehensive Plan, Official Zoning Map, Capital Improvements Program, and any other applicable planning documents adopted by the Town.*

After discussions between the applicant and staff on December 10th and 11th, the applicant decided to address the 20' Linear Park addition during each outparcel PDP review.

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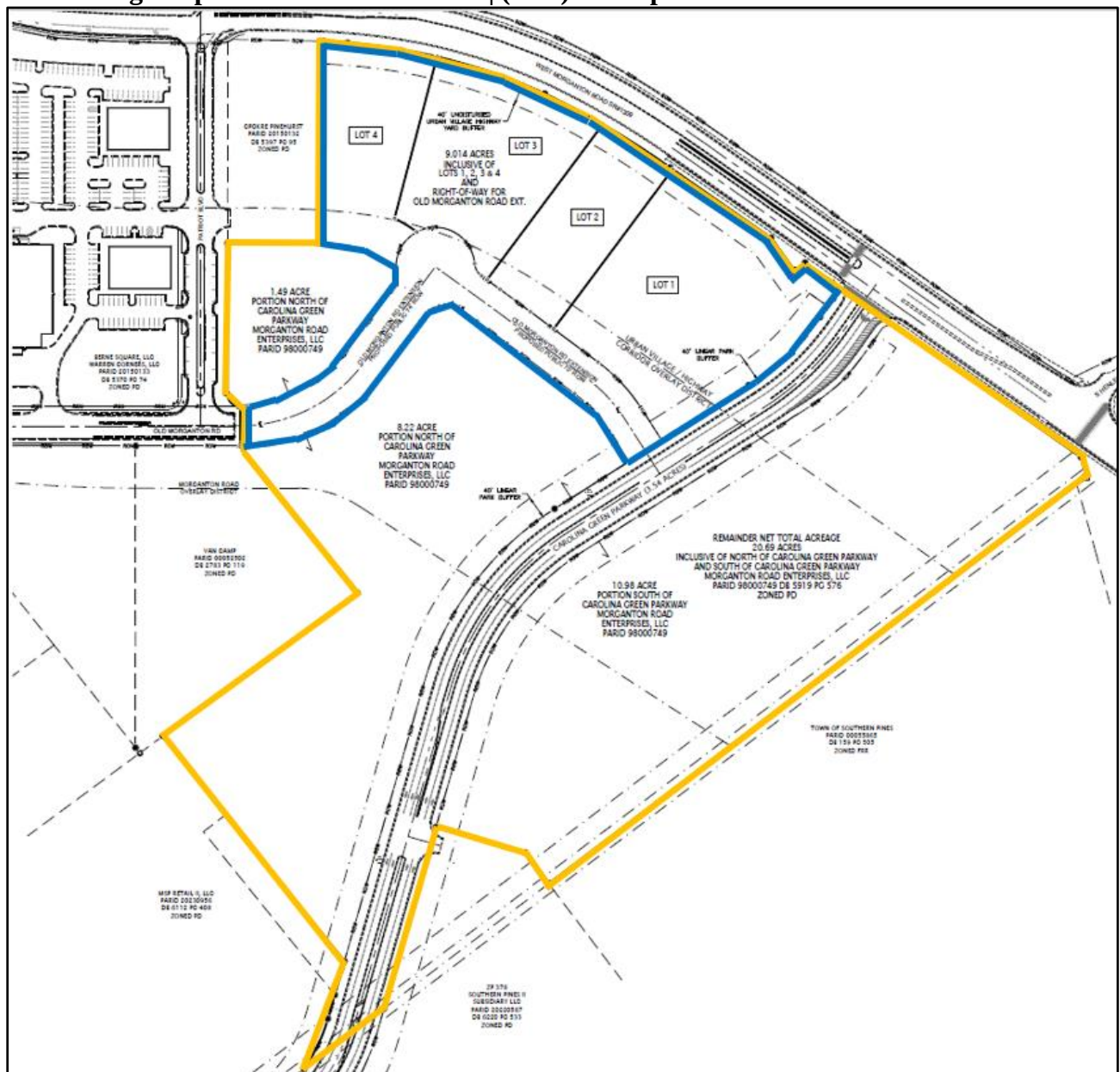
To ensure the project adheres to MAPP criterion 2 (*the proposed Subdivision complies with the UDO and applicable state and federal regulations*), the applicant submitted a RCW and environmental impact assessment from Dr. JH Carter III & Associates, Inc. The assessment, dated August 9, 2024, reflects that no negative impacts on the RCW or endangered species will result from development on the subject property (see attachment 7 and 8).

Pursuant to MPS CDP §5.5.4, “*A 20’ perimeter landscape buffer will be required along the boundaries of the CDP that abut adjoining properties.*” For that reason, the applicant has included a 20’ buffer on the western side of outparcel 4 (see attachment 5).

To facilitate the sale and transfer of control in the time between preliminary plat approval and final plat & PDP approval, the applicant intends to execute an approximately 9.03-acre Minor Subdivision immediately following preliminary plat approval. The current parent tract is 32.65-acres, the minor will separate the 9.03 acres comprising the four proposed outparcels along W Morganton Rd. This will result in a 20.69-acre remainder parent tract

The 9.03-acre parcel will only exist in the timeframe between preliminary plat approval and final plat / PDP approval. The minor plat will fall precisely in line with this proposed MAPP. Though atypical, staff do not assess this plan violates any subdivision regulations or processes. It also will not negatively impact the project's process or ultimate outcome.

- Current parent tract in orange.
- Proposed Minor Subdivision in blue.
- Original parent tract: 32.65 acres | (blue) x4 outparcel area: ~9.03 acres



F. Outside Agency and Neighborhood Meeting Comments:

Staff has provided information on the project to outside agencies, and has received the following responses:

- A response from the Town Engineer highlighted that the applicant has omitted the median in the 74' right-of-way within Old Morganton Rd Extension (from Carolina Green Pkwy to the proposed traffic circle). This omission deviates from the prescribed 74' cross section in the MPS CDP. The applicant provided a reasoning for the omission in their narrative (attachment 2). Staff do not find any technical issues with the change, so for that reason do not object to removing the median in this roadway section.
- The Regional Land Use Advisory Commission replied on December 11, 2024 indicating they have no comment for this project.
- The Technical Review Committee reviewed the Preliminary Plat at their December 3, 2024 meeting and noted the following:
 - Traffic moving from the proposed Old Morganton Rd Extension onto Carolina Green Pkwy must be restricted to right turns only (pursuant to the provided TIA in attachment 9). Turning left must be restricted by a physical means – curbs or other path obstructing measures. This detail can be reviewed and confirmed during site plan review.
 - The proposed 40' linear park buffer on the east side of the subdivision is currently undisturbed and should remain that way in line with MAPP Criterion 1.
 - The traffic circle must include a stub out for a street connection between Patriot Blvd and the traffic circle, via outparcel 4. A stub out should also be present on the traffic circle to connect a driveway to outparcel 3. Both of these can be addressed during site plan review.
- A list of Technical Review Committee comments was provided to the applicant on December 6, 2024. The applicant returned amended application documents on December 10, 2024. Further PDP and site plan review and approval will be required prior to issuance of any development, if approved.

4. ATTACHMENTS:

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

1. Preliminary Plat Application, Agent Authorizations, and List of Adjacent Landowners
2. Narrative
3. Justification

4. Preliminary Plat Sheet 1 – Parent Tract
5. Preliminary Plat Sheet 2 – 4 Outparcels Specifics
6. Preliminary Plat Sheet 3 – Utilities
7. Red Cockaded Woodpecker Survey Letter
8. Red Cockaded Woodpecker Survey Map
9. Traffic Impact Analysis – Executive Summary
10. Duke Energy Letter
11. Piedmont Natural Gas Letter
12. Monument Signs Concept
13. Legal Description for 9.03 Minor Subdivision (4 Outparcels)

5. 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.

I move to adopt the following for transmission to the Town Council as a result of the December 19, 2024 Preliminary Forum on application MAPP-04-24:

The information presented at the forum indicated that the following issues be considered in applying the criteria for a Major Subdivision Preliminary Plat to application MAPP-04-24:

1. Approval of the request will result in the creation of five commercial parcels within the Morganton Park South Planned Development and the extension of Old Morganton Road to Carolina Green Parkway. The extension will also include a traffic circle. Approval of this request will also delineate buffer requirements for the required 40' highway buffer, 40' linear park buffer, and 20' western side buffer. Site design requirements will be determined during the Preliminary Development Plan review process.
- 2.

In addition, the following concerns were raised during the forum, but do not appear to apply in determining whether the Major Subdivision Preliminary Plat criteria are satisfied:

- 1.



Major Subdivision Preliminary Plat

Date Received: _____ Case No.: S-_____-_____-_____

Subdivision Name: Morganton Park South - Phase 4 Street Address: 1700 Old Morganton Rd
PIN: 857100588078 Parcel ID: 98000749 Zoning District: PD
Project acreage in: Lots ±7.28 AC + Roads ±1.74 AC + Open Space _____ + Common Area _____
+ Other (describe) _____ = Total Project Acreage 9.014 AC
Number of Lots: 4 Minimum Lot Size: 1.19 AC Setbacks: NA
Highway Corridor Overlay: Yes/No yes If yes, Urban Village X Urban Transition _____ Rural Hwy _____
Watershed: Yes/No no If yes, LR #2: _____ LR Vass: _____ Nicks Creek: _____ HQW: Yes/No no
Does the site contain a Special Flood Hazard Area: Yes/No no Does the site contain wetlands: Yes/No no

Applicant:

Name: Midland Atlantic Properties
Phone: 513-792-5000 Email: jsilverman@midlandatlantic.com
Mailing Address: 8044 Montgomery Road, Suite 370, Cincinnati, Ohio 45236

Contact Person, if different from Applicant:

Name: Koontz Jones Design - C/O Bob Koontz
Phone: 910-684-8487 Email: bkoontz@koontzjones.com
Mailing Address: 140 Applecross Rd. Suite B, Pinehurst NC, 28374

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

Name(s): MORGANTON ROAD ENTERPRISES, LLC, Thomas M Van Camp Trustee & Others
Phone: 910-295-2525 Email: thomasv@vancamplaw.com
Mailing Address: PO BOX 1389 Pinehurst, NC 28370

Date: November 12, 2024

Midland Atlantic Properties

Signature of Applicant

William M. Mees, Jr.
Director of Development
wmees@midlandatlantic.com

4.17.24

APPOINTMENT OF AGENT

The undersigned owner(s), Midland Atlantic Properties, hereby appoint(s) Koontz Jones Design as the exclusive agent for the purpose of making an application to the Town of Southern Pines for approval of a Major Subdivision of the property described in the attached application. The owner(s) hereby agree 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 Planning Board and Town Council for the approval of a Major Subdivision of the property; and
4. to act on behalf of the owner(s) without limitations with regard to any and all things directly or indirectly connected with or arising out of any application for a Major Subdivision under the Southern Pines Unified Development Ordinance.

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

Signed this 12th day of November, 2024.

Midland Atlantic Properties



Property Owner

William M. Mees, Jr.
Director of Development

Property Owner


Agent

APPOINTMENT OF AGENT

Morganton Road Enterprises, LLC

The undersigned owner(s), Van Camp, Thomas M Trustee & Others, hereby appoint(s) Koontz Jones Design 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:

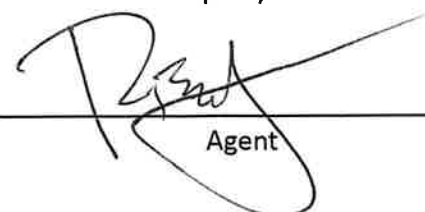
1. to submit an application and required supplemental materials;
2. to appear at public meetings and give representation and comments on behalf of the owner(s);
3. to accept conditions or recommendations made by the Town of Southern Pines Town Council for the approval of a Planned Development District – 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 _____ day of _____, _____.

 AIF

Property Owner

Property Owner


Agent

4.17.24

ADJACENT PROPERTY OWNERS

PARID	PIN	DEED BOOK	DEED PAGE	NAME	NAME2	ADDRESS	ADDRESS2	CITY	STATE	ZIP
00039140	85710770813	159		505 TOWN OF SOUTHERN PINES		PO BOX 870		SOUTHERN PINES	NC	28388
00049222	857100563343	6102		263 MIDLAND SOUTHERN PINES RETAIL LLC		8044 MONTGOMERY ROAD	SUITE 370	CINCINNATI	OH	45236
00052502	857100572972	2783		119 VAN CAMP ROBERT W & JULIE M	TRUSTEES	512 PENICKWOOD LN	APT 9105	SOUTHERN PINES	NC	28387
00055865	857100574447	159		505 TOWN OF SOUTHERN PINES		PO BOX 870		SOUTHERN PINES	NC	28388
00056206	857100478567	2824		397 MLE PROPERTIES LLC		210 FRYE RD		PINEHURST	NC	28374
00991984	857100784375	143		303 SOUTHERN PINES TOWN OF		PO BOX 870		SOUTHERN PINES	NC	28388
00991984801	857100784375			SOUTHERN PINES TOWN OF		C/O TIME WARNER TAX DEPT 070	PO BOX 7467	CHARLOTTE	NC	28241-7467
00991985	857100682988	143		303 SOUTHERN PINES TOWN OF		PO BOX 870		SOUTHERN PINES	NC	28388
20150132	857100583770	5397		95 CPGKRE PINEHURST	LOWES OUTPARCELS LLC	2710 WYCLIFF ROAD	SUITE 100	RALEIGH	NC	27607
20150133	857100487483	5370		74 BERNE SQUARE LLC	WARREN CORNERS LLC	1775 GRAHAM AVE	SUITE 201	HENDERSON	NC	27536
20150134	857100479988	4484		407 MLE PROPERTIES LLC		210 FRYE RD		PINEHURST	NC	28374
20190271	857100590566	5210		279 MORGANTON PARK REALTY LLC		5 FIRST VILLAGE DRIVE		PINEHURST	NC	28374
20190272	857100597408	5210		301 PINEHURST SURGICAL CLINIC		5 FIRST VILLAGE DRIVE		PINEHURST	NC	28374
20200203	857100590157	5297		202 PINEHURST MEDICAL GROUP LLC	REALTY LLC	205 PAGE RD		PINEHURST	NC	28374
20200421	857100581716	6160		207 SOUTHERN WAKE INDUSTRIAL PARK LLC		27 ANNETTE DR	STE 107	BENSON	NC	27504
20220003	857100589930	5774		380 TOWN OF SOUTHERN PINES		PO BOX 870		SOUTHERN PINES	NC	28388
20220587	857100568777	6220		533 ZP 378 SOUTHERN PINES II SUBSIDIARY LLC		6725 MONUMENT DR		WILMINGTON	NC	28405-4558
20230819	857100687987	143		200 YMCA OF THE SANDHILLS		PO BOX 870		SOUTHERN PINES	NC	28388
20230820	857100781785	6101		257 MIDLAND SOUTHERN PINES RETAIL LLC		2717 FORT BRAGG ROAD		FAYETTEVILLE	NC	28303
20230833	857100467058	6102		408 MSP RETAIL II LLC		8044 MONTGOMERY ROAD	SUITE 370	CINCINNATI	OH	45236
20230956	857100478061	6112		451 RENTAL DERBY LLC		8044 MONTGOMERY ROAD		CINCINNATI	OH	45236
98000748	857107686501	5625		576 MORGANTON ROAD ENTERPRISES LLC		39 SPEARHEAD DRIVE		WHISPERING PINES	NC	28327
98000749	857100588078	5919			VAN CAMP THOMAS M TRUSTEE & OTHERS	PO BOX 1389		PINEHURST	NC	28370

MORGANTON PARK SOUTH – PHASE 4 MAJOR SUBDIVISION NARRATIVE

The purpose of this Major Subdivision (MS) application is to fully describe the next phase of development for the approved Morganton Park South Conceptual Development Plan (CDP). As stated in the Town of Southern Pines Unified Development Ordinance (UDO) in Section 2.20, the Major Subdivision Preliminary Plat “serves as a guide to future density, intensity, land uses, pedestrian and bicycle ways, trails, parks and open space, as well as Lot, street and drainage patterns.” The following narrative will provide information related to the submitted plans and details of Phase 4 of the proposed development of the Morganton Park South CDP. This narrative will describe how the Major Subdivision Preliminary Plat meets the criteria outlined in Section 2.20 of the UDO. Phase 4 is consistent with the PD zoning district, the approved CDP, and the Town’s 2040 Comprehensive Plan (TCP).

The subject property is currently zoned Planned Development (PD) with an approved Conceptual Development Plan (CDP) PD-08-21. The property is also designated as a Retail Center and a Community Activity Center in the TCP. In addition, the property is designated as a Suburban Settlement Character District. A Suburban Settlement may contain shopping centers, office parks, industrial parks, single-family neighborhoods, or apartment complexes. The proposed outparcel development in this Major Subdivision application follows the guidelines of the TCP and all standards of the approved CDP.

Phase 4, as described in this Major Subdivision application, will include four commercial and/or office outparcels and the Old Morganton Road connector on +/- 9.03 acres. The Old Morganton Road extension will connect to Carolina Green Parkway at a full-motion intersection. All outparcels will have access from Old Morganton Road. The applicant intends to subdivide the 9.03 acres from the current tract (PARID 9800749) through a separate minor subdivision process to allow the applicant to acquire the subject property from the landowner. Following is a description of the individual phase and overall design elements of the Major Subdivision Preliminary Plat.

Retail and/or Office Development

Phase 4 of the Morganton Park South CDP will include four (4) outparcels. The attached preliminary plat shows that the outparcels will be developed within the +/- 9.03 acre outparcel area. The outparcels may be developed with any retail and office uses permitted in Exhibit VII – Land Use Plan of the approved CDP. The outparcels will be required to undergo a Preliminary Development Plan process for each outparcel. The following establishes design standards for the individual outparcels specific to the proposed development included in the preliminary plat and on Sheet L-1.0 of the documents.



Open Space

Phase 4 will include a 40' wide linear park along the Carolina Green Parkway. Sheet L-1.0 provides updated open-space calculations to reflect this phase of development.

Stormwater Management

Each outparcel will provide its own stormwater management to be specifically designed during the site planning process unless it is determined that there is capacity in another regional stormwater facility. In addition, the stormwater system for Old Morganton Road is shown on Sheet L-1.0. Stormwater management for all sites on the property will be provided per Section 5.5.10 of the CDP booklet. Appropriate local stormwater and erosion control permits will be required by the Town before any land disturbance activity on the site. The site is not located in HW or Water Supply Watersheds.

Lighting

Lighting levels along streets will be provided to meet the UDO standards for safety. Parking lot lighting levels will be permitted up to 4.00 lumens per square foot (4 footcandles) and include luminaires with cutoffs less than 90 degrees to prevent the spilling of light onto adjacent properties.

Endangered Species

A report prepared by Dr. JH Carter and Associates on August 9, 2024, has been provided with this application. After a wildlife biologist had surveyed the property, no new cavity trees were found. As a result, the development of this property was determined to have no negative impact on RCW habitat.

Utilities

This Major Subdivision follows the criteria described in Section 5.5.5 of the CDP booklet. Water and sewer utilities are readily available for the project and have been installed during previous phases of development. Utility locations are provided on Sheet L-1.0, illustrating the location of water and sewer utility connections. Water and sewer will be installed along Old Morganton Road to connect the site from the existing Carolina Green Parkway utilities to the existing water and sewer mains located on Old Morganton Road.

Roadways

Section 5.5.1 Vehicular Circulation, Street Cross Sections, and Parking of the approved CDP allows for ingress/egress for the Phase 4 property and requires the extension of Old Morganton Road to connect to Carolina Green Parkway with a 74' wide right-of-way. The CDP states that access points throughout the development can be reviewed during the development process.

Old Morganton Road will be extended to Carolina Green Parkway from the existing intersection with Patriot Boulevard. From the intersection at Patriot and Old Morganton, the roadway will curve to a roundabout and then continue east to intersect with the Carolina Green Parkway at a full-motion intersection. A median will be provided from Patriot Boulevard to the roundabout. No median will be provided from the roundabout to Carolina Green Parkway to allow full motion access to the outparcels.

The curve and roundabout design will provide additional traffic calming to reduce speeds along Old Morganton Road. This design adds to the pedestrian friendly environment being developed for the entirety of Morganton Park South. Each outparcel along Old Morganton Road will be permitted one (1) full-motion access point.

Signage

Signage on the property will follow Section 5.5.7 of the approved CDP document. The sign design will follow the design character established in the CDP and currently constructed within Morganton Park South.

In summary, the proposed Major Subdivision is consistent with the TCP and promotes its objectives. The TCP designates the property as a Suburban Settlement Character District. This Major Subdivision meets the standards of the approved CDP. The proposed Major Subdivision is the fourth development phase for the Morganton Park South area in the Town of Southern Pines. Phase 4 will meet the community vision described in Section 2.2 of the CDP and create new retail development in Southern Pines within the overall mixed-use development of Morganton Park South.

Morganton Park South – Phase 4 Major Subdivision Justification

Below are listed the five (5) criteria required to approve a Major Subdivision application as described in Section 2.20.4 (G) Criteria of the Town of Southern Pines UDO. Following the individual criteria is an explanation, indicated in blue, describing how the project demonstrates compliance with each of these criteria.

- (1) The application is consistent with the Comprehensive Plan, as well as any other adopted plans for streets, alleys, parks, playgrounds, and public utility facilities;

This application is consistent with the Town's Comprehensive Plan (TCP), incorporates many of its goals and objectives, and establishes a development pattern that is consistent with the surrounding neighborhood and approved Conceptual Development Plan (CDP) for the property. The development pattern is compatible with the surrounding area, zoning classifications, and future uses included in the CDP. The Preliminary Plat included in this application is consistent with UDO standards and standards included in the CDP for roadways, open space, and public utilities.

- (2) The proposed Subdivision complies with the UDO and applicable state and federal regulations;

This major subdivision plan complies with the UDO standards and those outlined in the CDP for this property. Uses included in this preliminary plat will be limited to those approved in the CDP for the property. The proposed Major Subdivision Preliminary Plat establishes setbacks and a development pattern consistent with the UDO. The request also complies with all applicable Town of Southern Pines, state, and federal regulations. Roadways and utilities will be provided for the project to adequately serve the property's development. Stormwater management will also meet all local, state, and federal requirements. As required, these items will be permitted with the appropriate agencies during the site planning process.

- (3) The proposed Subdivision, including its Lot sizes, density, access, and circulation, is Compatible with the existing and/or permissible zoning and future land use of adjacent property;

The subject property is currently zoned Planned Development (PD) with an approved Conceptual Development Plan (CDP). The property is also designated as a Retail Center and a Community Activity Center in the TCP. In addition, the property is designated as a Suburban Settlement Character District. A Suburban Settlement may contain shopping centers, office parks, industrial parks, single-family neighborhoods, or apartment complexes. The proposed outparcel development in this PDP follows the guidelines of the TCP and all standards of the approved CDP.

In addition, the applicant has worked with the Town of Southern Pines and NCDOT to ensure safe access and circulation for the property. The Preliminary Plat adjusts the conceptual road design shown in the CDP but retains the original intent for connectivity, pedestrian access, and safe turning movements. Section 2.20.4(A)(1) of the UDO states that the Preliminary Plat "serves as a guide to future density, intensity, land uses, pedestrian and bicycle ways, trails, parks, and open space, as well as Lot, street and drainage patterns." We believe that the alignment included in the Major Subdivision Preliminary Plat application, which is based on more detailed topographic

analysis, engineering information, and site-specific design, demonstrates compliance with the CDP.

The modification (1) reduces the number of curb cuts along the eastern end of Carolina Green Parkway from two curb cuts to one curb cut – now placed between the two original curb cuts; and (2) adjusts the configuration of Old Morganton Road to a design which reduces traffic speed and allows for safer pedestrian utilization by adding curves and a roundabout. The modification also places the Old Morganton Road extension in a location that is physically able to be constructed – the original Conceptual Plan placed the road in the middle of the borrow pit used to construct the Lowe’s Grocery Store Center, presenting a significant grading challenge. We believe the modification is an improvement to the original Conceptual Plan, but moreover, we believe the modification is consistent with the intent of the CDP while creating a safer, more pedestrian-friendly condition for Old Morganton Road and maintaining the overall circulation patterns for the entirety of Morganton Park.

- (4) The proposed Subdivision will not have detrimental impacts on the safety or viability of permitted uses on adjacent properties; and

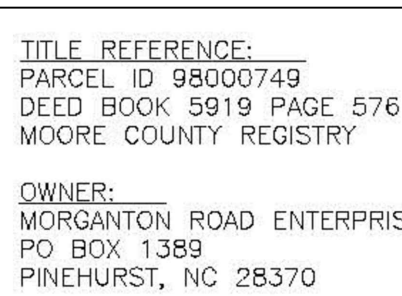
This proposed development is compatible with the adjacent properties. The proposed density, land use, and proposed plan are consistent with standards set forth in the UDO and all Southern Pines zoning documents, including the approved CDP. Based on the approved CDP the proposed development is compatible and consistent with the surrounding neighborhood.

Vehicular access to the property will be from Carolina Green Parkway and through an extension of the existing Old Morganton Road. Individual outparcels will have access directly from Old Morganton Road. Old Morganton Road will include a curved area, and a roundabout will be added for traffic calming purposes and to slow vehicles through the development. In conjunction with the extension of the multi-use trail and sidewalks, these traffic calming measures provide a safer environment for pedestrians and bicyclists. The applicant has worked with the Town and NCDOT to ensure safe ingress and egress to the property.

- (5) The proposed public facilities are adequate to serve the normal and emergency demands of the proposed Development, and to provide for the efficient and timely extension to serve future Development.

Public water and sewer utilities are available for the project and will be extended to serve the property. Extension of these utilities will match the original intent of the Morganton Park South development and are located in a manner consistent with the Town’s requirements for emergency demands. Fire hydrants will be installed as required by the Town of Southern Pines. Upon completion and acceptance by the Town of Southern Pines, all utility improvements will be dedicated to the Town of Southern Pines.

The extension of Old Morganton Road will be constructed to the standards included in this application, which meet the Town’s requirements for emergency demands related to pavement widths, pavement cross-section, and turning radii. All roadways will be designed and permitted through the Town of Southern Pines and reviewed by emergency services for compliance with access and service requirements.



PRELIMINARY PLAT PREPARED BY:
ROBERTO RODRIGUEZ, JR., PLS
LICENSE # 5428
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

<u>TRACT ACREAGE CALCULATIONS</u>		
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)

USEABLE OPEN SPACE	= ±0.39 AC
OPEN SPACE	= ±0.87 AC
TOTAL OPEN SPACE	= ±1.26 AC

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	S88°01'32"E	42.85
C2	161.36	1036.13	S81°11'56"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	S44°12'46"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	N57°41'33"W	66.17
C11	25.10	30.00	N83°02'27"W	24.37
C12	8.10	70.00	S81°18'27"W	8.10
C13	25.10	30.00	S63°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	N124°3'23"E	24.37
C17	9.92	70.00	N71°05'56"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°38'01"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

SITE NOTES:

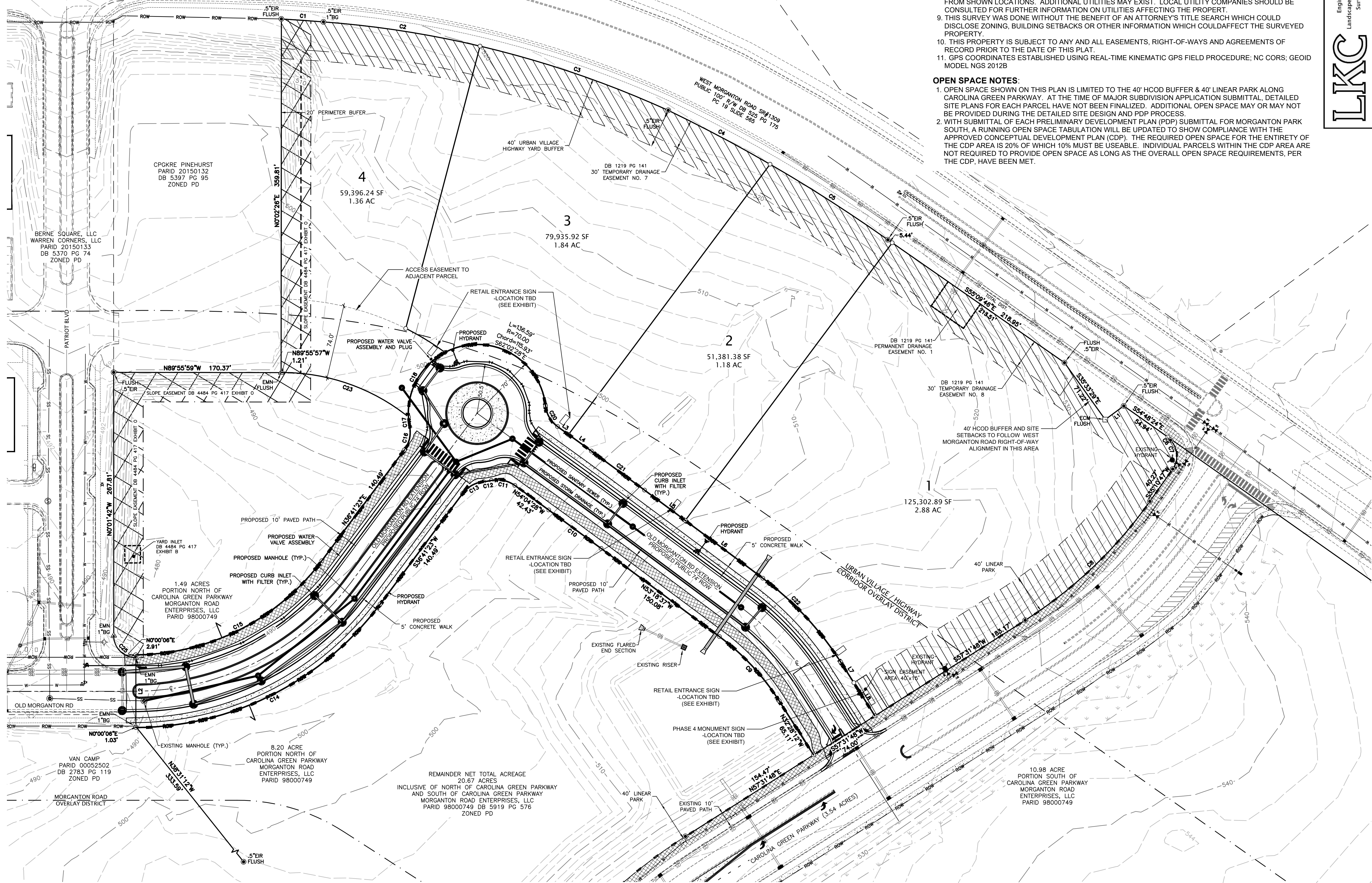
1. WATER AND SANITARY SEWER BY MOORE COUNTY PUBLIC UTILITIES
2. ALL STREETS ARE TO BE PUBLIC, TOWN OF SOUTHERN PINES ROADS.
3. EACH OUTPARCEL TO HAVE INDIVIDUAL ACCESS FROM OLD MORGANTON ROAD
4. EACH OUTPARCEL SHALL BE ALLOWED 1 (ONE) RETAIL ENRANCEMENT SIGN (SEE SIGNAGE EXHIBIT). THE FINAL LOCATION FOR EACH SIGN SHALL BE DETERMINED DURING DETAILED SITE PLANNING.

GENERAL NOTES:

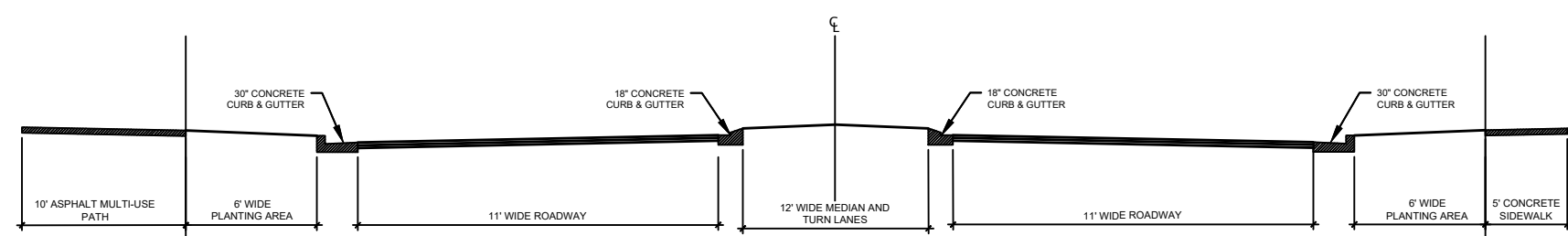
1. THIS MAP IS NOT IN ACCORDANCE WITH GS 47-30
2. AREA BY COORDINATE METHOD
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCE
4. DASHED LINES NOT SURVEYED, DRAWN FROM INFORMATION AS INDICATED
5. THERE ARE NO VISIBLE ENCROACHMENTS OTHER THAN THOSE SHOWN HEREON
6. NO PROPERTY IS NOT LOCATED IN A WATER SUPPLY WATERSHED
7. THIS PROPERTY IS NOT LOCATED IN A DESIGNATED FEMA SPECIAL FLOOD HAZARAD 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 COULDAFFECT 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 CORRS; GEOID MODEL NGS 2012B

OPEN SPACE NOTES:

1. OPEN SPACE SHOWN ON THIS PLAN IS LIMITED TO THE 40' H'OD BUFFER & 40' LINEAR PARK ALONG CAROLINA GREEN PARKWAY. AT THE TIME OF MAJOR SUBDIVISION APPLICATION SUBMITTAL, DETAILED SITE PLANS FOR EACH PARCEL HAVE NOT BEEN FINALIZED. ADDITIONAL OPEN SPACE MAY OR MAY NOT BE PROVIDED DURING THE DETAILED SITE DESIGN AND PPP PROCESS.
2. WITH SUBMITTAL OF EACH PRELIMINARY DEVELOPMENT PLAN (PPP) SUBMITTAL FOR MORGANTON PARK SOUTH, A RUNNING OPEN SPACE TABULATION WILL BE UPDATED TO SHOW COMPLIANCE WITH THE ABOVE-RECORDED CONCERNED DEVELOPMENT PLAN (CDP). THE REQUIRED OPEN SPACE FOR THE ENTIRETY OF THE CDP AREA IS 20% OF WHICH 10% MUST BE USEABLE. INDIVIDUAL PARCELS WITHIN THE CDP AREA ARE NOT REQUIRED TO PROVIDE OPEN SPACE AS LONG AS THE OVERALL OPEN SPACE REQUIREMENTS, PER THE CDP, HAVE BEEN MET.



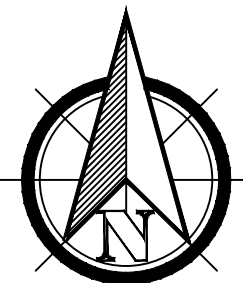
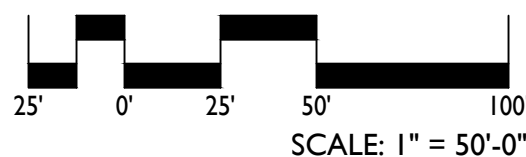
ROADWAY CROSS SECTIONS



74' RIGHT-OF-WAY (OLD MORGNTON RD)
SECTION (NOT TO SCALE)
*OR TO MATCH EXISTING OLD MORGANTON ROAD CROSS SECTION

Figure 10: Typical Section of a 27' Wide Planting Area. The diagram illustrates a cross-section of a 27-foot wide planting area. It features a 9-foot wide sidewalk on the left, followed by a 9-foot wide planting area. Within this planting area, there are two 12-foot wide drive aisles separated by a 3-foot wide planter bed. The planter bed is bordered by 18-inch concrete curbs and gutters. The right side of the diagram shows a 2.5-foot maximum slope leading away from the planting area.

74' RIGHT-OF-WAY (OLD MORGANTON RD)
SECTION (NOT TO SCALE)



LKC
Engineering
Landscape Architecture
Surveying

LKC Engineering, PLLC
140 Aqua Shield Court
Aberdeen, NC 28315
O: 910.420.1437
lkceengineering.com
License No. P-1095

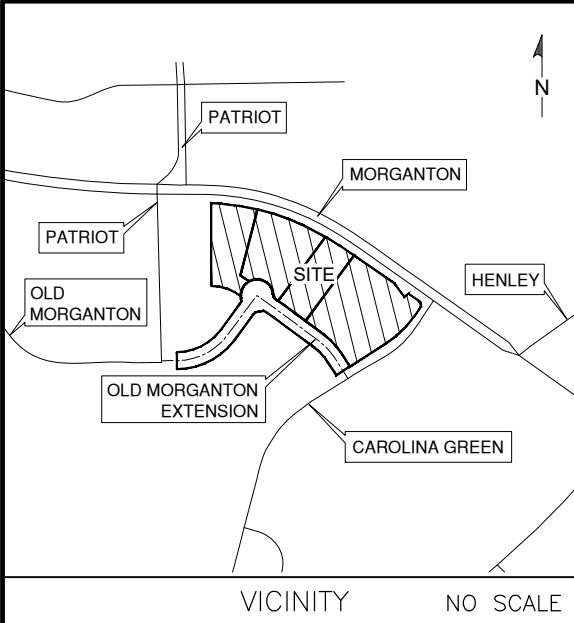
KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

140 APPLECROSS RD, SUITE B
PINEHURST, NC 28374
P: (910) 684-8487
W: www.koontzjonesdesign.com

REVISIONS:

MORGANTON PARK SOUTH - PHASE 4
MAJOR SUBDIVISION
SOUTHERN PINES, NORTH CAROLINA
PRELIMINARY PLAT

DATE: 12/11/2024
DESIGNED BY: BK
DRAWN BY: BK
CHECKED BY: BK
Q.C. BY: BK
SCALE: 1"=50'
PROJECT #: KD24028
SHEET NUMBER:
1-10



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 # 5428
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 (41,885 SF)
-LINEAR PARK 0.36 ACRES (14,950 SF)

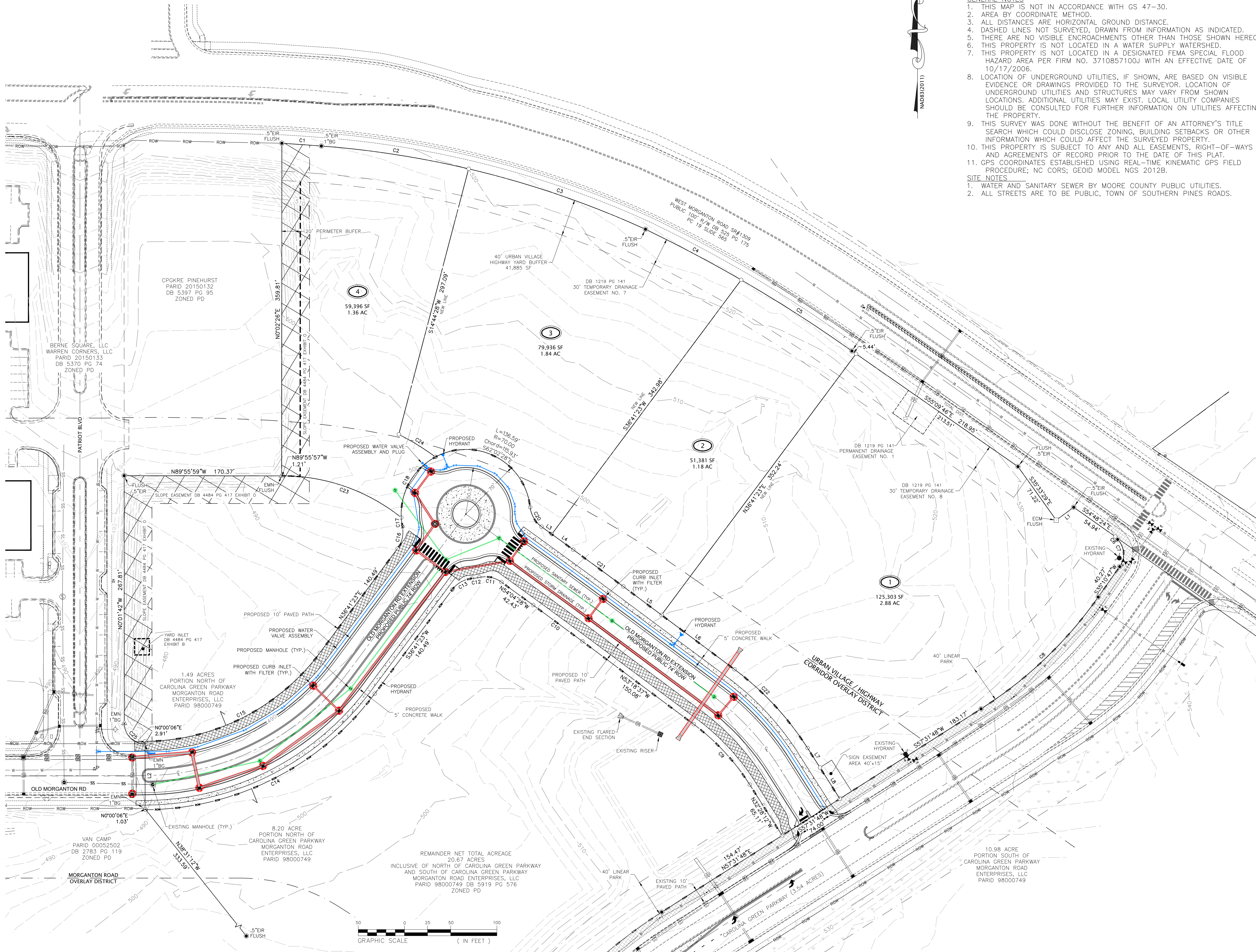
COMMERCIAL LOT DATA
5 LOTS TOTAL, ONE PHASE
-4 BUILDABLE LOTS - COMMERCIAL USE
-1 LOT REMAINDER 20.67 ACRES
(NOT INCLUSIVE OF CAROLINA GREEN PARKWAY)

LEGEND

- 5" IRON ROD SET FLUSH
- EXISTING IRON ROD
- EXISTING IRON PIPE
- EXISTING MONUMENT
- EXISTING MAG NAIL
- EXISTING RIGHT OF WAY
- FUTURE RIGHT OF WAY
- BOUNDARY LINE
- PROPERTY BARB
- BOUNDARY NOT SURVEYED
- EDGE OF PAVEMENT
- EDGE OF CONCRETE
- EXISTING SANITARY SEWER
- EXISTING STORM DRAINAGE
- 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	N7°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

GENERAL NOTES

- THIS MAP IS NOT IN ACCORDANCE WITH GS 47-30.
- AREA BY COORDINATE METHOD.
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCE.
- DASHED LINES NOT SURVEYED, DRAWN FROM INFORMATION AS INDICATED.
- THERE ARE NO VISIBLE ENCROACHMENTS OTHER THAN THOSE SHOWN HEREON.
- THIS PROPERTY IS NOT LOCATED IN A WATER SUPPLY WATERSHED.
- 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.
- 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.
- 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.
- THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHT-OF-WAYS AND AGREEMENTS OF RECORD PRIOR TO THE DATE OF THIS PLAT.
- GPS COORDINATES ESTABLISHED USING REAL-TIME KINEMATIC GPS FIELD PROCEDURE; NC CORS; GEOID MODEL NGS 2012B.

SITE NOTES

- WATER AND SANITARY SEWER BY MOORE COUNTY PUBLIC UTILITIES.
- 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
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License No. P-1095

Engineering
Landscape Architecture
Surveying

LKC

PRELIMINARY PLAT
MORGANTON PARK SOUTH
PHASE 4
SOUTHERN PINES, NORTH CAROLINA

DATE: DECEMBER 10, 2024
DESIGNED:
DRAWN: RR
CHECKED:
NO.

Dr. J.H. CARTER III & ASSOCIATES, Inc.

Environmental Consultants
515-F Midland Road
Southern Pines, N.C. 28388
910-695-1043 / 910-695-3317 (fax)

9 August 2024

TO: Koontz Jones Design
Attn: Robert E. Koontz
150 South Page Street
Southern Pines, NC 28387

FROM: William Mullin, Wildlife/Wetland Biologist
Dr. J.H. Carter III & Associates, Inc. (JCA)

SUBJECT: Summary of red-cockaded woodpecker survey for the proposed Morganton Park South project in Southern Pines, Moore County, North Carolina.

CC: Raleigh USFWS Field Office
U.S. Fish and Wildlife Service
P.O. Box 33726
Raleigh, NC 27636-3726

Midland Atlantic Development Co., LLC, plans to construct a commercial development within the northeastern portion of the Morganton Park South retail complex on 5 adjacent lots (LRK #s 00052502, 98000749, 00052504, 00056206 and 20150134) on approximately 47.14 acres in Southern Pines, Moore County, North Carolina (NC) (Figure 1). This memorandum evaluates the impacts of this project on the Federally-endangered red-cockaded woodpecker (*Picoides borealis* = *Dryobates borealis*) (RCW) and 3 Federally Endangered plant species, pursuant to Section 9 of the Endangered Species Act (ESA), as amended. The southern portion of the Morganton Park South retail complex is already cleared and construction is underway. This memorandum serves as an update to the July 2023 evaluation for 2 parcels (LRK #s 00052502 and 98000749). Three additional parcels (LRK#s 00052504, 00056206 and 20150134) on the north side of the Morganton Park South retail complex were included in this evaluation, totaling 5 parcels as shown on the attached figure.

The project site is located between US Highway 15-501 and State Route 1309 (Morganton Road), and Brucewood Road north of the north of the Target retail store, in Southern Pines, NC (Figure 1).

The newly added parcels 1, 2 and 3 (Figure 1) total 9.52 ac. All 3 parcels are adjacent to one another and located south of Old Morganton Road. These parcels are similarly vegetated with a dense overstory of loblolly (*Pinus taeda*) and longleaf pine (*P. palustris*), a moderately dense midstory of turkey (*Quercus laevis*), blackjack (*Q. marilandica*) and bluejack (*Q. incana*) oaks and a dense ground cover of muscadine grape (*Muscadinia rotundifolia*), poison ivy (*Toxicodendron radicans*) and Virginia-creeper (*Parthenocissus quinquefolia*).

Lot 4 (LRK #52502) is 3.04 ac. and occurs south of Patriot Boulevard along the northern edge of the project site (Figure 1). Two-thirds of the lot is vegetated with dense, second-growth loblolly pine, a dense 7-ft. tall midstory of bluejack oak and common wax-myrtle (*Morella cerifera*), and a dense ground cover of muscadine grape, poison ivy and Virginia-creeper. The eastern third of the lot was clear-cut between 2013 and 2014. The clear-cut has begun to revegetate and contains a moderately dense shrub layer of loblolly pine saplings, winged sumac (*Rhus copallinum*) and sweetgum (*Liquidambar styraciflua*), and a dense herbaceous layer of dogfennel (*Eupatorium capillifolium*), blackberries (*Rubus* spp.), ragweed (*Ambrosia artemisiifolia*) and broomsedge (*Andropogon virginicus*).

The northern 34 ac. of Lot 5 (LRK #98000749) was included in this evaluation (Figure 1); the southern portions are already developed. Portions of the 34 ac. parcel consist of 38-year old longleaf pine plantation and loblolly pine regeneration, a dense 7-15 ft. tall midstory of sassafras (*Sassafras albidum*), blackjack oak, American persimmon (*Diospyros virginiana*) and red maple (*Acer rubrum*), and a moderately dense ground cover of Carolina wiregrass (*Aristida stricta*), eastern bracken fern (*Pteridium latiusculum*) and Carolina jessamine (*Gelsemium sempervirens*). Dense mats of kudzu (*Pueraria montana*) blanket the pines along Morganton Road. The previously mentioned clear-cut is slightly north of the parcel 5's center.

A wildlife biologist with Dr. J. H. Carter III & Associates, Inc. (JCA) surveyed the project site and vicinity on 7 August 2024 for RCW cavity trees. No RCW cavity trees were found. The nearest RCW cavity tree (#1204) contains a relic enlarged cavity and is located 3,050 feet west of the project site in SOPI Cluster 60 (Figure 1). This project will have no effect on the RCW.

The United States Fish & Wildlife Service (USFWS) lists 3 Federally Endangered plant species that occur in Moore County: rough-leaved loosestrife (*Lysimachia asperulaefolia*), Michaux's sumac (*Rhus michauxii*) and American chaffseed (*Schwalbea americana*) (USFWS 2023). A biologist evaluated the project site for listed plant species on 6 July 2023. No habitat occurred within the project site for rough-leaved loosestrife or American chaffseed. Potentially suitable habitat occurred within the project site for Michaux's sumac in the regenerating clearcut, however, none was observed.

A JCA biologist transected the 5 parcels at 10-foot intervals and noted vegetative characteristics, soil conditions and ecology. The exclusion of fire and habitat conversion were potential contributing factors to the absence of the listed plant species. The closest known record of Michaux's sumac occurs 3.0 miles southeast of the project area (NCNHP 2023). This project will not impact Michaux sumac.

NC Natural Heritage Program. 2023. NC Natural Heritage Program online database at <http://ncnhp.org/Pages/heritagedata.html> (accessed 5 July 2023).

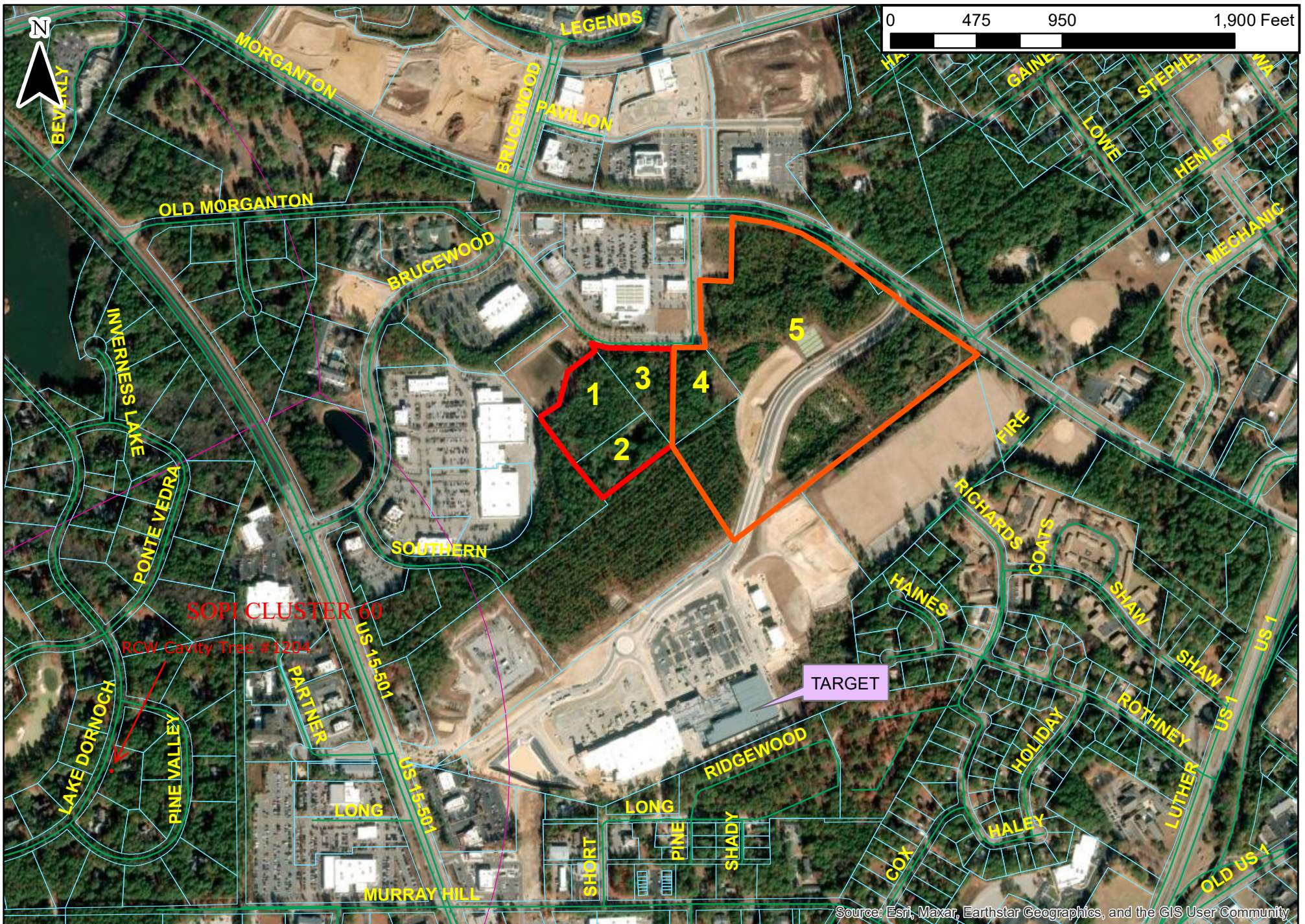


Figure 1. Location of red-cockaded woodpecker clusters and/or partitions impacted by the proposed Morganton Park South project in Southern Pines, Moore County, North Carolina, 2024.

Traffic Impact Analysis

Morganton Park South
Phase 4
Southern Pines, NC

Prepared for:
Midland Atlantic Properties

Kimley»Horn

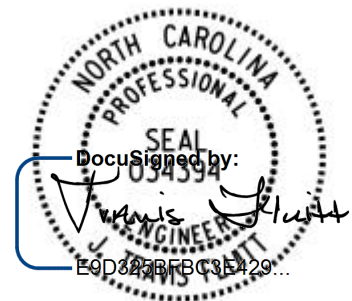
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Traffic Impact Analysis for
Morganton Park South Phase 4
Southern Pines, North Carolina

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

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 (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:

Carolina 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**.

Traffic Impact Analysis

Morganton Park South
Phase 4
Southern Pines, NC

Prepared for:
Midland Atlantic Properties

Kimley»Horn

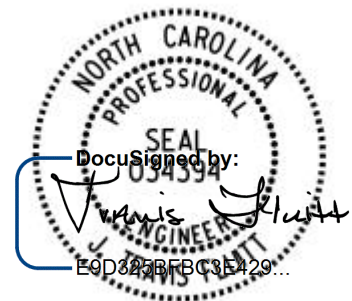
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Traffic Impact Analysis for
Morganton Park South Phase 4
Southern Pines, North Carolina

Prepared for:
Midland Atlantic Properties
Cincinnati, OH

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November 2024
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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:

Carolina 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):

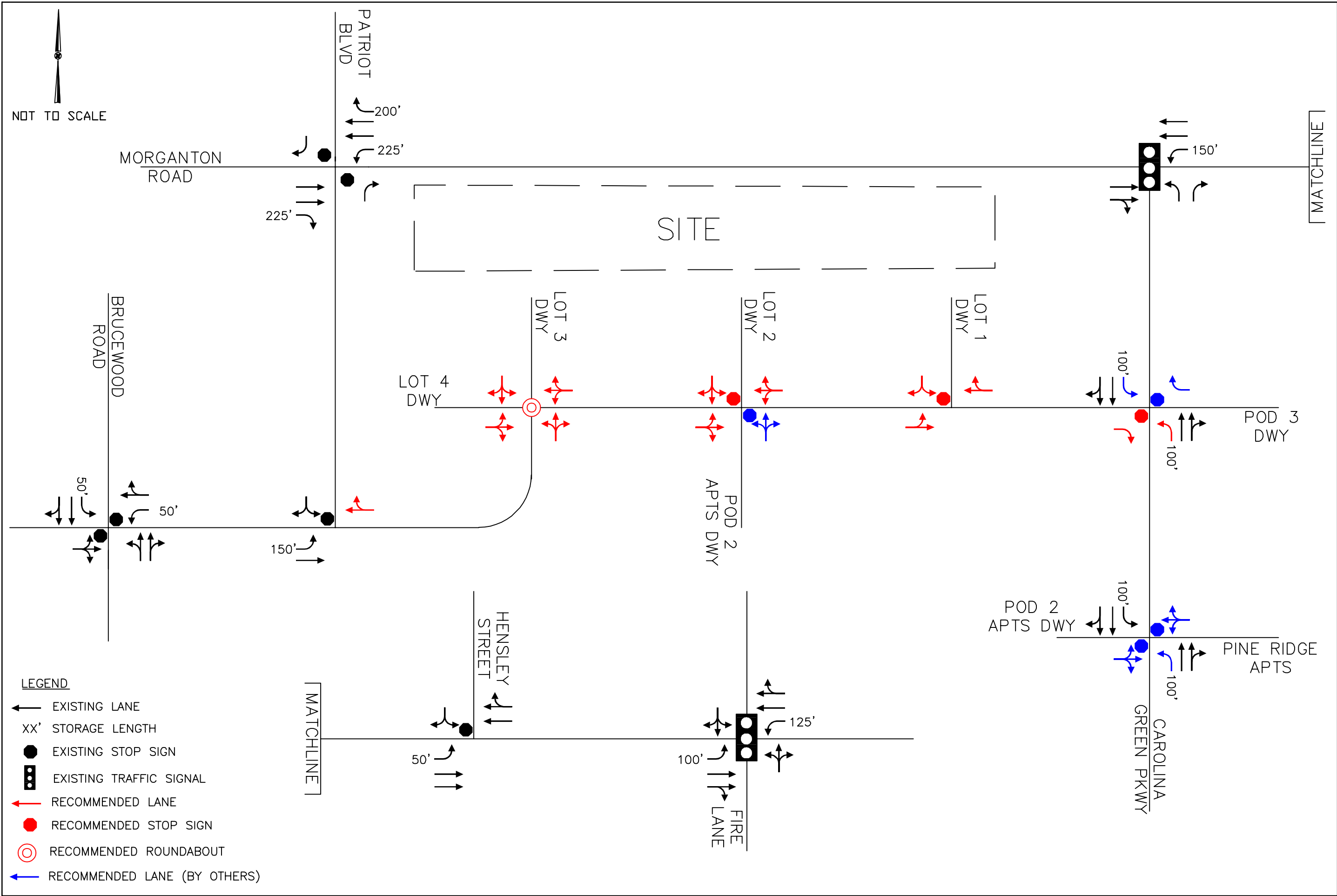
- Construct a southbound left-turn lane on Carolina Green Parkway with a minimum of 100 feet of storage and appropriate taper

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**.



RECOMMENDED ROADWAY LANEAAGE

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



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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.

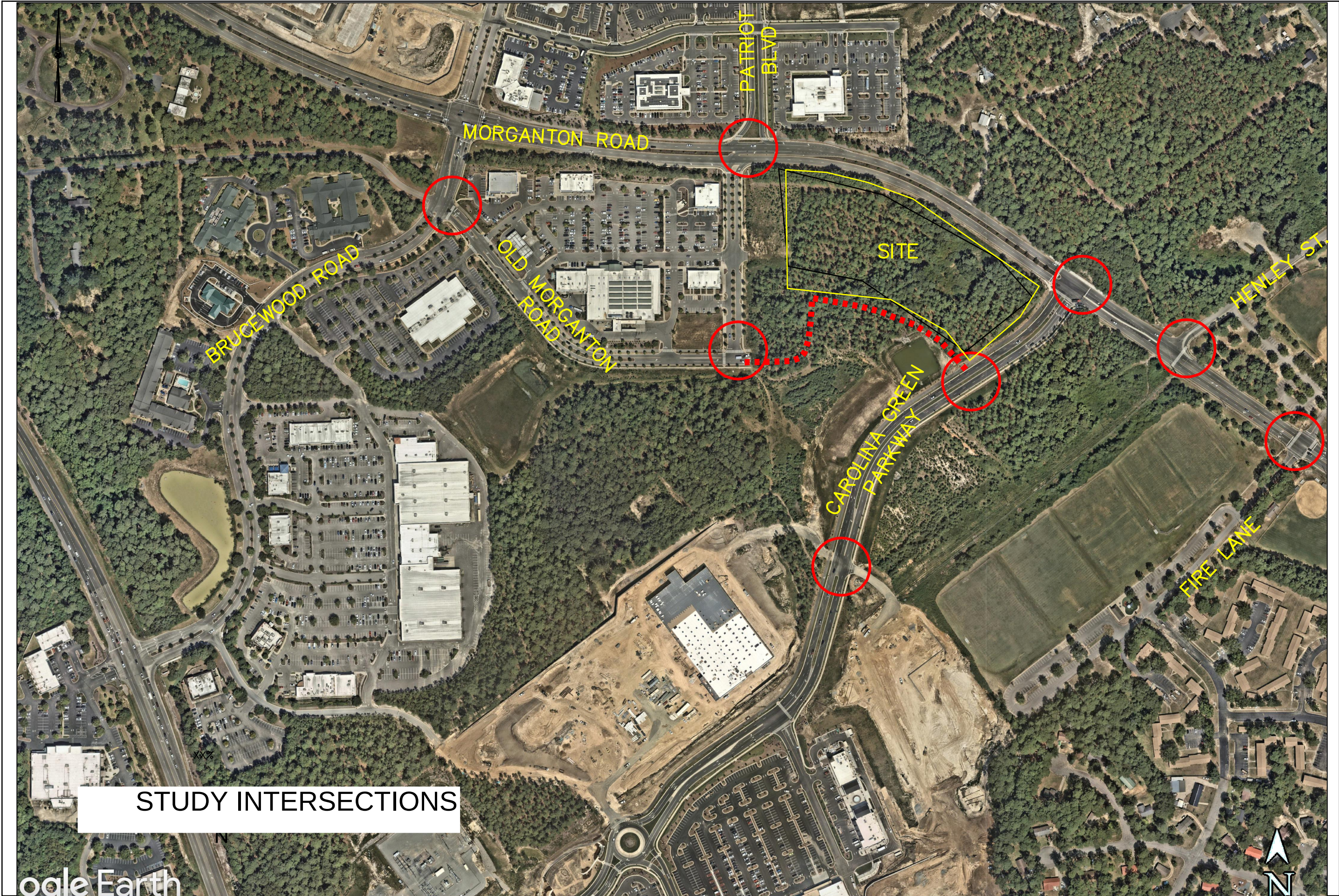
Brucewood Road is a 4-lane divided section with a posted speed limit of 35 mph between US 15/501 and Morganton Road. The estimated 2024 daily volume is approximately 6,000 vpd at Old Morganton Road.

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.

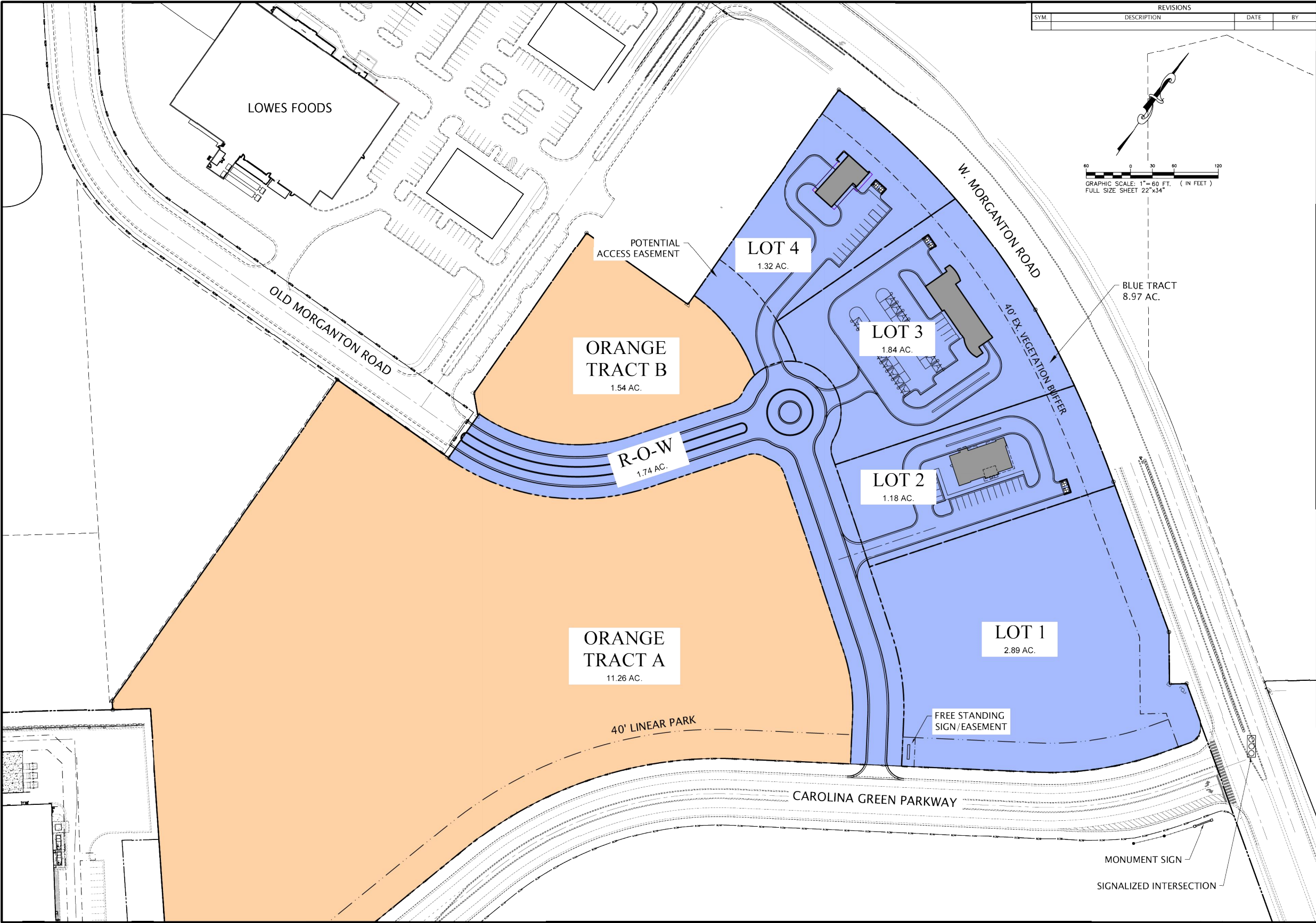
Old Morganton Road and Patriot Boulevard are both 2-lane divided roadways with no posted speed in the vicinity of the site. The estimated 2024 daily volume on Old Morganton Road ranges from approximately 2,500 vpd at Brucewood Road to less than 500 vpd at Patriot Boulevard. The estimated 2024 daily volume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



NOT TO SCALE



REVISIONS			
SYM	DESCRIPTION	DATE	BY

GRAPHIC SCALE: 1"=60 FT. (IN FEET)
FULL SIZE SHEET 22"x34"

0 30 60 120

North Arrow

LKC

Engineering
Landscape Architecture
Surveying

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140 Aqua Shed Court
Aberdeen, NC 28315
O: 910.420.1437
F: 910.637.0096
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MIDLAND ATLANTIC PROPERTIES

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Cincinnati, OH 45236
(513)792-5000

CONCEPTUAL MASTER PLAN

MORGANTON PARK SOUTH
PHASE 4

Southern Pines, North Carolina

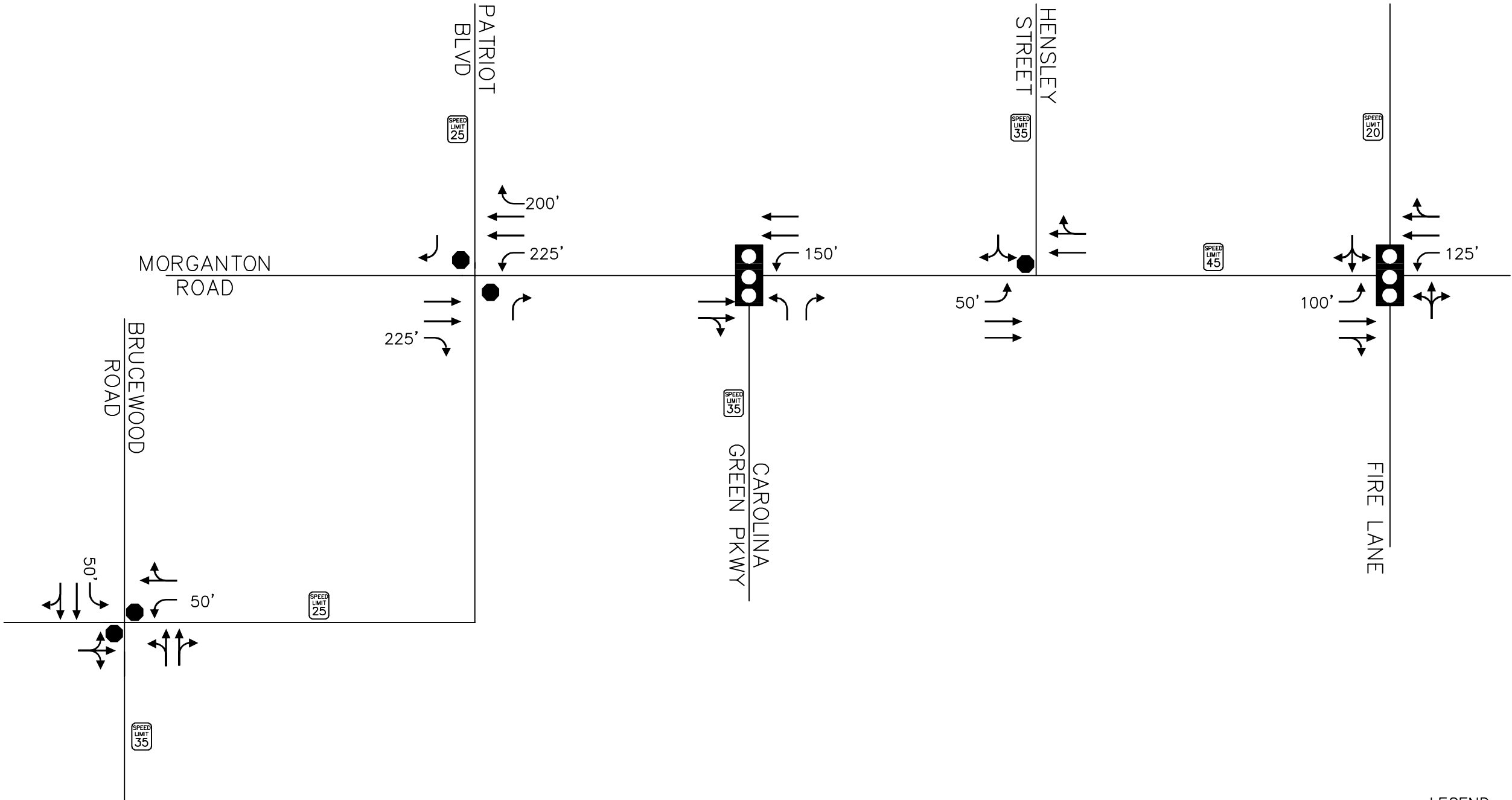
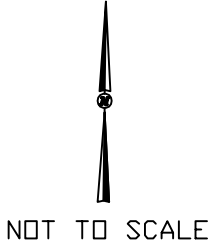
DATE: OCT., 2024

DESIGNED: _____

DRAWN: _____

CHECKED: _____

NO.



LEGEND

- ← EXISTING LANE
- XX' STORAGE LENGTH
- EXISTING STOP SIGN
- ⬢ EXISTING TRAFFIC SIGNAL
- POSTED SPEED LIMIT



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

EXISTING ROADWAY LANEAGE

FIGURE
2.3

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.

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. It 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.

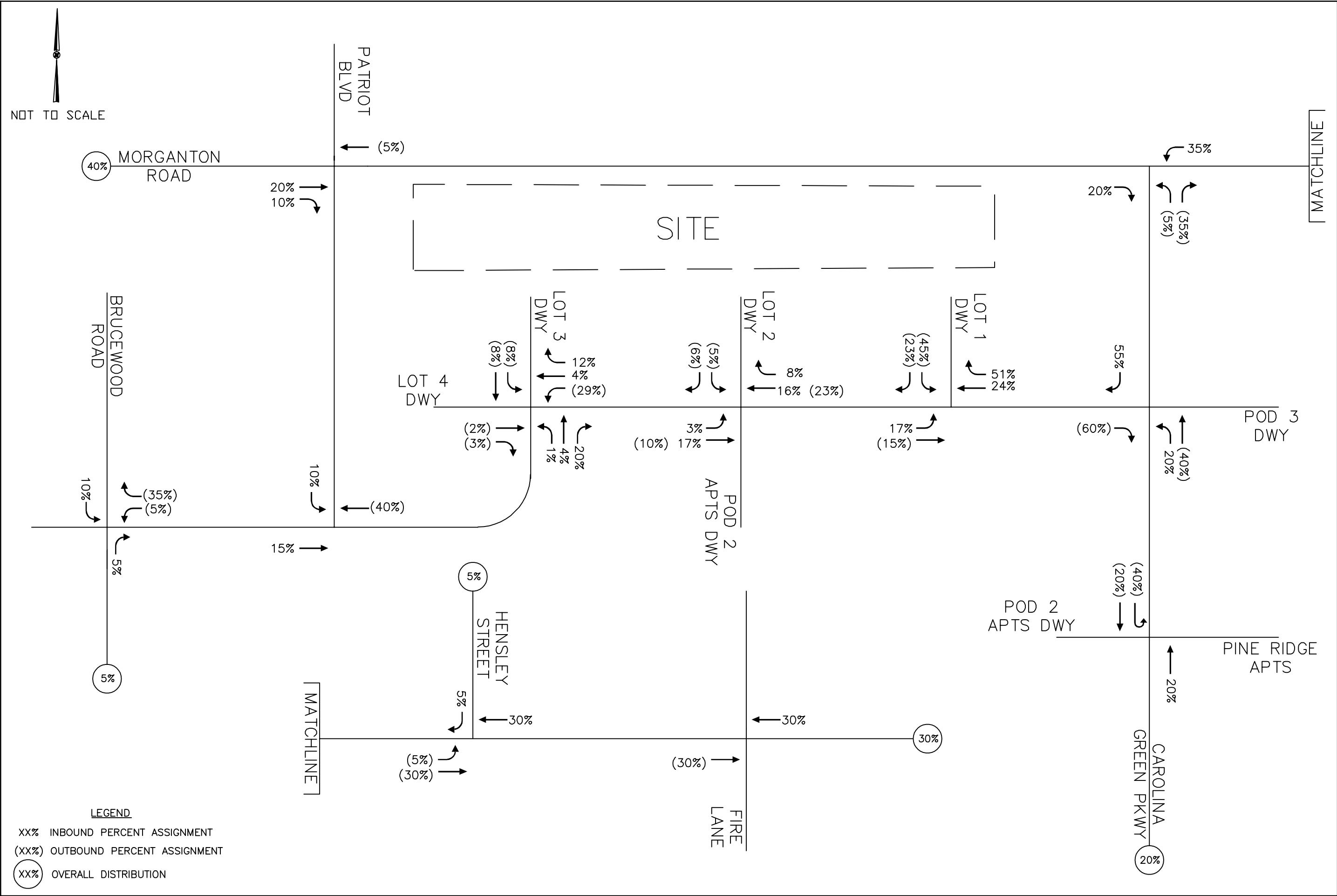
Detailed trip generation calculations are included in the Appendix of this report.

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**.



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

- Morganton Park North Apartments
 - o 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
 - o Traffic was obtained from *Morganton Park North Apartments TIA* (Kimley-Horn, June 2022)
- Morganton Park North Site 4N
 - o Traffic was obtained from *Morganton Park North Site 4N TIA* (Kimley-Horn, November 2023)
 - o Phase 1 (20,000 SF of medical office space) site traffic was applied for the year 2027 analyses
 - o Full build-out (160,000 SF of medical office space) site traffic was applied for the year 2034 analyses
- Morganton Park South Master Plan:
 - o 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)
 - o 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)
 - o 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
 - o 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

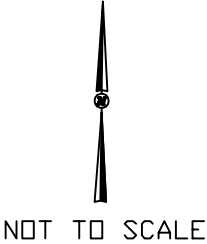
It is anticipated that some amount of existing and background traffic (will use the extension of Old Morganton Road to Carolina Green Parkway to get to/from US 15-501. Therefore, traffic was added to the intersections along both of these roadways in the 2027 build-out condition and the 2034 background 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

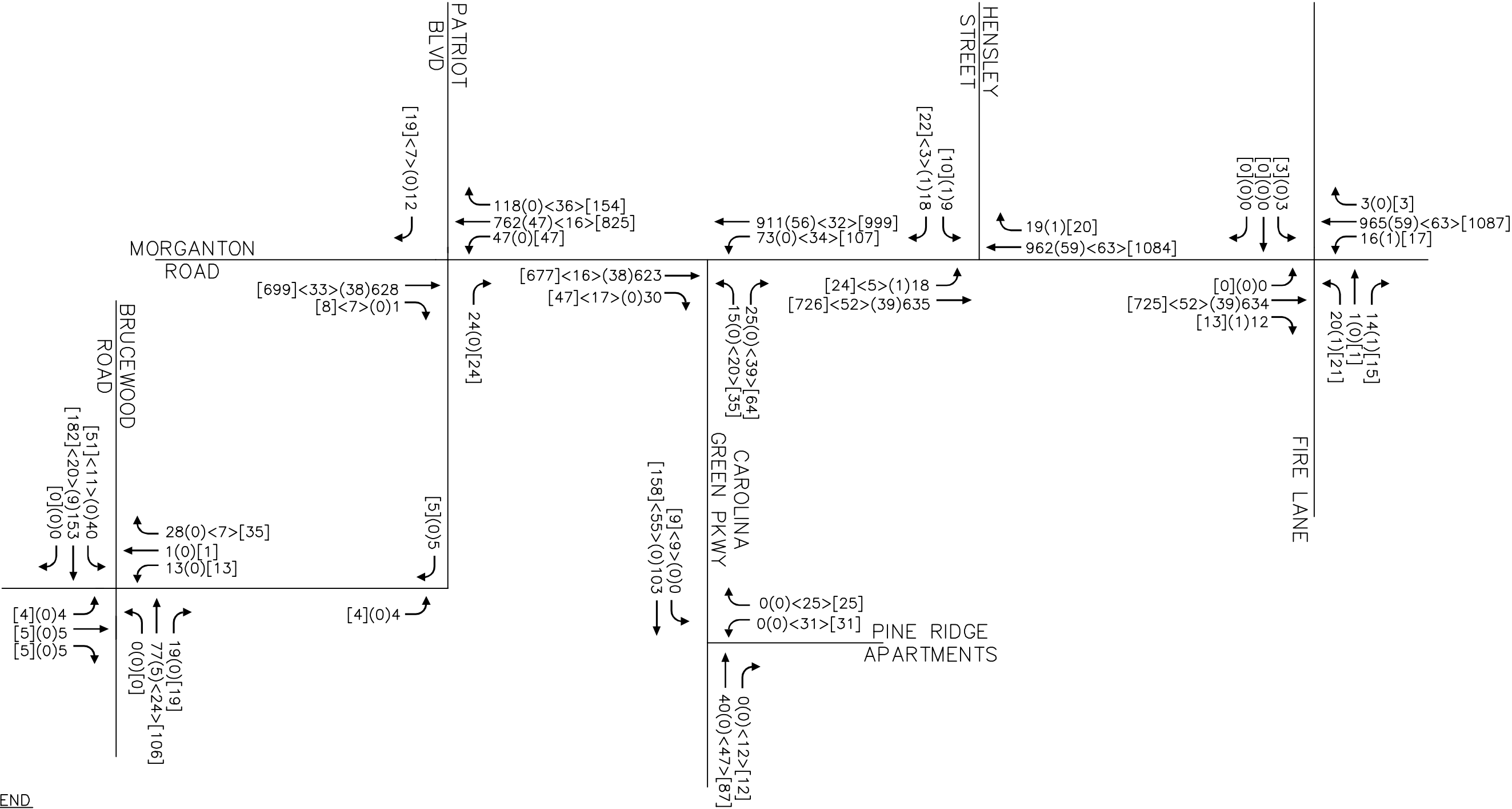
The projected site traffic was generated and assigned to the adjacent roadway network according to the distribution discussed previously in Section 4.0 for the build-out scenarios. The AM peak hour site traffic volumes for the years 2027 and 2034 are shown on **Figures 5.5** and **5.7**, respectively.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

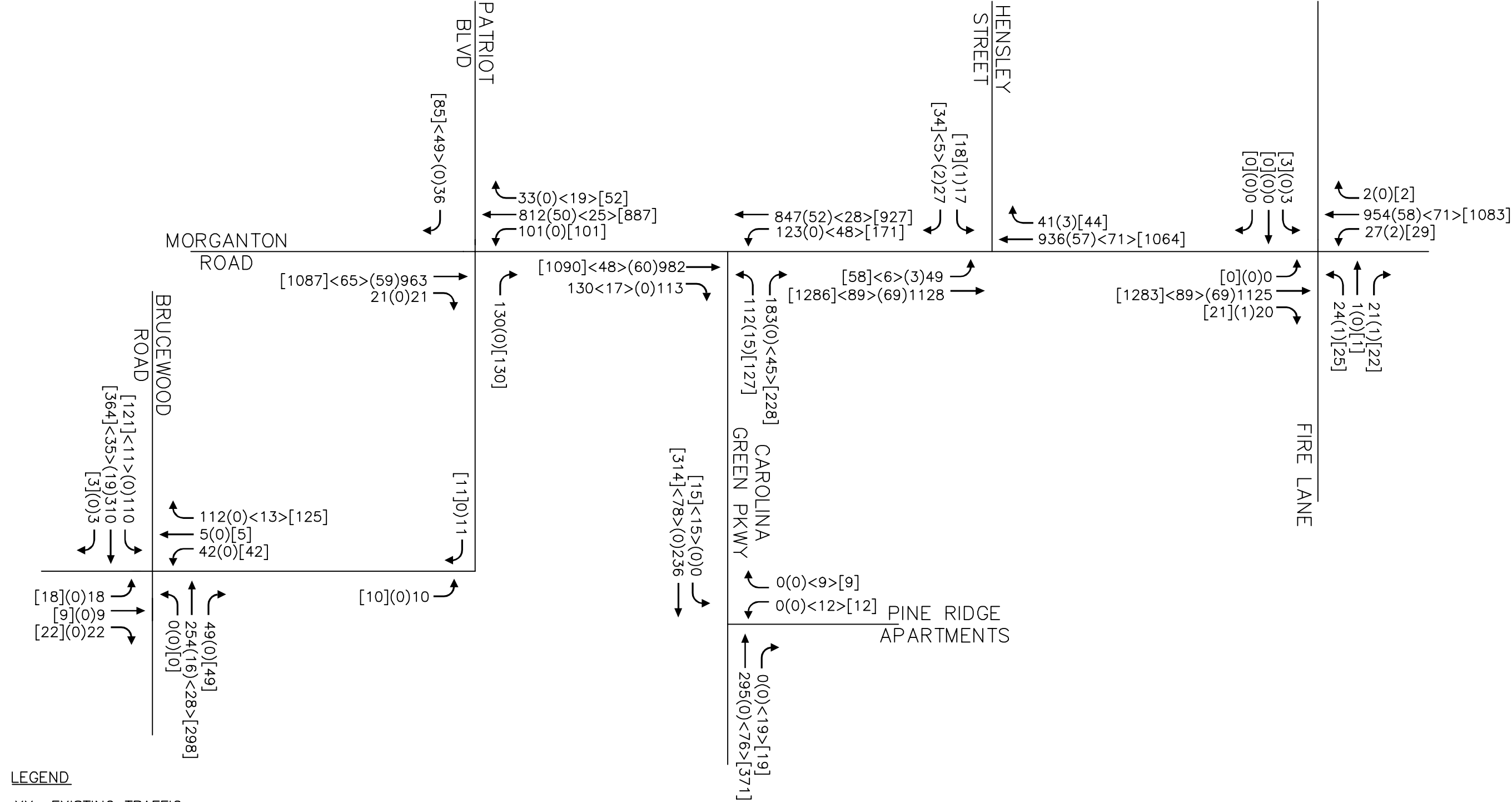
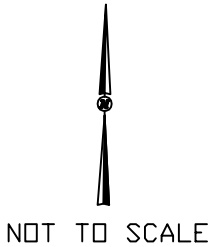
5.6 Build-Out Traffic

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.



- LEGEND
- XX EXISTING TRAFFIC
 - (XX) BACKGROUND GROWTH
 - <XX> APPROVED DEVELOPMENT TRAFFIC
 - [XX] TOTAL BACKGROUND TRAFFIC



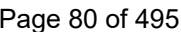


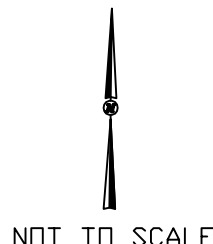


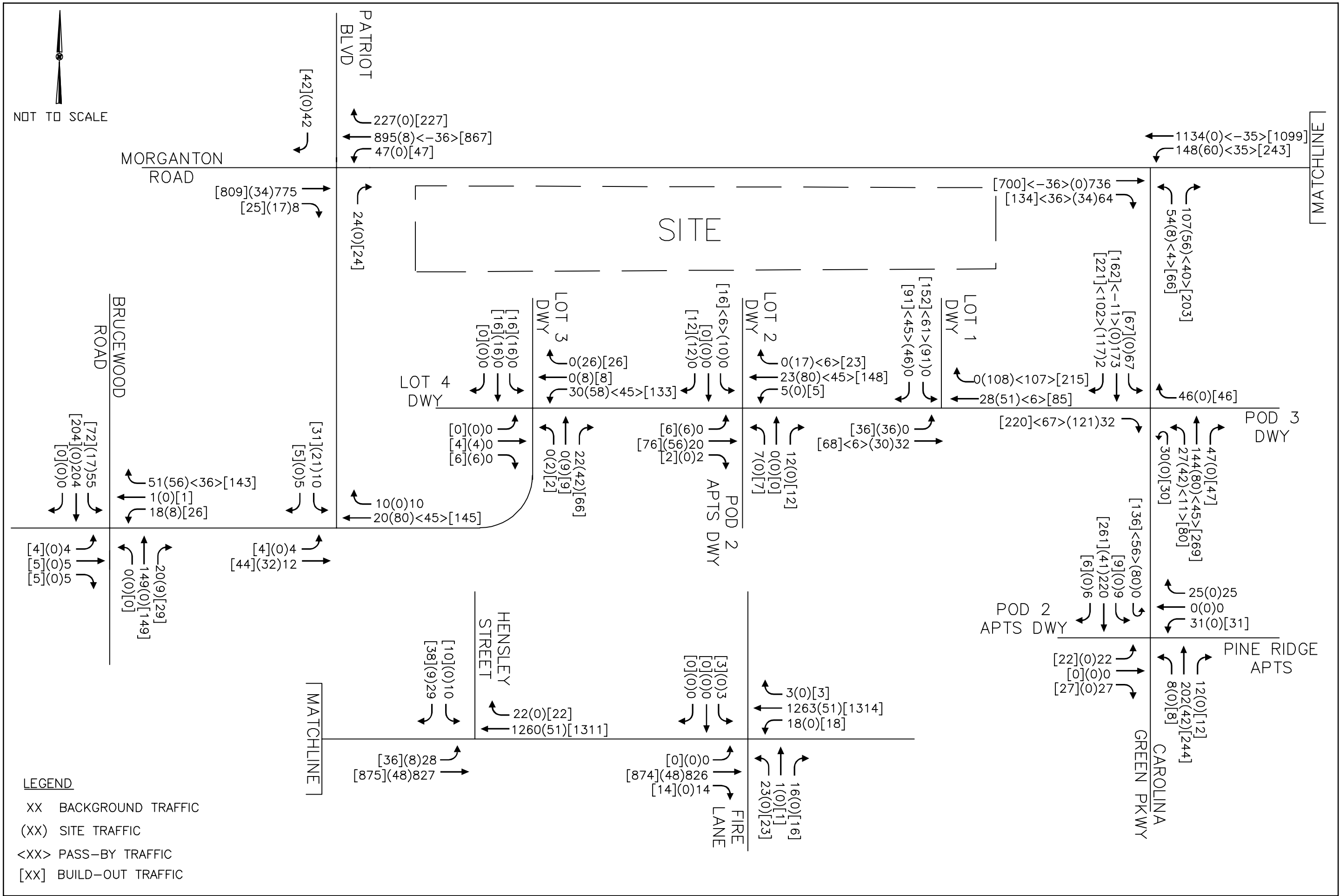
EXISTING (2024) AND PROJECTED
(2034) BACKGROUND
AM PEAK HOUR VOLUMES

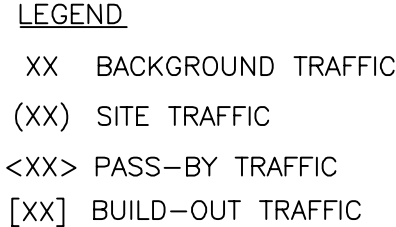


EXISTING (2024) AND PROJECTED (2034) BACKGROUND PM PEAK HOUR VOLUMES









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

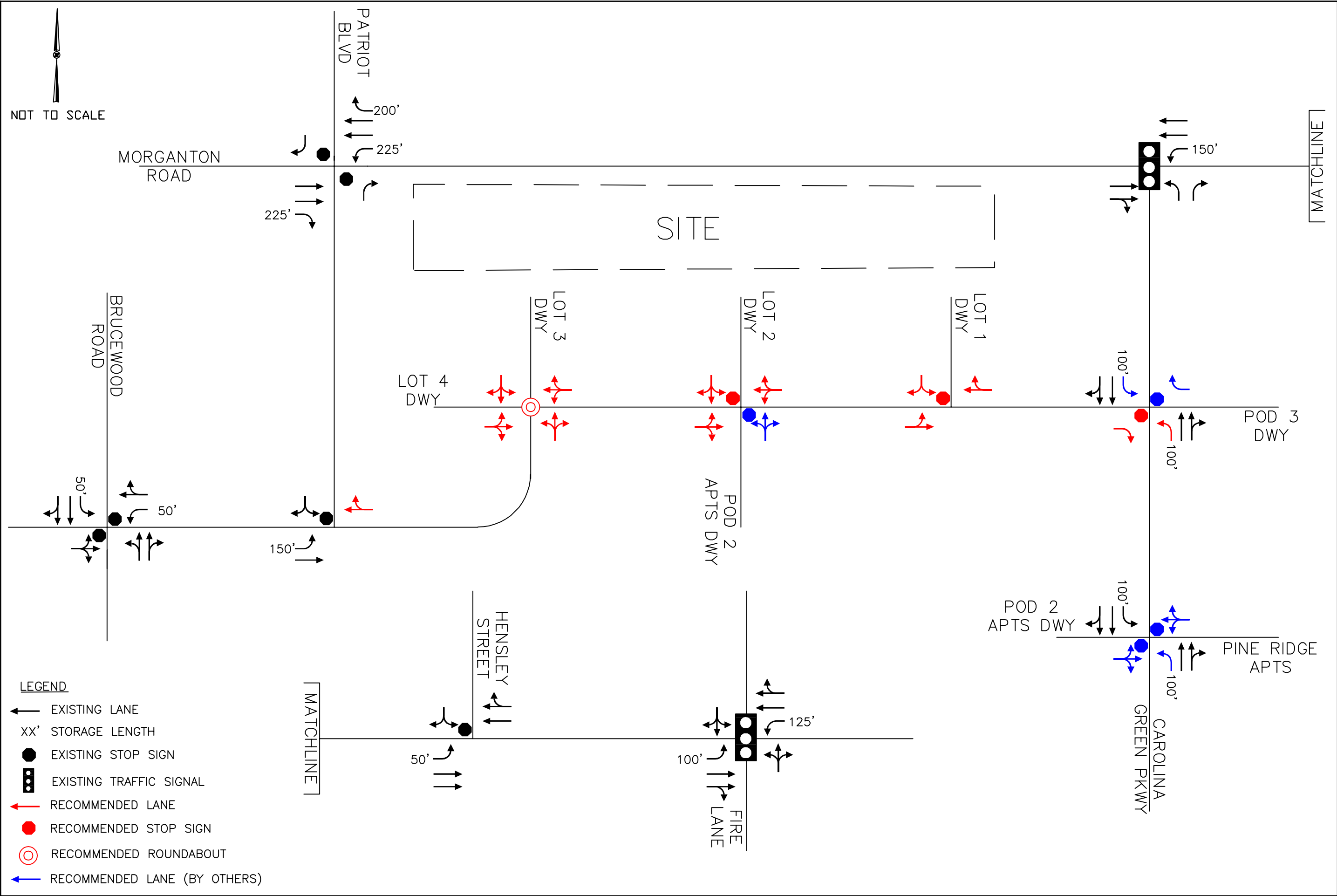


FIGURE 8.1

RECOMMENDED ROADWAY LANEAGE

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

Kimley»Horn

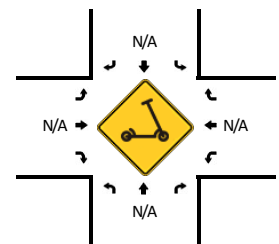
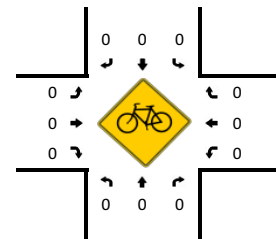
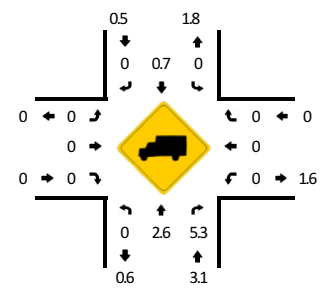
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Appendix

Appendix A:

Traffic Count Data

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DATE: Wed, Oct 30 2024

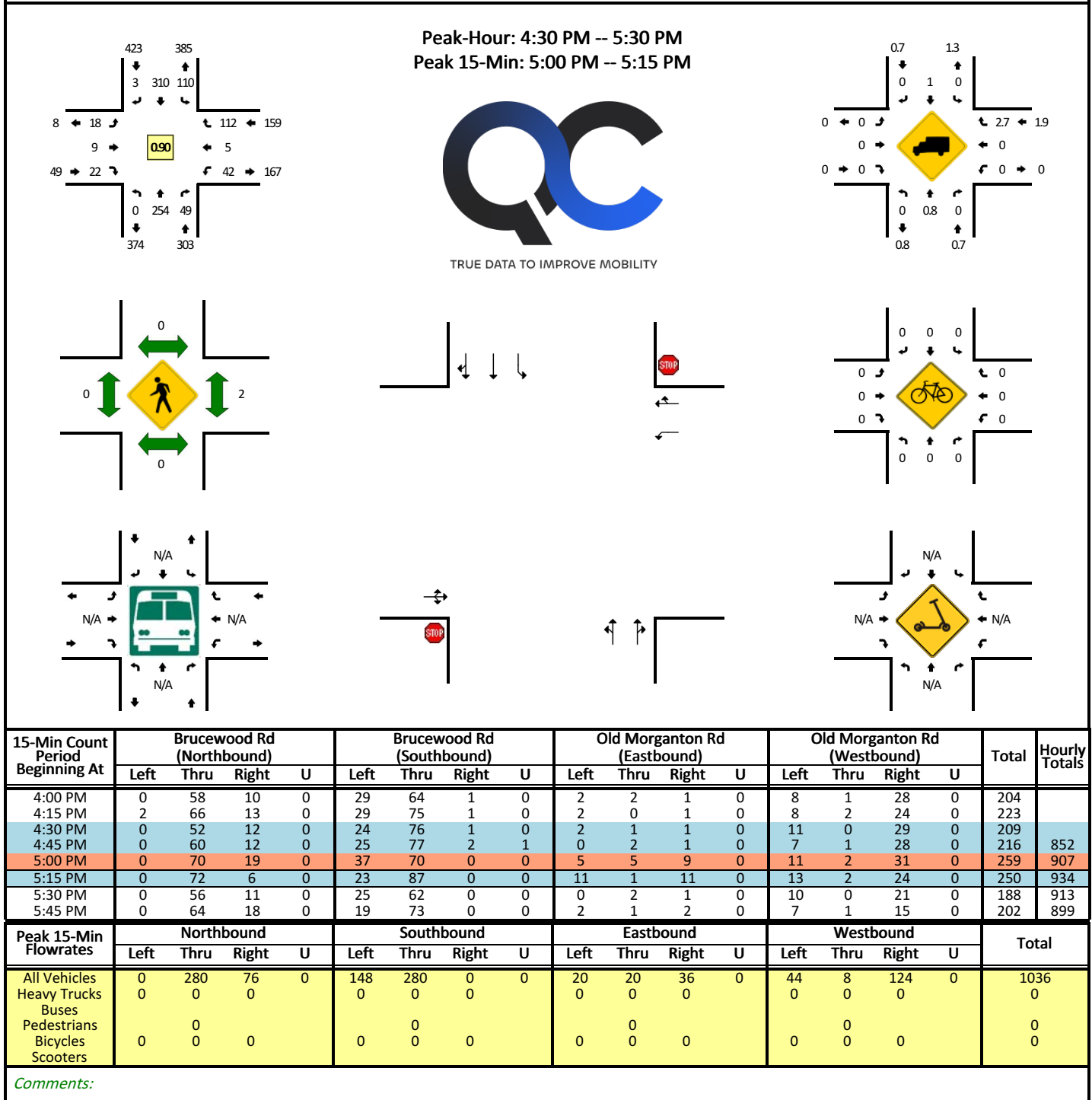


Comments:

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

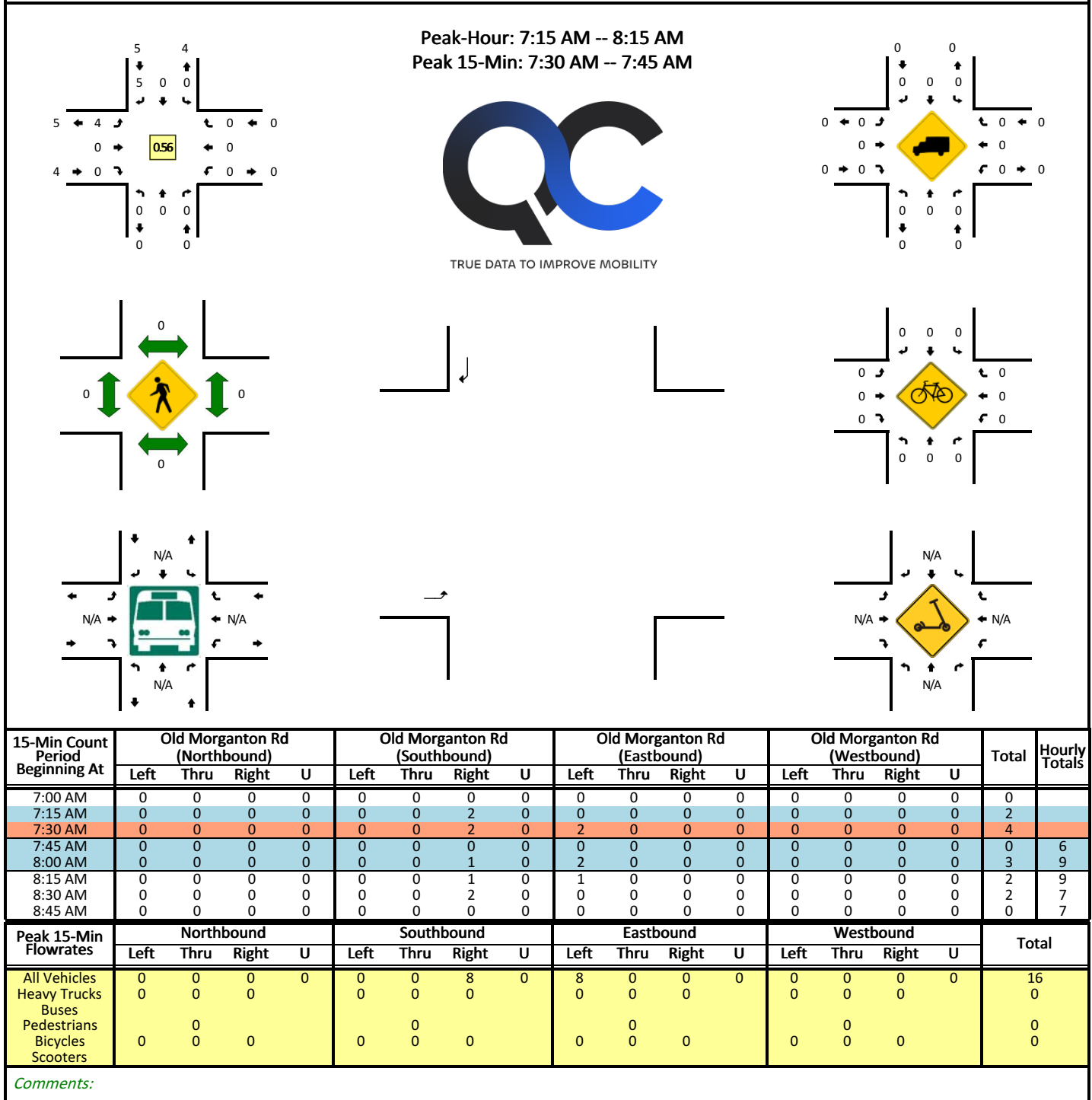
LOCATION: Brucewood Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

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



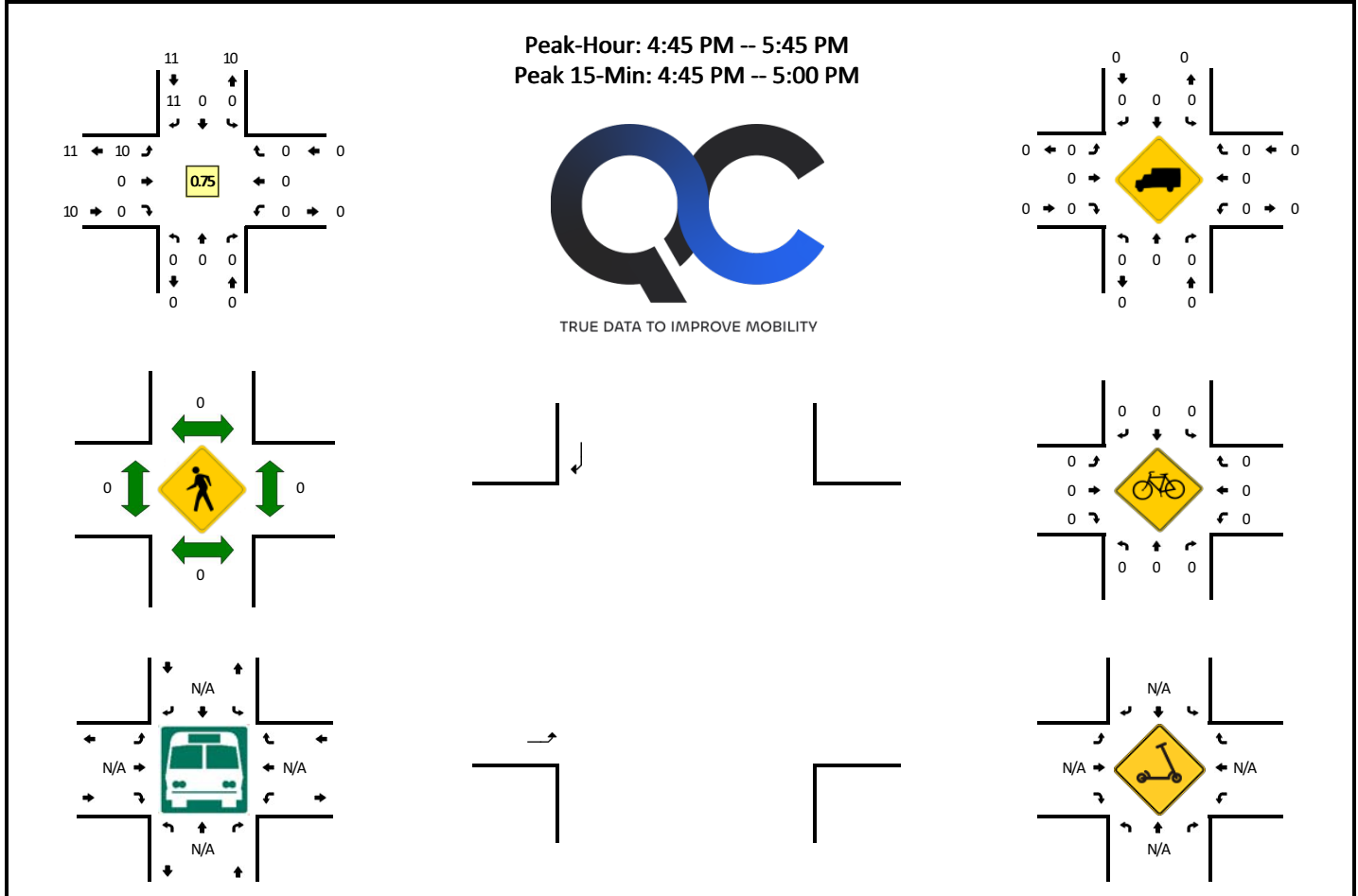
LOCATION: Old Morganton Rd -- Old Morganton Rd
CITY/STATE: Southern Pines, NC

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



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

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



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	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																		

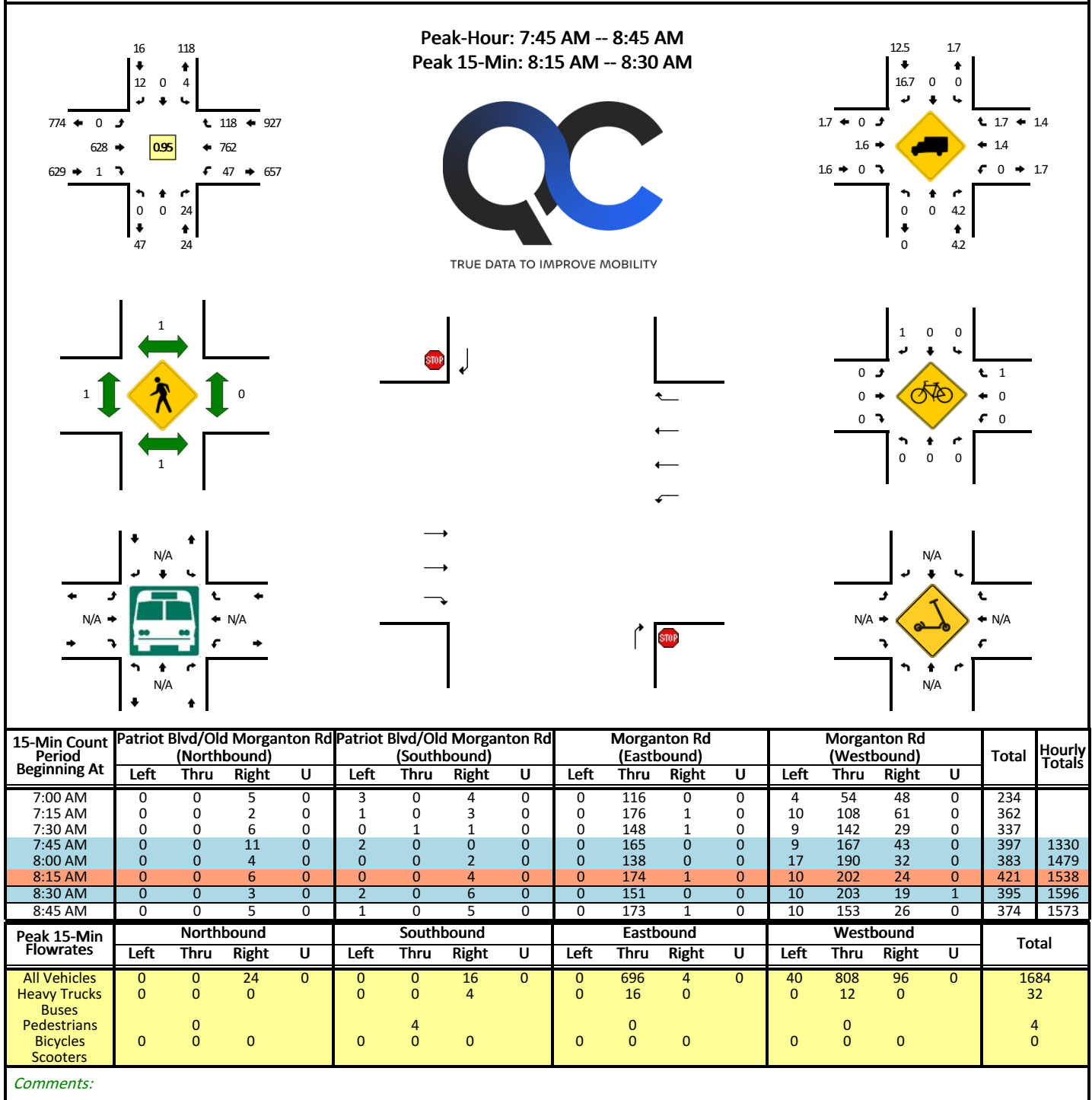
Comments:

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

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

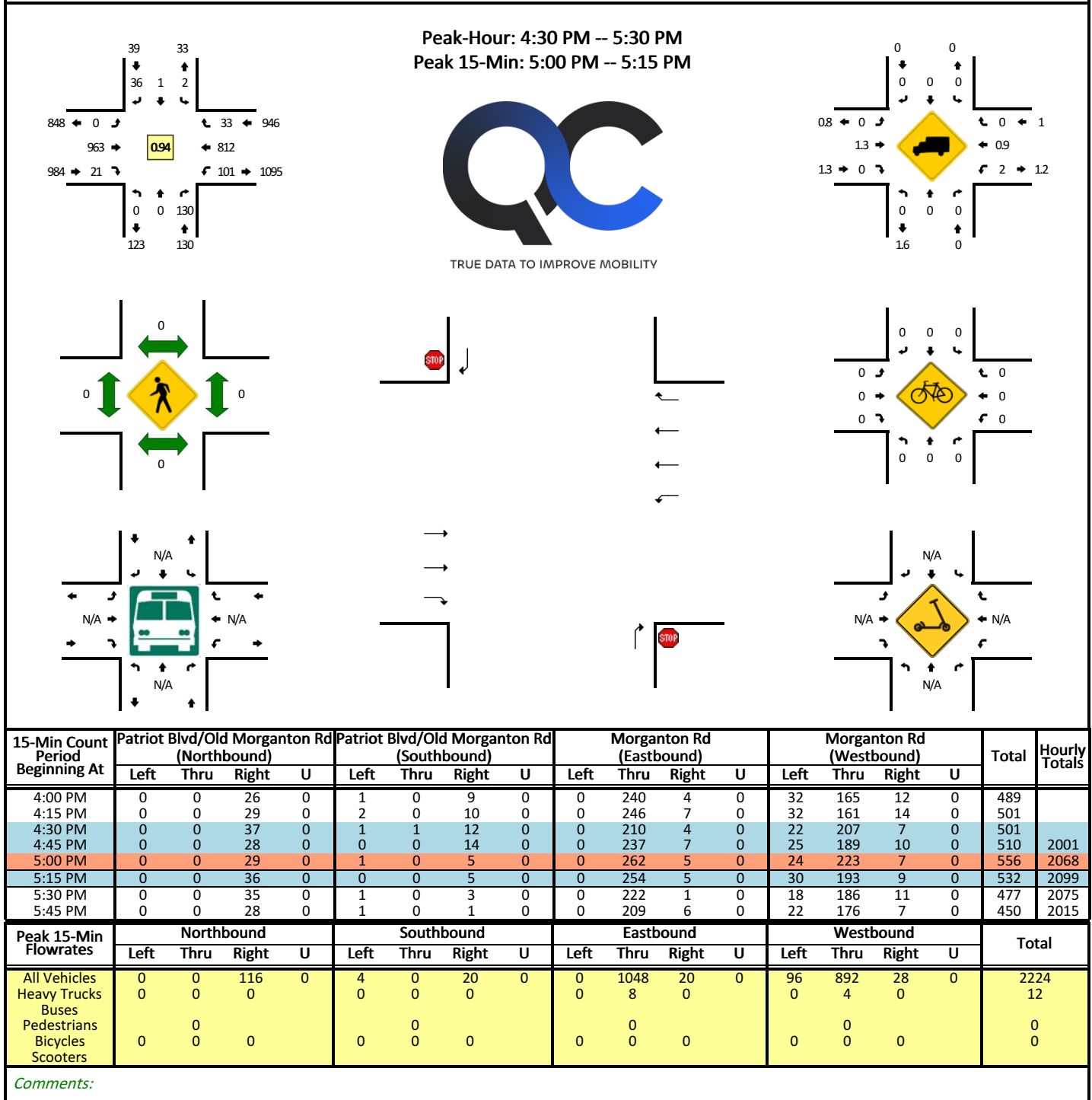
LOCATION: Patriot Blvd/Old Morganton Rd -- Morganton Rd
CITY/STATE: Southern Pines, NC

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



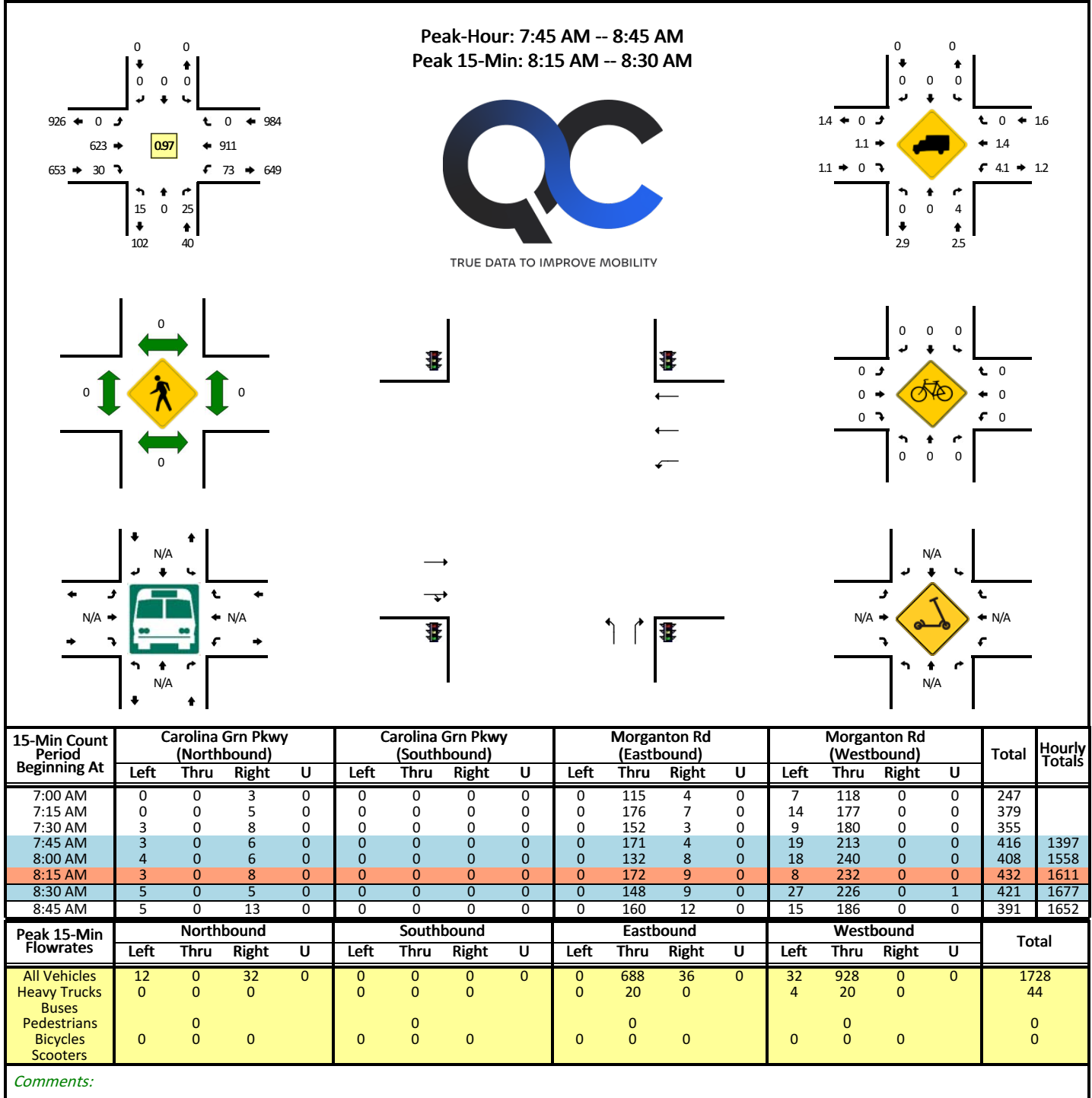
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CITY/STATE: Southern Pines, NC

QC JOB #: 16814714
DATE: Wed, Oct 30 2024



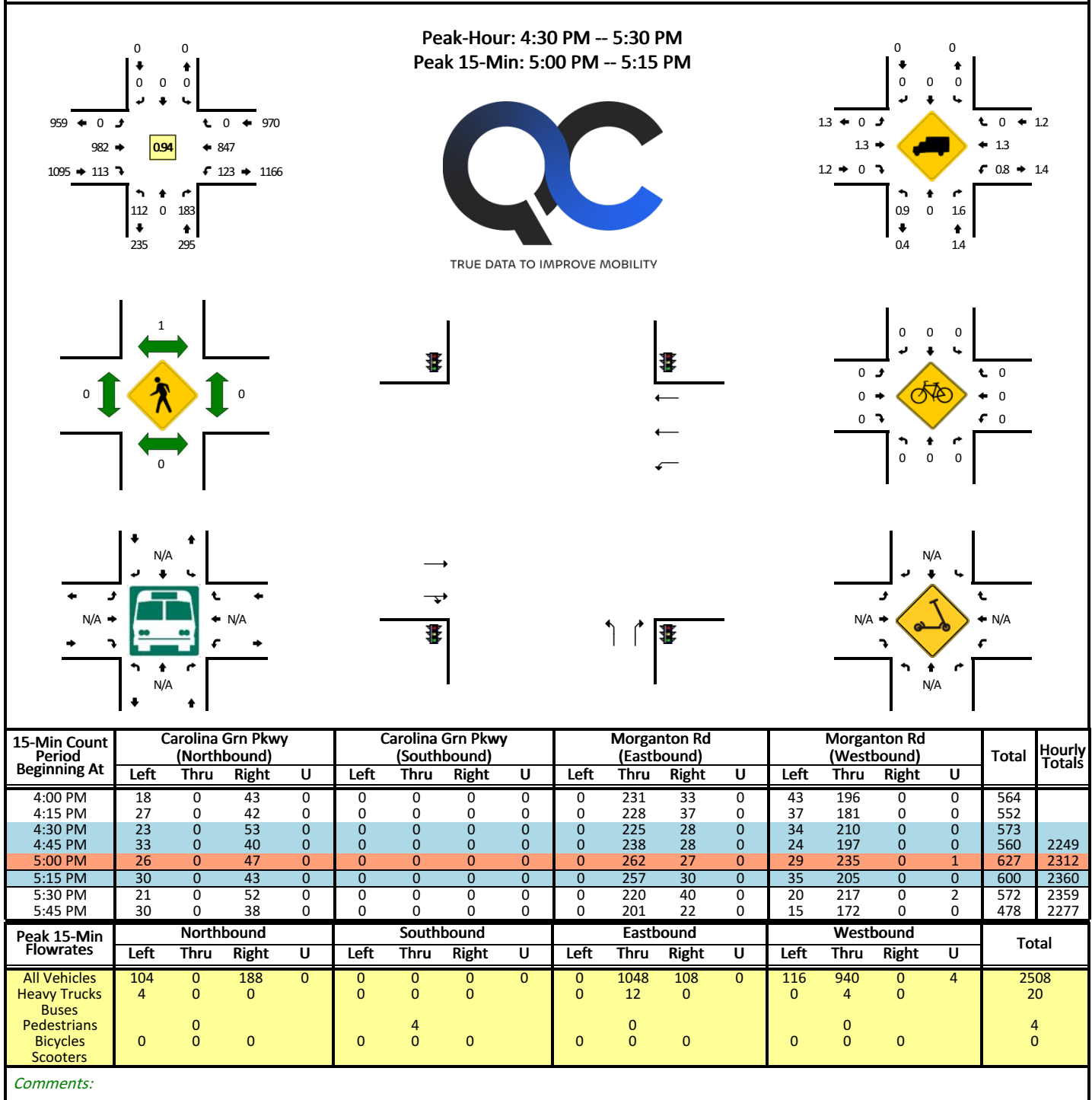
LOCATION: Carolina Grn Pkwy -- Morganton Rd
CITY/STATE: Southern Pines, NC

QC JOB #: 16814717
DATE: Wed, Oct 30 2024



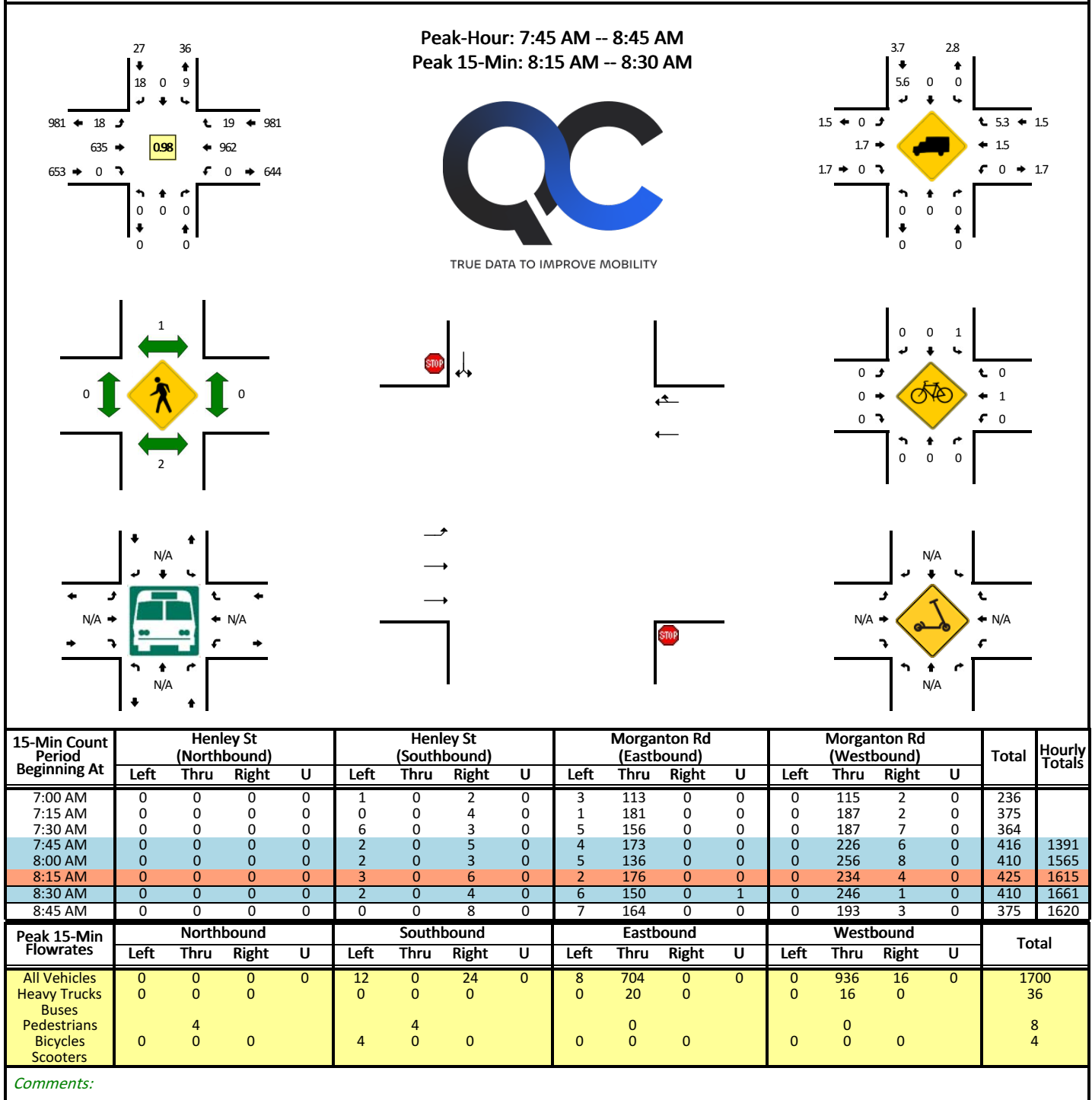
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CITY/STATE: Southern Pines, NC

QC JOB #: 16814718
DATE: Wed, Oct 30 2024



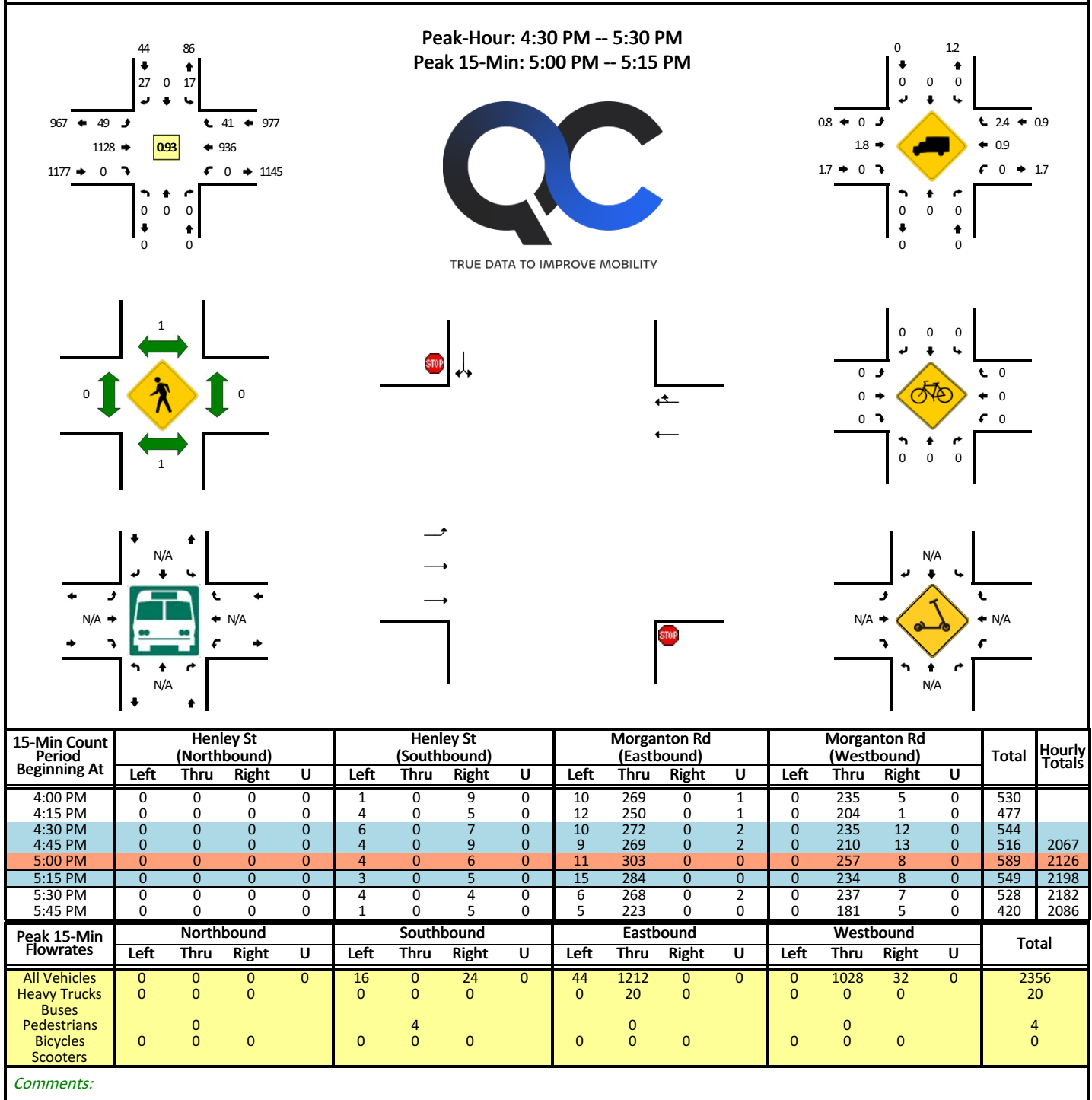
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CITY/STATE: Southern Pines, NC

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



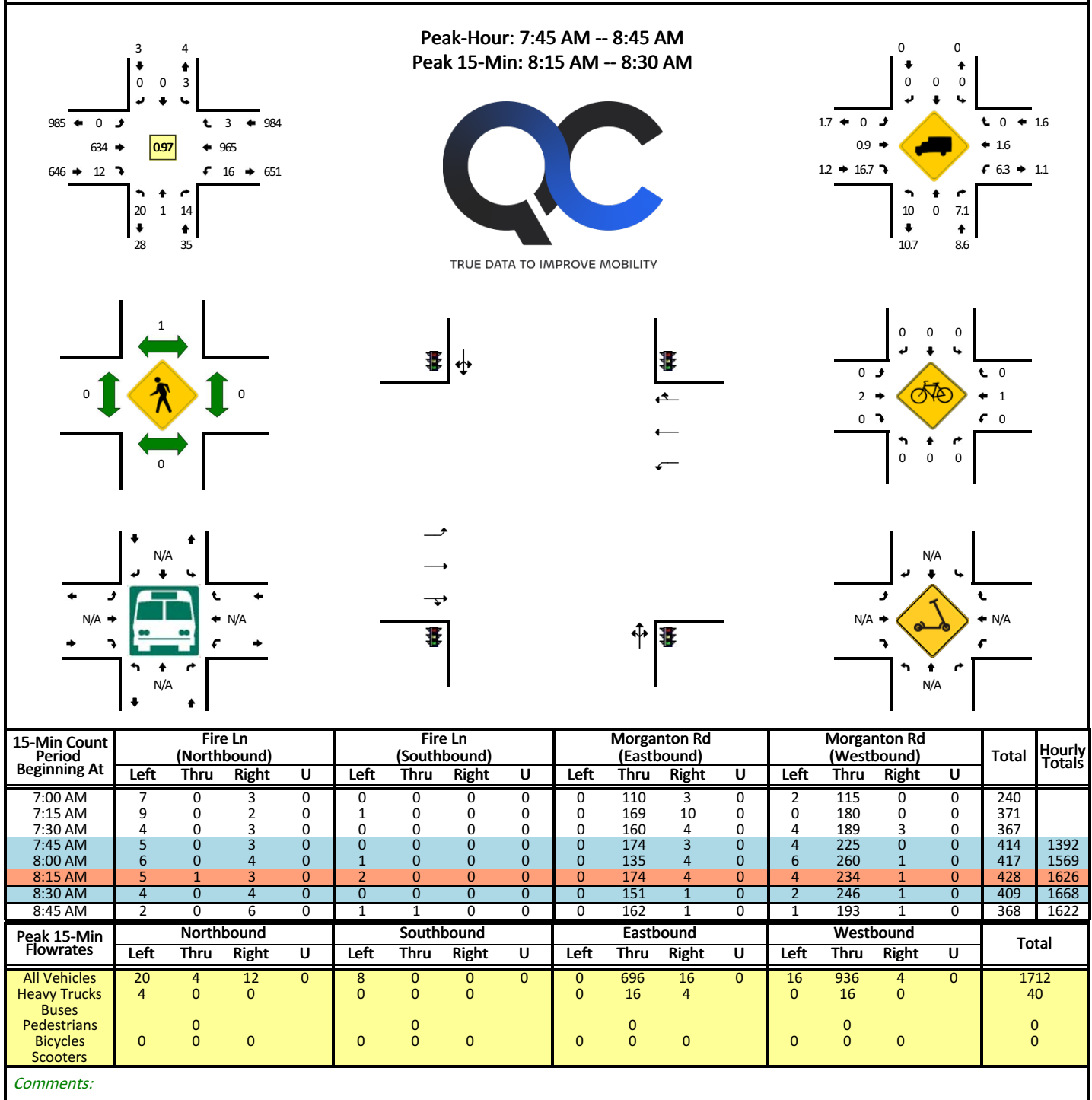
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CITY/STATE: Southern Pines, NC

QC JOB #: 16814720
DATE: Wed, Oct 30 2024



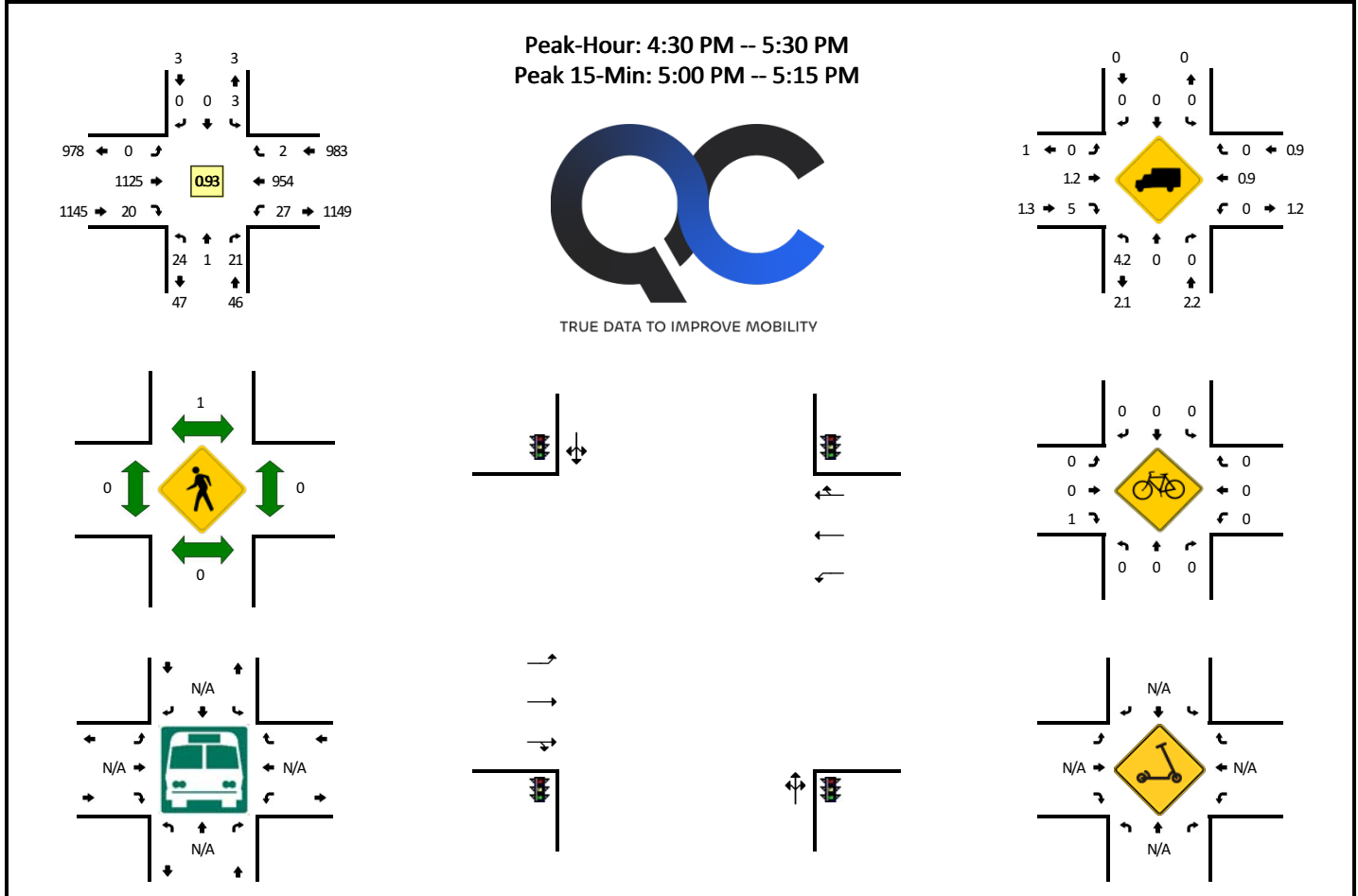
LOCATION: Fire Ln -- Morganton Rd
CITY/STATE: Southern Pines, NC

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



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

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



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
<u>912</u> Drive-In Bank	3,500	s.f.	352	176	176	35	20	15	74	37	37
<u>945</u> Convenience Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	3,850	3,850	548	274	274	474	237	237
<u>941</u> Quick Lubrication Vehicle Shop	2,500	s.f.	174	87	87	15	11	4	22	9	13
<u>948</u> 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
<u>Pass-By Capture</u>	<u>AM</u>	<u>PM</u>									
912 Drive-In Bank	29%	35%	112	56	56	10	6	4	26	13	13
945 Convenience Store/Gas-Station - VFP (16-24)	76%	75%	5,814	2,907	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

Morganton Park South Phase 4

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

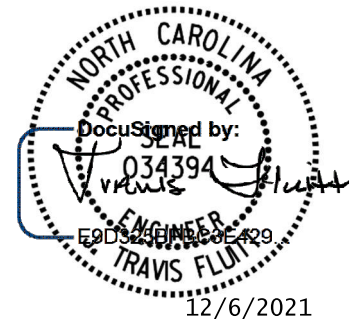
Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
<u>912</u> Drive-In Bank	3,500	s.f.	352	176	176	35	20	15	74	37	37
<u>945</u> Convenience Store/Gas-Station - VFP (16-24)	6,000	s.f.	7,700	3,850	3,850	548	274	274	474	237	237
<u>941</u> Quick Lubrication Vehicle Shop	2,500	s.f.	174	87	87	15	11	4	22	9	13
<u>948</u> 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
<u>Pass-By Capture</u>	<u>AM</u>	<u>PM</u>									
912 Drive-In Bank	29%	35%	112	56	56	10	6	4	26	13	13
945 Convenience Store/Gas-Station - VFP (16-24)	76%	75%	5,814	2,907	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

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

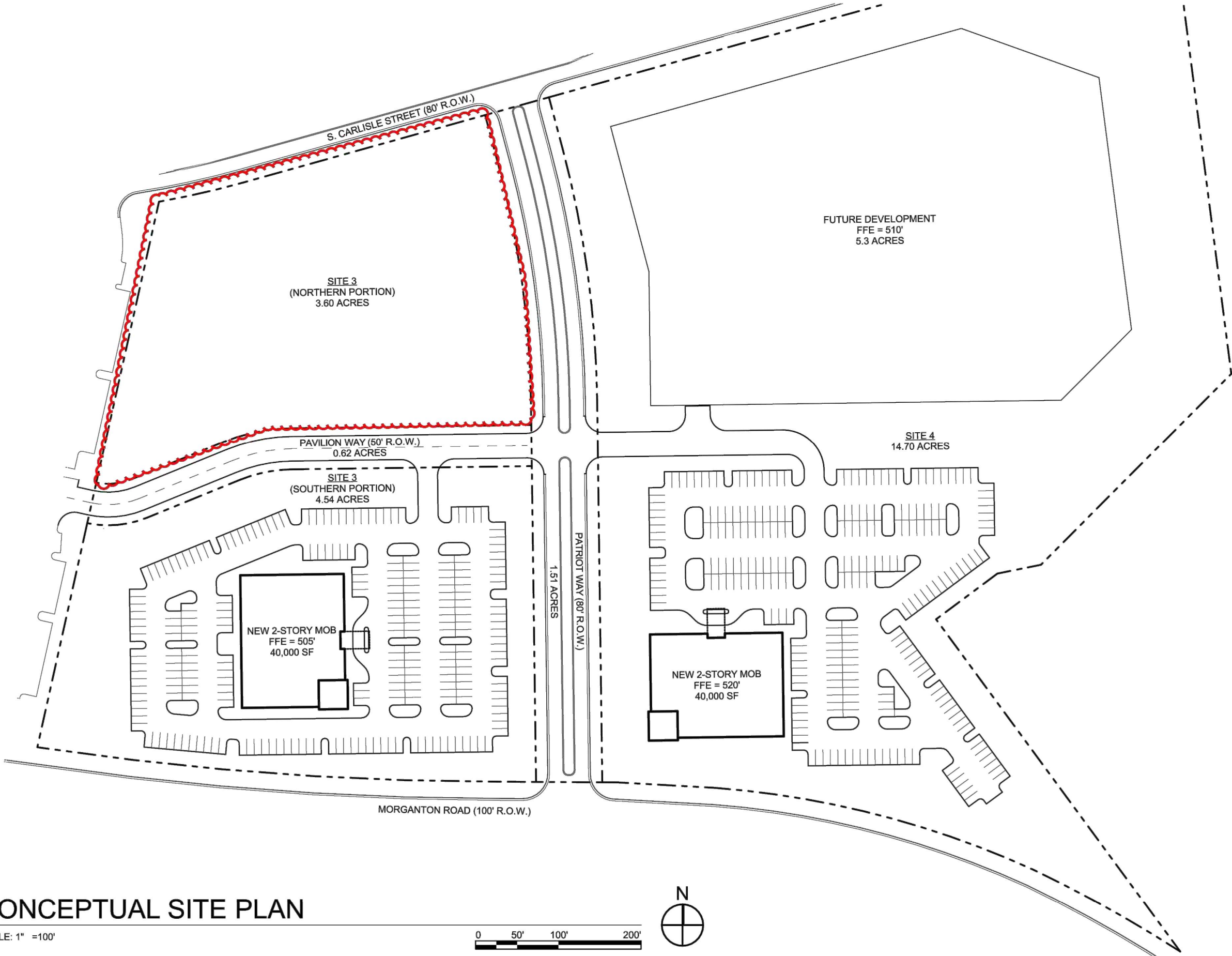
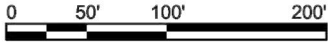
Capacity analyses were performed using Synchro Version 10.3 software. Existing signal timings were obtained from NCDOT. Existing peak hour factors (PHF) were used for the existing traffic condition at

\\kimley-horn.com\SE_RAL1\RAL_TPTO\Traffic\013080001 MPN Site 3\T5 - Report-Submittals\MPN Site 3 - Figures.dwg

1
A-1

CONCEPTUAL SITE PLAN

SCALE: 1" = 100'



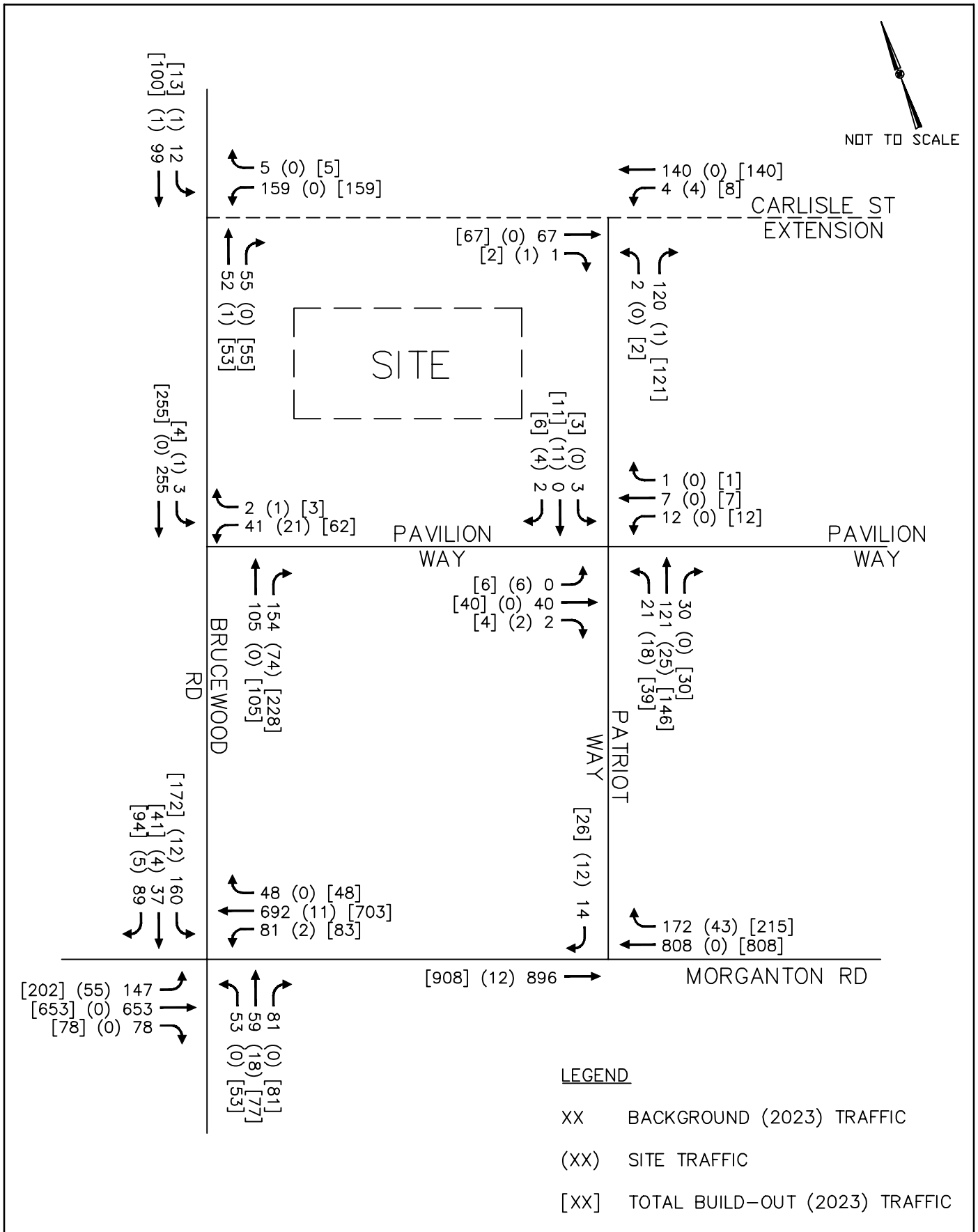
MPN SITE 3
TRAFFIC IMPACT ANALYSIS
SOUTHERN PINES, NC

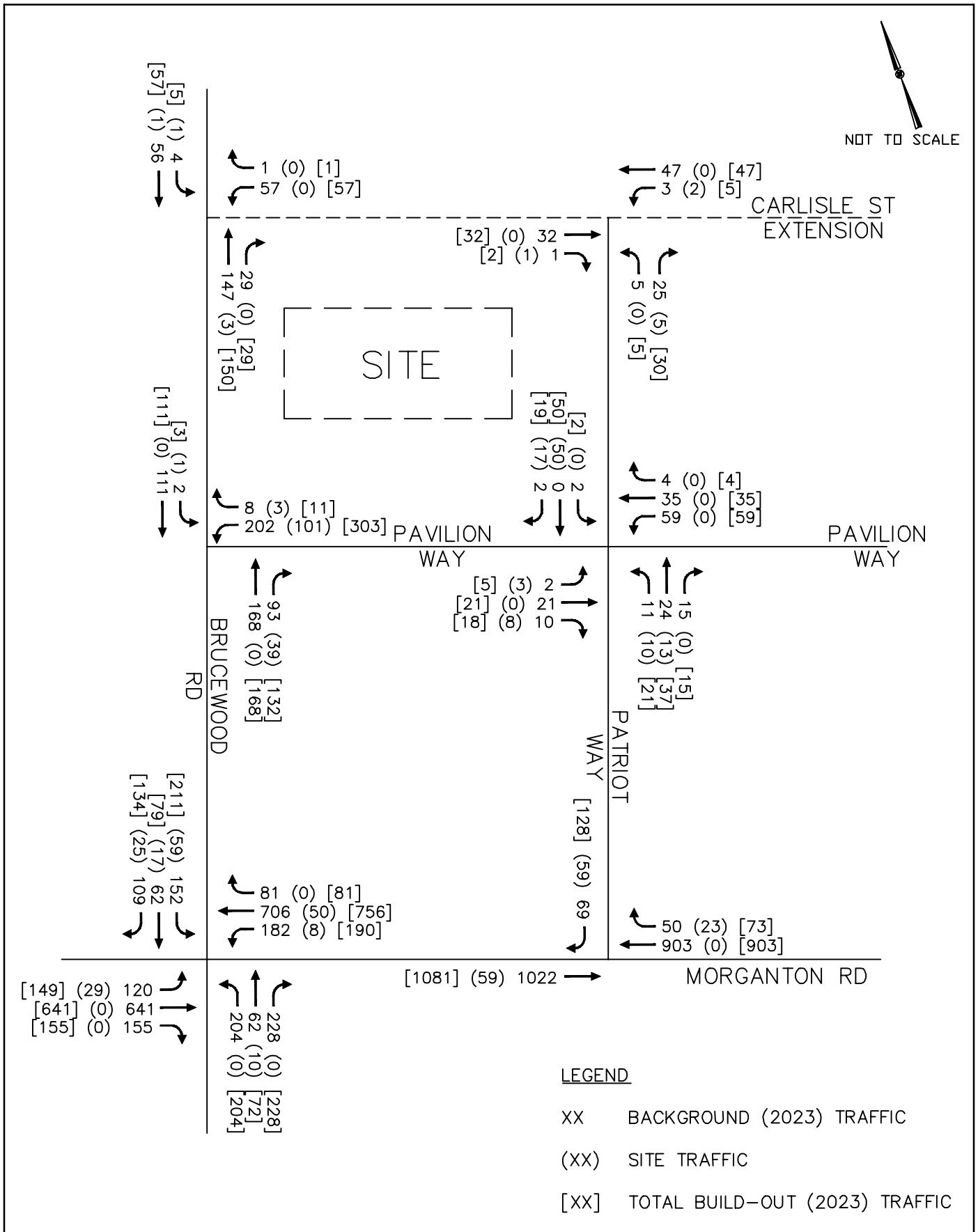
CONCEPTUAL SITE PLAN

FIGURE
2



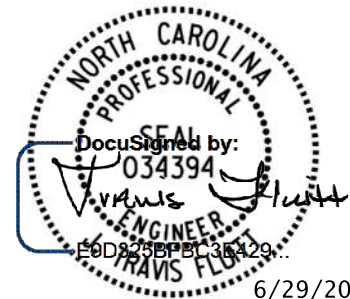
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June 29, 2022

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



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
 - o 22,600 SF medical office building on the northeast quadrant of the intersection of Brucewood Road at Pavilion Way
 - o 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

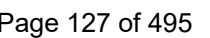
The site traffic distribution and percent assignment are shown on **Figure 8**.

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



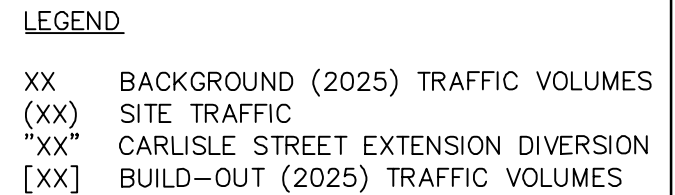


FIGURE 9

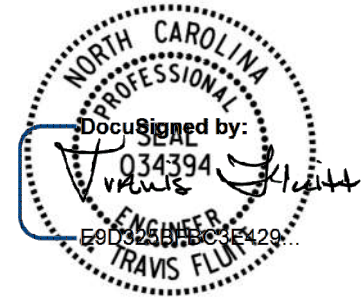


BACKGROUND AND BUILD-OUT (2025) PM PEAK HOUR TRAFFIC VOLUMES

FIGURE 10

November 21, 2023

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



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

11/21/2023

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
 - o Traffic was obtained from *Morganton Park North Medical Office Building TIA* (Kimley-Horn, November 2018)
- Pinehurst Medical/Pinehurst Surgical
 - o 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
 - o Traffic was obtained from *Morganton Park North Site 3 Medical Office Building TIA* (Kimley-Horn, December 2021)
- Legends Apartment Expansion
 - o Traffic was obtained from *Legends Apartments Expansion TIA* (Kimley-Horn, March 2021)
- Pineridge Development
 - o Traffic was obtained from *Pine Ridge Commercial TIA* (Kimley-Horn, July 2021)
- Lowes Food Outparcels
 - o Traffic was obtained from *Morganton Park North Apartments TIA* approved developments (Kimley-Horn, June 2022)
- Morganton Park North Apartments
 - o 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.

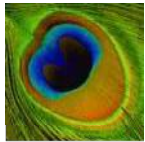
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SCALE: NOT TO SCALE
10/20/2022



4N MEDICAL OFFICE BUILDINGS

SOUTHERN PINES, NC



HAROLD DEAN
PEACOCK
ARCHITECT

Kimley»Horn

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

CONCEPTUAL SITE PLAN

FIGURE
2

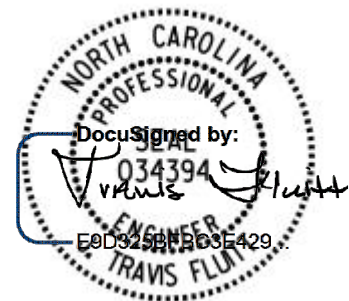
Appendix D:
Morganton Park South Master Plan Trip
Generation & Assignment

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

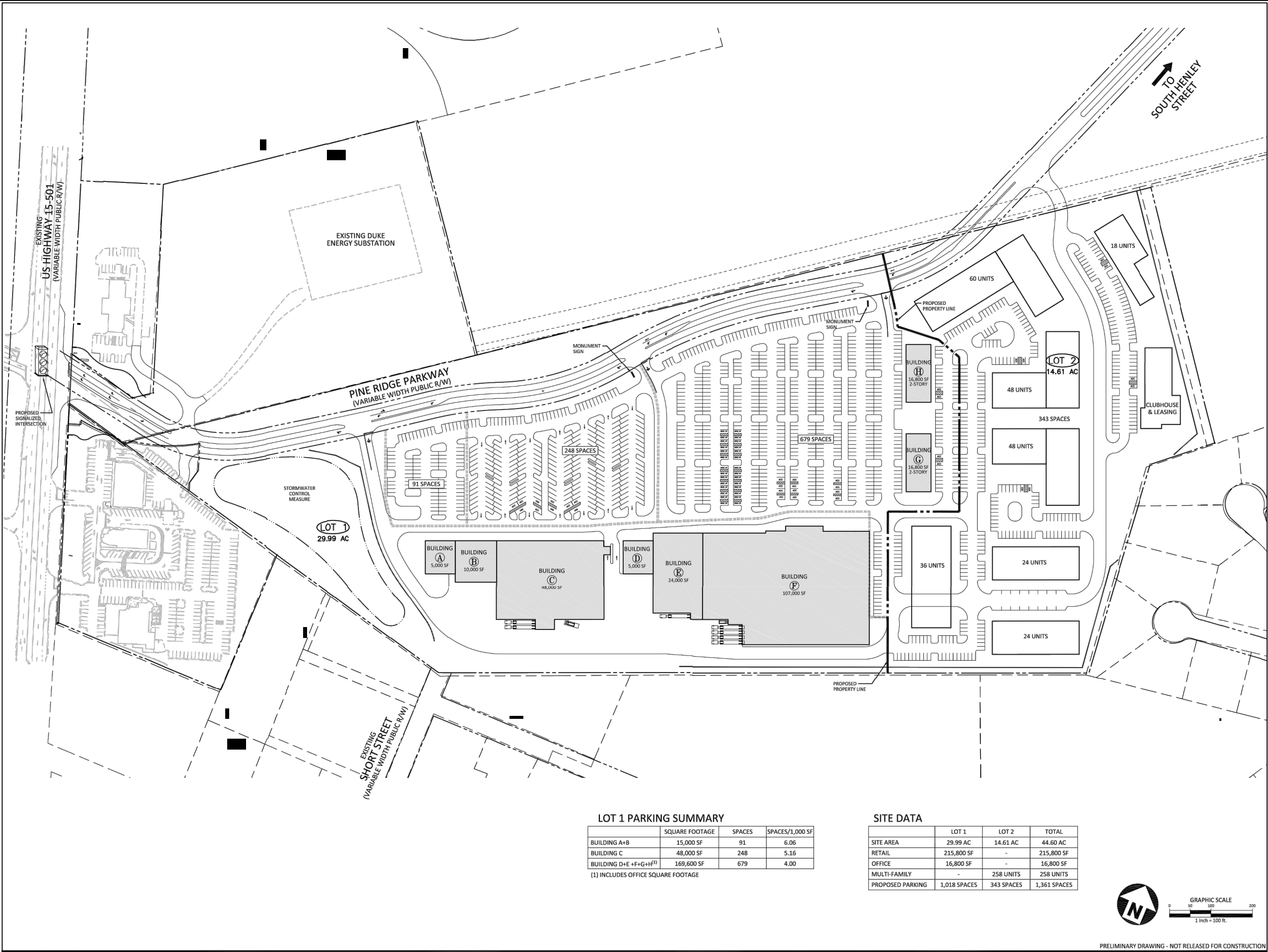
Kimley-Horn and Associates, Inc. has performed a Traffic Impact Analysis (TIA) for the proposed Pine Ridge Commercial development located between US 15/501 and Morganton Road east of the Southern Pines Village shopping center in Southern Pines, NC. The site is currently vacant. As currently envisioned, 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
<i>Internal Capture Reduction</i>				784	6	6	56	56
<i>Pass-By Reduction</i>				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.



4.0 Site Traffic Distribution

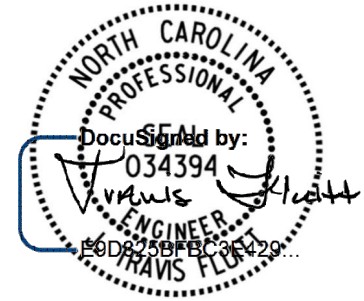
The proposed site generated trips were assigned to the surrounding roadway network. The directional distribution and assignment were based on a review of surrounding land uses and traffic patterns. The following overall distribution was used for new external site trips:

- 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**.

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
<i>Internal Capture</i>		217	1	1	14	19
<i>Pass-by Capture</i>		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.

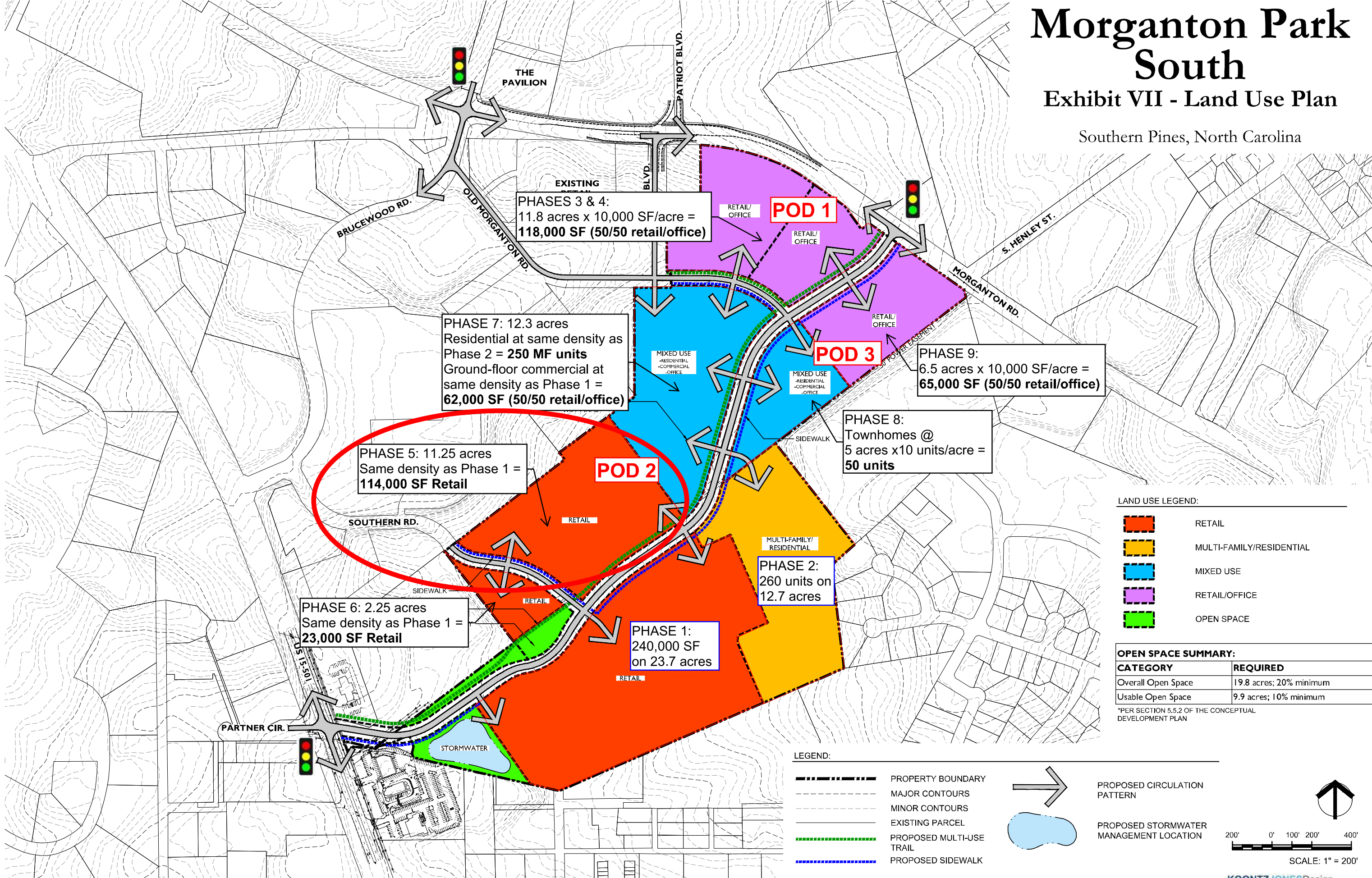


Travis Fluitt, P.E.
Senior Project Manager

Morganton Park South

Exhibit VII - Land Use Plan

Southern Pines, North Carolina



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
<u>220</u> Multifamily Housing (Low-Rise)	214 d.u.	1,448	724	724	89	21	68	113	71	42

\\kimley-horn.com\CL_RAL1\RAL_TPTO_Traffic\011820005 MPS Traffic Services\Phase 4\November 2024 TIA\T3 - Background Data\Approved Developments\[Pod 2 App Dev Calcs - TF.xls]Trip Gen

11/18/24

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
<u>710</u>	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
<u>932</u>	High-Turnover Sit-Down Restaurant	3,500	s.f.	376	188	188	33	18	15	32	20	12
<u>934</u>	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

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-by Trips:	78	77	94	93

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Brucewood Road
E/W Street:	Old Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.061208	Buildout Year:	2027

Description			Old Morganton Road			Old Morganton Road			Brucewood Road			Brucewood Road		
			Eastbound			Westbound			Northbound			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 Background 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)														

		Old Morganton Road			Old Morganton Road			Brucewood Road			Brucewood Road		
Description		Eastbound			Westbound			Northbound			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)													

11/18/24

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 (0)

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11/18/24

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%			
Growth Factor (Buildout):	0.061208			
Existing Year:	2024			
Buildout Year:	2027			

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	0.061	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			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	0.061	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 (0)

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

in Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Carolina Green Parkway
E/W Street:	Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.061208	Buildout Year:	2027

				Morganton Road			Morganton Road			Carolina Green Parkway			-		
Description				Eastbound		Right	Westbound		Right	Northbound		Right	Southbound		Right
				Left	Through		Left	Through		Left	Through		Left	Through	
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 Background 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)															

Description		Morganton Road			Morganton Road			Carolina Green Parkway			-		
		Eastbound			Westbound			Northbound			Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	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)													

11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

in Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Henley Street
E/W Street:	Morganton Road

Description		Morganton Road			Morganton Road			Henley Street			Henley Street		
		Eastbound			Westbound			Northbound			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		0.061	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)													

		Morganton Road <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Henley Street <u>Northbound</u>			Henley Street <u>Southbound</u>		
Description		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		0.061	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)													

11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	182	173	132	135
Pass-By Trips	78	77	94	93

in Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Fire Lane
E/W Street:	Morganton Road

				Morganton Road						Fire Lane			Fire Lane		
Description				Eastbound			Westbound			Northbound			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	
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)															

Description		Morganton Road <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Fire Lane <u>Northbound</u>			Fire Lane <u>Southbound</u>		
		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)													

11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

h Rate (Buildout):	2.00%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

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

		Pod 2 Apartments			Pine Ridge Apartments			Carolina Green Parkway			Carolina Green Parkway				
		Eastbound			Westbound			Northbound			Southbound				
Description		Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right	
2024	Traffic Count														
Count Balancing		0	0	0	0	0	0	0	40	0	0	0	0	103	0
2024	Existing Traffic	0	0	0	0	0	0	0	40	0	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	0.000
2027	Background Growth	0	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	0
MPN Apartments		0	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	0
Pine Ridge Apartments		0	0	0	31	0	0	25	0	0	12	0	9	0	0
BJ's & Starbucks		0	0	0	0	0	0	0	47	0	0	0	0	55	0
Pod 2 Apartments		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pod 3 Apartments		0	0	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	0
2027	Background Traffic	0	0	0	31	0	25	0	87	12	0	9	158	0	0
Project Traffic															
Percent Assignment Inbound		0%	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic		0	0	0	0	0	0	0	46	0	0	0	0	0	0
Percent Assignment Outbound		0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	20%	0%	0%
Outbound Project Traffic		0	0	0	0	0	0	0	0	0	86	0	43	0	0
Total External Site Traffic		0	0	0	0	0	0	0	46	0	86	0	44	0	0
Pass-By Capture Reduction		0	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	0
Total Pass-By Traffic		0	0	0	0	0	0	0	0	0	48	0	0	0	0
Internal Capture Traffic		0	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	0
Old Morganton Road Diversion		0	0	0	0	0	0	0	20	0	0	0	20	0	0
2027	Buildout Total	0	0	0	31	0	25	0	153	12	134	9	222	0	0
Percent Impact (Approach)		-	-	-	-	0.0%	-	-	27.9%	-	-	48.8%	-	-	-

Description	Pod 2 Apartments			Pine Ridge Apartments			Carolina Green Parkway			Carolina Green Parkway			
	Left	Eastbound Through	Right	Left	Westbound Through	Right	Left	Northbound Through	Right	U-Turn	Left	Southbound 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
BJs & 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	0
Pod 3	0	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	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%	

11/20/24

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			U-Turn	Carolina Green Parkway Northbound			Carolina Green Parkway 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	40	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	40	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 Apartments	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			U-Turn	Carolina Green Parkway Northbound			Carolina Green Parkway 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	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 Apartments	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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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Lot 1 Driveway
E/W Street:	Old Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.061208	Buildout Year:	2027

Description	Old Morganton Road			Old Morganton Road			-			Lot 1 Driveway		
	Left	Eastbound Through	Right	Left	Westbound Through	Right	Left	Northbound Through	Right	Left	Southbound 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%	

		Old Morganton Road Eastbound Through			Old Morganton Road Westbound Through			- Northbound Through			Lot 1 Driveway Southbound Through		
Description		Left		Right	Left		Right	Left		Right	Left		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	96	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%	

11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	228	216	188	193
Pass-by Trips:	97	96	134	133

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.061208	Buildout Year:	2027

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

Description	Old Morganton Road			Old Morganton Road			Pod 2 Driveway			Lot 2 Driveway		
	Left	Eastbound Through	Right	Left	Westbound Through	Right	Left	Northbound Through	Right	Left	Southbound 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%	

Description	Old Morganton Road <u>Eastbound</u> Through			Old Morganton Road <u>Westbound</u> Through			Pod 2 Driveway <u>Northbound</u> Through			Lot 2 Driveway <u>Southbound</u> Through		
	Left		Right	Left		Right	Left		Right	Left		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%	

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11/18/24

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 (0)

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11/18/24

Appendix F:
Intersection Spreadsheets - 2034 Build-Out

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-by Trips:	90	89	108	108

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Brucewood Road
E/W Street:	Old Morganton Road

Description			Old Morganton Road			Old Morganton Road			Brucewood Road			Brucewood Road		
			Eastbound			Westbound			Northbound			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%		

Description		Old Morganton Road <u>Eastbound</u>			Old Morganton Road <u>Westbound</u>			Brucewood Road <u>Northbound</u>			Brucewood Road <u>Southbound</u>		
		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)													

11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Patriot Blvd
E/W Street:	Old Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.138934	Buildout Year:	2034

			Old Morganton Road			Old Morganton Road			-			Patriot Blvd		
Description			Eastbound Through			Westbound Through			Northbound Through			Southbound Through		
			Left		Right	Left		Right	Left		Right	Left		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%		

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%	

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11/18/24

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 <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Patriot Blvd <u>Northbound</u>			Patriot Blvd <u>Southbound</u>		
	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 <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Patriot Blvd <u>Northbound</u>			Patriot Blvd <u>Southbound</u>		
	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 ()

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips	90	89	108	108

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Carolina Green Parkway
E/W Street:	Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.138934	Buildout Year:	2034

Description		Morganton Road			Morganton Road			Carolina Green Parkway			-		
		Eastbound			Westbound			Northbound			Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	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)													

Description		Morganton Road			Morganton Road			Carolina Green Parkway			-		
		Eastbound			Westbound			Northbound			Southbound		
		Left	Through	Right	Left	Through	Right	Left	Through	Right	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)													

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips:	90	89	108	108

in Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Henley Street
E/W Street:	Morganton Road

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.138934	Buildout Year:	2034

		Morganton Road Eastbound			Morganton Road Westbound			Henley Street Northbound			Henley Street Southbound		
Description		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
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%	

		Morganton Road <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Henley Street <u>Northbound</u>			Henley Street <u>Southbound</u>		
Description		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
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)													

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	170	161	118	120
Pass-By Trips:	90	89	108	108

in Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

Project:	Morganton Park South Phase 4
Location:	Southern Pines, NC
Ct. Date	
N/S Street:	Fire Lane
E/W Street:	Morganton Road

				Morganton Road			Morganton Road			Fire Lane			Fire Lane		
Description				Eastbound Through			Westbound Through			Northbound Through			Southbound Through		
				Left		Right	Left		Right	Left		Right	Left		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%		

Description		Morganton Road <u>Eastbound</u>			Morganton Road <u>Westbound</u>			Fire Lane <u>Northbound</u>			Fire Lane <u>Southbound</u>		
		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)													

11/18/24

Intersection Analysis Sheet

Project: Morganton Park South Phase 4
 Location: Southern Pines, NC
 C.t. 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			Pine Ridge Apartments Westbound			Carolina Green Parkway Northbound			Carolina Green Parkway Southbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	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			Pine Ridge Apartments Westbound			Carolina Green Parkway Northbound			Carolina Green Parkway Southbound			
	Left	Through	Right	Left	Through	Right	Left	Through	Right	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 ()

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11/18/24

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%			
Growth Factor (Buildout):	0.138934			
Existing Year:	2024			
Buildout Year:	2034			

AM PEAK HOUR AM PHF = 0.9

Description	Old Morganton Road <u>Eastbound</u>			Pod 3 Driveway <u>Westbound</u>			U-Turn	Carolina Green Parkway <u>Northbound</u>			Carolina Green Parkway <u>Southbound</u>		
	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	40	0	103	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	40	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	0	25	0	9	0
BJ's & Starbucks	0	0	0	0	0	0	0	0	0	47	0	55	0
Pod 2 Apartments	0	0	12	0	0	0	0	0	4	22	0	6	2
Pod 3 Apartments	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 <u>Eastbound</u>			Pod 3 Driveway <u>Westbound</u>			U-Turn	Carolina Green Parkway <u>Northbound</u>			Carolina Green Parkway <u>Southbound</u>		
	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	295	0	236	0
2024 Existing Traffic	0	0	0	0	0	0	0	0	0	295	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 Apartments	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 ()

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11/18/24

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%			
Growth Factor (Buildout):	0.138934			
Existing Year:	2024			
Buildout Year:	2034			

AM PEAK HOUR AM PHF = 0.9

Description	Old Morganton Road <u>Eastbound</u>			Old Morganton Road <u>Westbound</u>			- <u>Northbound</u>			Lot 1 Driveway <u>Southbound</u>		
	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 <u>Eastbound</u>			Old Morganton Road <u>Westbound</u>			- <u>Northbound</u>			Lot 1 Driveway <u>Southbound</u>		
	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 ()

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

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

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.138934	Buildout Year:	2034

Description	Old Morganton Road <u>Eastbound</u> Through			Old Morganton Road <u>Westbound</u> Through			Pod 2 Driveway <u>Northbound</u> Through			Lot 2 Driveway <u>Southbound</u> Through		
	Left		Right	Left		Right	Left		Right	Left		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%		

Description	Old Morganton Road <u>Eastbound</u>			Old Morganton Road <u>Westbound</u>			Pod 2 Driveway <u>Northbound</u>			Lot 2 Driveway <u>Southbound</u>		
	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%	

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11/18/24

	AM In	AM Out	PM In	PM Out
Net New Trips:	212	201	168	171
Pass-by Trips:	113	111	154	155

Rate (Buildout):	2.0%	Existing Year:	2024
Factor (Buildout):	0.138934	Buildout Year:	2034

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

Annual Growth Rate (Buildout):	2.0%	Existing Year:	2024
Growth Factor (Buildout):	0.138934	Buildout Year:	2034

Description	Lot 4 Driveway			Old Morganton Road			Old Morganton Road			Lot 3 Driveway		
	Eastbound Through			Westbound Through			Northbound Through			Southbound Through		
	Left		Right	Left		Right	Left		Right	Left		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%		

Description	Lot 4 Driveway <u>Eastbound</u>			Old Morganton Road <u>Westbound</u>			Old Morganton Road <u>Northbound</u>			Lot 3 Driveway <u>Southbound</u>		
	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%	

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Appendix G:
Synchro Output:
Existing (2024)

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Existing AM (2024)
11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Existing AM (2024)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Existing AM (2024)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Existing AM (2024)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Existing AM (2024)

11/14/2024

						
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 Effect 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

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Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

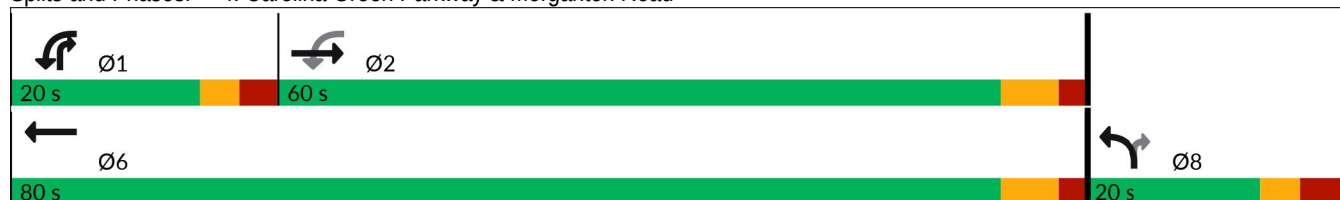
Existing AM (2024)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Existing AM (2024)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Existing AM (2024)
11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Existing AM (2024)

11/14/2024

												
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 Effect 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	

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Existing AM (2024)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Existing PM (2024)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Existing PM (2024)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Existing PM (2024)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Existing PM (2024)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Existing PM (2024)
11/14/2024

						
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 Effect 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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

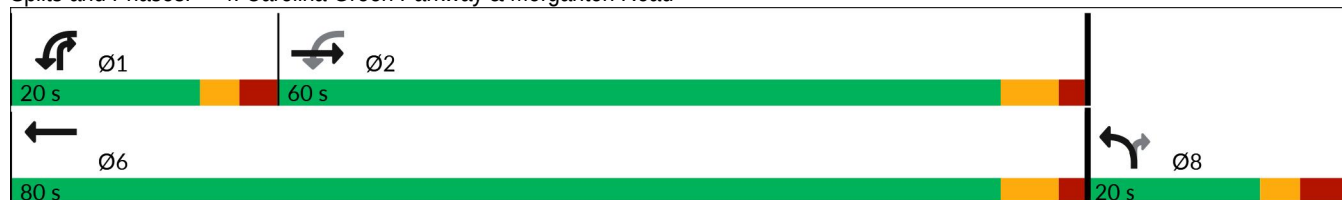
Existing PM (2024)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Existing PM (2024)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Existing PM (2024)

11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Existing PM (2024)

11/14/2024

												
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 Effect 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	

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Existing PM (2024)
11/14/2024

												
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 Capacity Utilization 45.9%
Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service A

Splits and Phases: 6: Fire Lane/NCNG Armory & Morganton Road

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Appendix H:
Synchro Output:
Background (2027)

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background AM (2027)

11/14/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	5	5	13	4	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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background AM (2027)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background AM (2027)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Background AM (2027)

11/14/2024

						
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 Effect 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

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

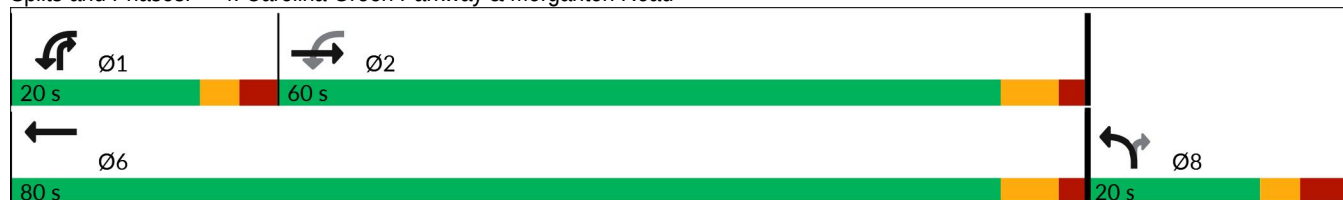
Background AM (2027)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background AM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background AM (2027)

11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background AM (2027)

11/14/2024

												
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 Effect 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	

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Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background AM (2027)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Background AM (2027)
11/14/2024

						
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	W		T		T	T
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
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	NBRWBLn1	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	-

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background PM (2027)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background PM (2027)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background PM (2027)

11/14/2024

												
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											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background PM (2027)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Background PM (2027)

11/14/2024

						
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 Effect 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

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

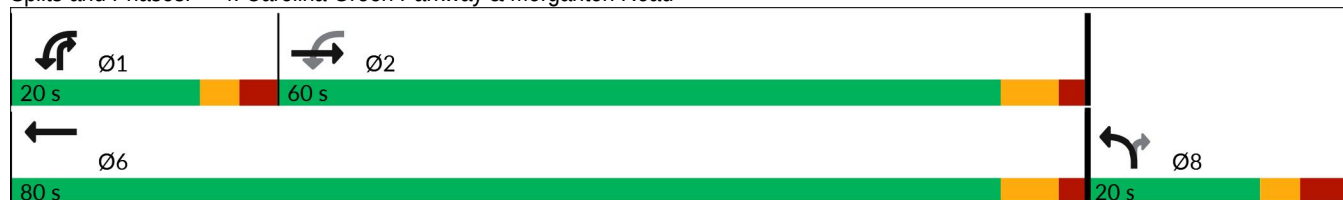
Background PM (2027)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background PM (2027)

11/14/2024

												
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 Effect 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	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background PM (2027)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Background PM (2027)
11/14/2024

						
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	W		↑↑		W	↑↑
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
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	NBRWBLn1	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)

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out AM (2027)
11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out AM (2027)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Build-out AM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	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	212
Stage 1	-	-	155
Stage 2	-	-	57
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1419	-	776
Stage 1	-	-	873
Stage 2	-	-	966
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1419	-	774
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

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out AM (2027)
11/14/2024

												
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											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out AM (2027)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out AM (2027)
11/14/2024

						
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 Effect 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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

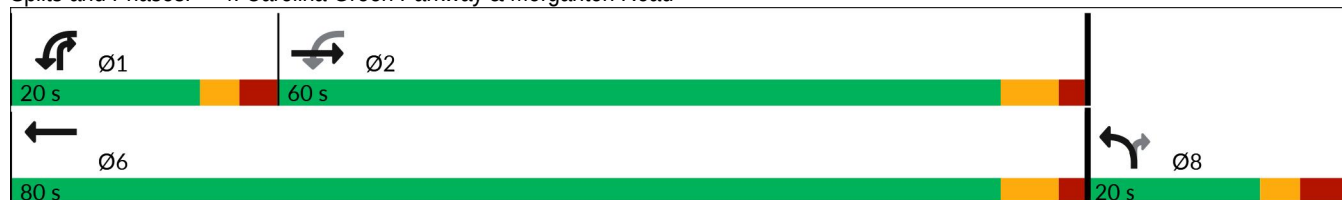
Build-out AM (2027)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out AM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out AM (2027)
11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out AM (2027)

11/14/2024

												
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 Effect 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	

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out AM (2027)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Build-out AM (2027)
11/14/2024

							
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						

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Build-out AM (2027)
11/14/2024

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	NBRWBLn1	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

Morganton Park South Phase 4
8: Carolina Green Parkway & Old Morganton Road

Build-out AM (2027)
11/14/2024



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

Morganton Park South Phase 4
8: Carolina Green Parkway & Old Morganton Road

Build-out AM (2027)
11/14/2024

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
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	-	-

Morganton Park South Phase 4
9: Old Morganton Road & Lot 1 Driveway

Build-out AM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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

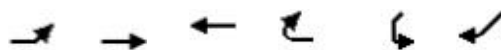
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	320	0	0 355 205
Stage 1	-	-	- - 205 -
Stage 2	-	-	- - 150 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1240	-	- - 643 836
Stage 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

Morganton Park South Phase 4
10: Old Morganton Road & Lot 2 Driveway

Build-out AM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		4	1		W	
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	280
Stage 1	-	-	174
Stage 2	-	-	106
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1387	-	710
Stage 1	-	-	856
Stage 2	-	-	918
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1387	-	706
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

11: Old Morganton Road & Lot 4 Driveway & Lot 3 Driveway

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out PM (2027)
11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out PM (2027)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Build-out PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out PM (2027)
11/14/2024

												
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											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out PM (2027)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out PM (2027)
11/14/2024

						
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 Effect 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

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Kimley-Horn Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

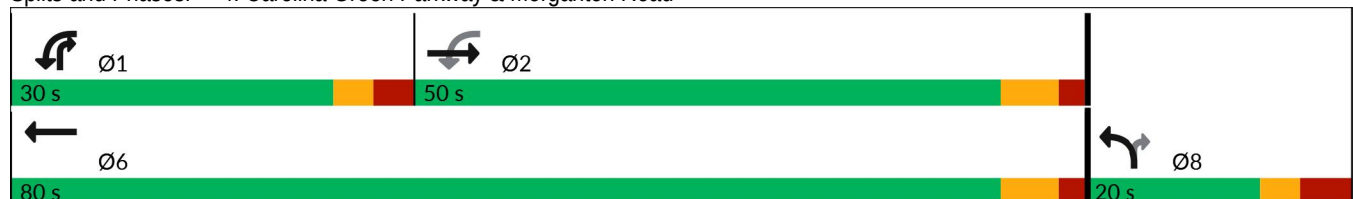
Build-out PM (2027)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out PM (2027)

11/14/2024

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 O (veh)	0.4	-	-	-	0.9	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out PM (2027)

11/14/2024

												
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 Effect 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	

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out PM (2027)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Build-out PM (2027)
11/14/2024

							
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						

Morganton Park South Phase 4
7: Carolina Green Parkway & Pine Ridge Apartments

Build-out PM (2027)
11/14/2024

Intersection							
Int Delay, s/veh	2.2						
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations	W	W	↑↑			↓	↑↑
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	NBRWBLn1	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

Morganton Park South Phase 4
8: Carolina Green Parkway & Old Morganton Road

Build-out PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
8: Carolina Green Parkway & Old Morganton Road

Build-out PM (2027)
11/14/2024

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	-	-	

Morganton Park South Phase 4
9: Old Morganton Road & Lot 1 Driveway

Build-out PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
9: Old Morganton Road & Lot 1 Driveway

Build-out PM (2027)
11/14/2024

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

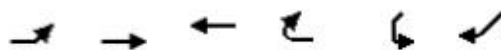
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	360	0	0 405 237
Stage 1	-	-	- - 237 -
Stage 2	-	-	- - 168 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1199	-	- - 602 802
Stage 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

Morganton Park South Phase 4
10: Old Morganton Road & Lot 2 Driveway

Build-out PM (2027)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
10: Old Morganton Road & Lot 2 Driveway

Build-out PM (2027)
11/14/2024

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		4	1		W	
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	WBRSWLn1
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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)

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background AM (2034)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background AM (2034)

11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Background AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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	

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background AM (2034)

11/14/2024

												
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											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background AM (2034)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Background AM (2034)

11/14/2024

						
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 Effect 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

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

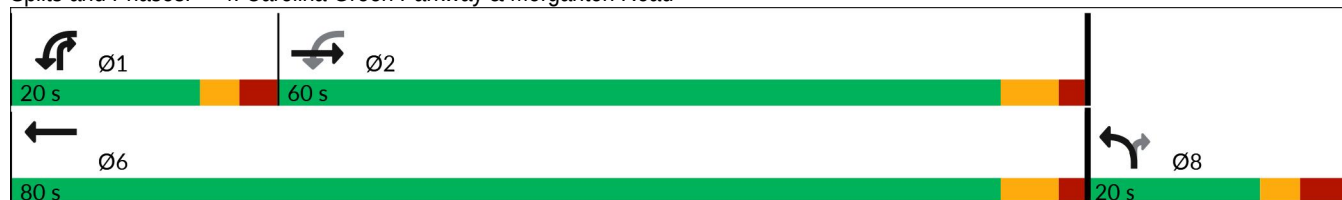
Background AM (2034)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background AM (2034)

11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background AM (2034)

11/14/2024

												
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 Effect 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	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background AM (2034)

11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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		Major2		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	EBLn1WBLn1	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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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	EBLn1WBLn1	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	-	-

Morganton Park South Phase 4
10: Pod 2 Apartments & Old Morganton Road

Background AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1588
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1588
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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	-

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background PM (2034)

11/14/2024

												
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											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Background PM (2034)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Background PM (2034)

11/14/2024



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

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background PM (2034)

11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Background PM (2034)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Background PM (2034)

11/14/2024

						
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 Effect 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

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

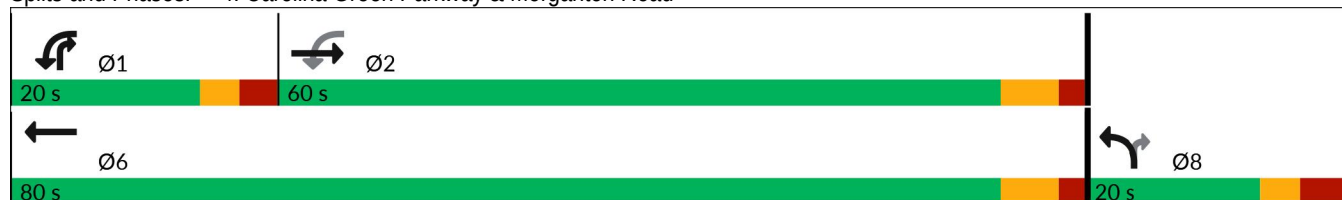
Background PM (2034)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background PM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Background PM (2034)

11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background PM (2034)

11/14/2024

												
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 Effect 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	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Background PM (2034)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

												
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%											
Analysis Period (min)	15											
ICU Level of Service A												

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		Major2		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	EBLn1WBLn1	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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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

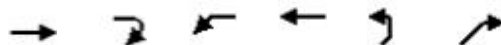
Major/Minor	Minor2		Minor1		Major1			Major2					
Conflicting Flow All	-	-	66	-	-	78	132	132	0	0	155	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	6.44	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-
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	EBLn1WBLn1	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	-	-

Morganton Park South Phase 4
10: Pod 2 Apartments & Old Morganton Road

Background PM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1538
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1538
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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)

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out AM (2034)
11/14/2024

												
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												

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out AM (2034)
11/14/2024

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	EBLn1WBLn1WBLn2	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

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Build-out AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out AM (2034)

11/14/2024

												
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%											
Analysis Period (min)	15											
ICU Level of Service A												

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out AM (2034)
11/14/2024

						
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 Effect 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

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out AM (2034)
11/14/2024

	→	↘	↙	←	↖	↗
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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out AM (2034)

11/14/2024

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

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out AM (2034)

11/14/2024

												
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 Effect 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	

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Kimley-Horn

Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out AM (2034)
11/14/2024

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

Ø1	Ø2	Ø4
25 s	45 s	20 s
Ø5	Ø6	Ø8
25 s	45 s	20 s

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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		Major2		Major2		Major2	
Conflicting Flow All	772	918	149	765	915	142	297	0	0	284	284	0	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	EBLn1WBLn1	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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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	EBLn1WBLn1	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	-	-

Morganton Park South Phase 4
9: Old Morganton Road & Lot 1 Driveway

Build-out AM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out PM (2034)
11/14/2024

												
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											

Morganton Park South Phase 4
1: Brucewood Road & Old Morganton Road

Build-out PM (2034)
11/14/2024

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	EBLn1WBLn1WBLn2	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	-	-

Morganton Park South Phase 4
2: Old Morganton Road & Patriot Blvd

Build-out PM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

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

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out PM (2034)
11/14/2024

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

Morganton Park South Phase 4
3: Patriot Blvd & Morganton Road

Build-out PM (2034)
11/14/2024

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

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out PM (2034)
11/14/2024

						
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 Effect 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

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Synchro 11 Report

Morganton Park South Phase 4
4: Carolina Green Parkway & Morganton Road

Build-out PM (2034)
11/14/2024



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

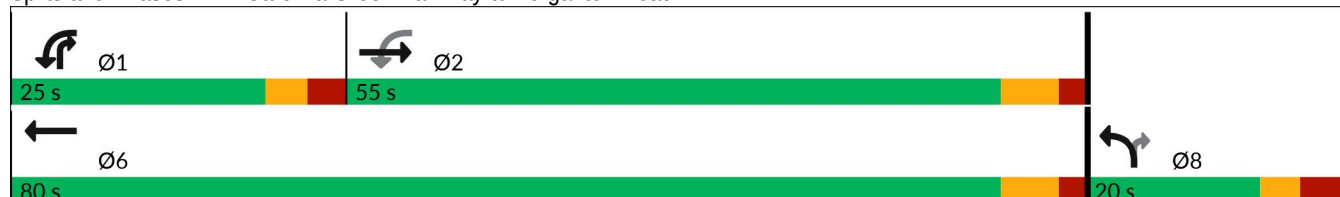
Analysis Period (min) 15

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



Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out PM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Morganton Park South Phase 4
5: Morganton Road & S Henley Street

Build-out PM (2034)

11/14/2024

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	

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out PM (2034)

11/14/2024

												
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 Effect 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	

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Synchro 11 Report

Morganton Park South Phase 4
6: Fire Lane/NCNG Armory & Morganton Road

Build-out PM (2034)
11/14/2024

												
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

 Ø1	 Ø2	 Ø4
25 s	45 s	20 s
 Ø5	 Ø6	 Ø8
25 s	45 s	20 s

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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	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	EBLn1WBLn1	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%											
Analysis Period (min)	15											
	ICU Level of Service A											



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	EBLn1WBLn1	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	-

Morganton Park South Phase 4
9: Old Morganton Road & Lot 1 Driveway

Build-out PM (2034)
11/14/2024



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%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		4	
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	433
Stage 1	-	-	267
Stage 2	-	-	166
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1163	-	580
Stage 1	-	-	778
Stage 2	-	-	863
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1163	-	563
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%											
Analysis Period (min)	15											
ICU Level of Service A												

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		

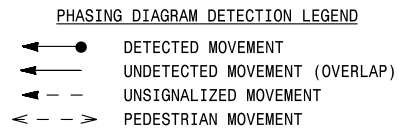
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	686	1341	-	-	1474	-	-	614
HCM Lane V/C Ratio	0.026	0.004	-	-	0.015	-	-	0.056
HCM Control Delay (s/veh)	10.4	7.7	0	-	7.5	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.2

												
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%											
Analysis Period (min)	15											
	ICU Level of Service A											

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



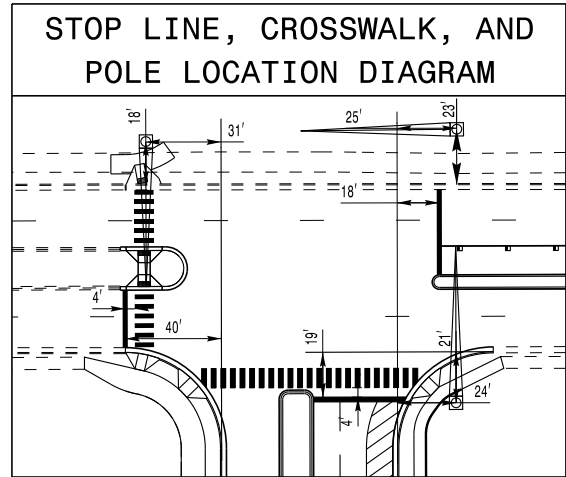
ALTERNATE PHASING DIAGRAM

02+6 08
01+6

SIGNAL FACE I.D.
All Heads L.E.D.

* Disable Delay during Alternate Phasing operation.
Disable Phase call for loop during Alternate Phasing operation.

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.

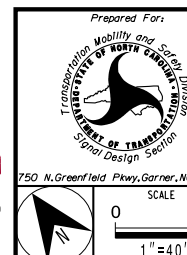


* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

PLANS PREPARED IN THE OFFICE OF:
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421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

<u>PROPOSED</u>		<u>EXISTING</u>
	Traffic Signal Head	N/A
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	N/A
	Type II Signal Pedestal	N/A
	Signal Pole with Guy	N/A
	Metal Pole with Sidewalk Guy	N/A
	Metal Pole with Mastarm	N/A
	Inductive Loop Detector	N/A
	Controller & Cabinet	N/A
	Junction Box	N/A
	2-in Underground Conduit	N/A
N/A	Right of Way	N/A
	Directional Arrow	N/A
(A)	Left "TURNING VEHICLES YIELD TO PEDESTRIANS" Sign (R10-15)	(A) N/A
(B)	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	(B) N/A
(C)	No U-Turn/ No Left Turn Sign (R3-18)	(C) N/A

New Installation



SR 1309 (Morganton Road)
at
Pine Ridge Parkway

Division 8 Moore County Southern Pines

PLAN DATE: February 2022	REVIEWED BY: SL Phillips
--------------------------	--------------------------

29	PREPARED BY: DM Curri	REVIEWED BY:		
	RELATIONS		UNIT	DATE

REVISED	INIT.	DATE

[illegible]

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

A circular professional engineer seal for the State of California. The outer ring contains the text "STATE OF CALIFORNIA" at the top and "PROFESSIONAL ENGINEER" at the bottom. Inside the ring, the word "ENGINEER" is prominently displayed in the center, with "STA" and "IPS" visible on the left and right sides respectively.

DocuSigned by:  L. PHILLIPS

7/14/2022

SIGNATURE	DATE
	00 00

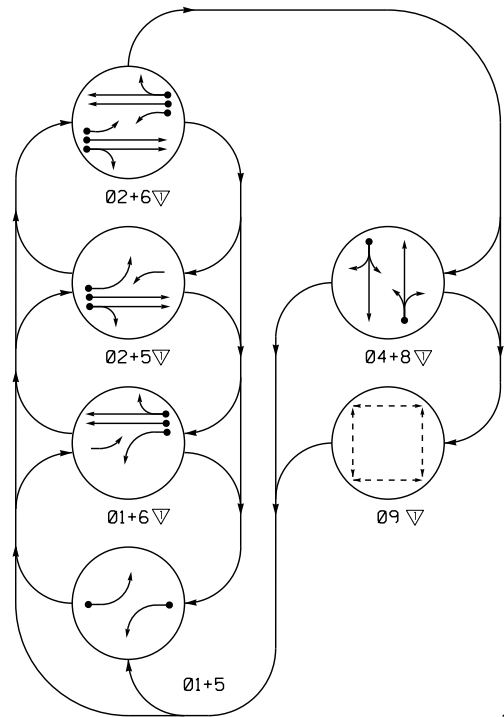
08-0301 Morganton @ Pkwy

FREE SQL TMI

PI 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	

PHASING DIAGRAM



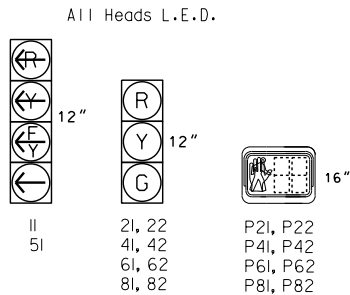
PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE						
	01+5	02+5	02+6	04+8	09	F	FL
II	←	←	←	←	←	←	←
2l, 22	R	R	G	G	R	R	Y
4l, 42	R	R	R	R	G	R	R
5l	←	←	←	←	←	←	←
6l, 62	R	G	R	G	R	R	Y
8l, 82	R	R	R	R	G	R	R
P2l, P22	DW	DW	DW	DW	W	DRK	
P4l, P42	DW	DW	DW	DW	W	DRK	
P6l, P62	DW	DW	DW	DW	W	DRK	
P8l, P82	DW	DW	DW	DW	W	DRK	
SIGN A	OFF	OFF	OFF	OFF	ON	OFF	

W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.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
IA	6X40	0	2-4-2	Y	1	Y	Y	-	15
2A, 2B	6X6	70	4	Y	2	Y	Y	-	-
4A	6X40	0	2-4-2	Y	4	Y	Y	-	10
5A	6X40	0	2-4-2	Y	5	Y	Y	-	15
6A, 6B	6X6	70	4	Y	6	Y	Y	-	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	10

6 Phase Fully Actuated (Isolated)

NOTES

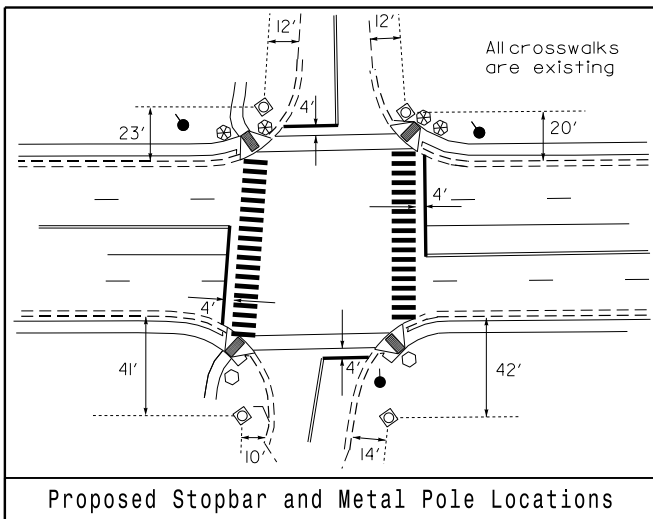
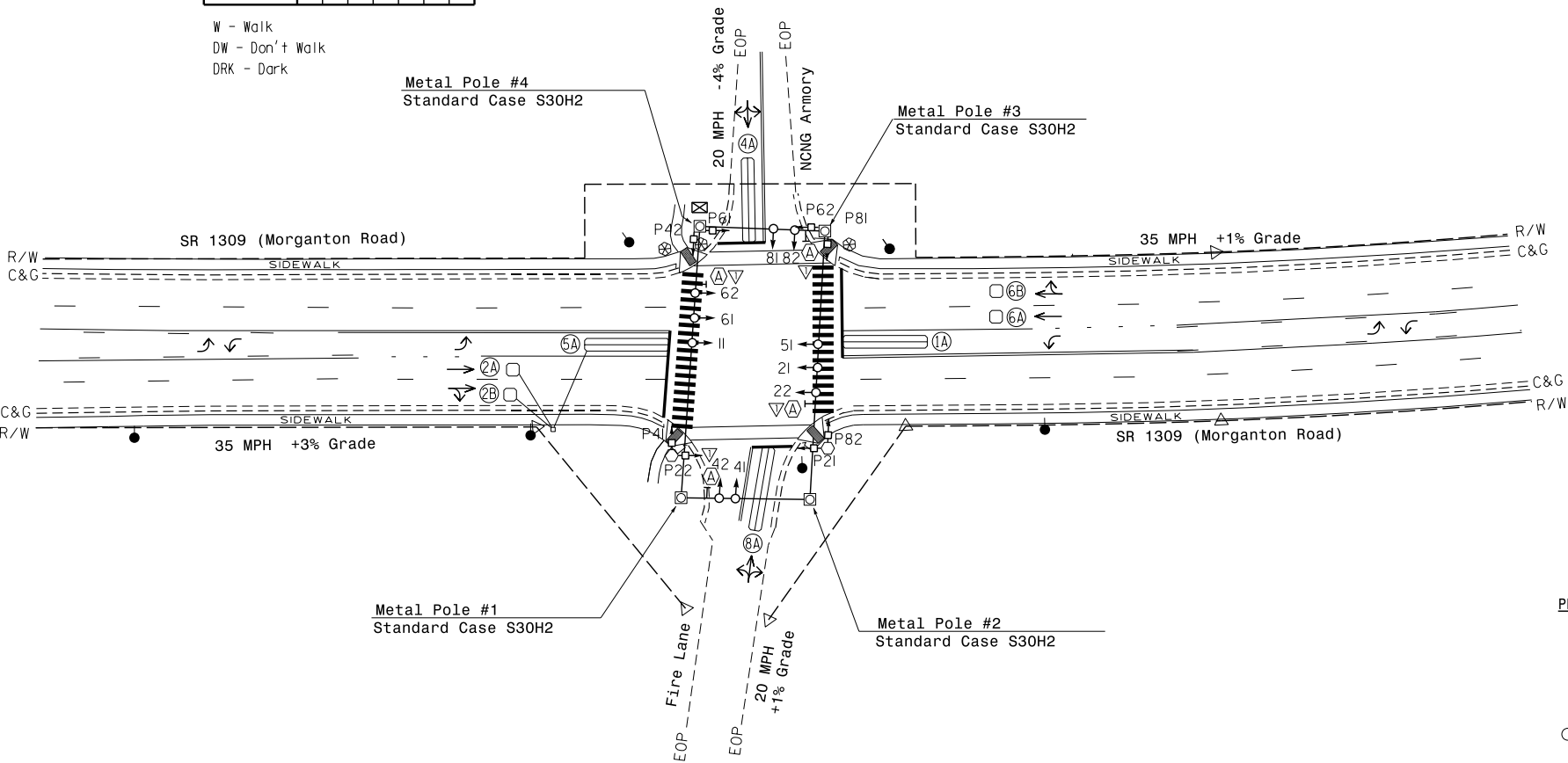
- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" (Phase 9) with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
- Pavement markings are existing unless otherwise shown.
- The order of phase 4+8 and phase 9 may be reversed.
- Illuminate sign A at the beginning of the preceding red clearance interval. This sign will remain illuminated until the beginning of the succeeding green phase.

LEGEND

- | PROPOSED | EXISTING |
|--|----------|
| Traffic Signal Head | N/A |
| Modified Signal Head | N/A |
| Sign | N/A |
| Pedestrian Signal Head With Push Button & Sign | N/A |
| Signal Pole with Guy | N/A |
| Signal Pole with Sidewalk Guy | N/A |
| Inductive Loop Detector | N/A |
| Controller & Cabinet | N/A |
| Junction Box | N/A |
| 2-in Underground Conduit | N/A |
| Right of Way | N/A |
| Directional Arrow | N/A |
| Metal Strain Pole | N/A |
| Curb Ramp | N/A |
| Type I Pushbutton Post | N/A |
| Type II Signal Pedestal | N/A |
| "NO TURN ON RED" L.E.D. Blankout Sign | N/A |

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.



New Installation

750 N. Greenfield Pkwy, Garner, NC 27529 TRANSPORTATION MOBILITY AND SAFETY DIVISION SIGNAL DESIGN SECTION	SR 1309 (Morganton Road) at Fire Lane/NCNG Armory		SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT J. ZIEMBA 6/22/2015
	Division 8 Moore County Southern Pines	Division 8 Moore County Southern Pines	
PLAN DATE: June 2015	REVIEWED BY:	DATE: 6/22/2015	
PREPARED BY: C.E. Carter	REVIEWED BY:	DATE: 6/22/2015	
REVISIONS	INIT.	DATE	
Remove Advance Walk and Add Exclusive Ped Phase 9 with NTOR Blankout Signs	RS	10/2/15	
SCALE 0 40 1"=40'		SIG. INVENTORY NO. 08-1075	

08-1075 Morganton @ Fire Ln

Manual override active

SQ1 ϕ 1 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 FIDW
- 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



Mailing Address:
Duke Energy Progress
Customer Service Center
PO Box 1771
Raleigh, NC 28602-1771
o: 800.452.2777

November 12, 2024

MSP Retail III
1610, 1630, 1650, 1670 Old Morganton Road
Southern Pines NC 28387

Subject: Letter of Electric Availability

Dear MSP Retail III:

This letter confirms that Duke Energy Progress can provide electric service to the proposed site at 1610, 1630, 1650, 1670 Old Morganton Road, provided all necessary easements, permits and rights-of-way can be obtained. Please call Duke Energy Progress at 1-800-452-2777 when your construction plans are complete so we can discuss your electrical service requirements.

Duke Energy Progress appreciates the opportunity to provide your electric service.

Sincerely,

Kristin Parker
Senior Engineering Technologist
1423 McNeill Way
Aberdeen, NC 28315
910-916-1731
Kristin.Parker@duke-energy.com



4720 Corporation Dr.
Fayetteville, NC 28306

November 12, 2024

Midland Atlantic Properties
David Woodke
8044 Montgomery Rd Ste 370
Cincinnati, OH 45236

RE: Morganton Park South-Phase 4; Moore County NC

To whom it may concern,

This letter is to confirm that Piedmont Natural Gas owns and operates a 4 inch plastic gas main on Carolina Green Pkwy and a 2 inch plastic gas main on Old Morganton Rd. Therefore; natural gas is available for the project listed above. If you have any additional questions please feel free to contact me as my contact information is listed below. Thank you

Sincerely,

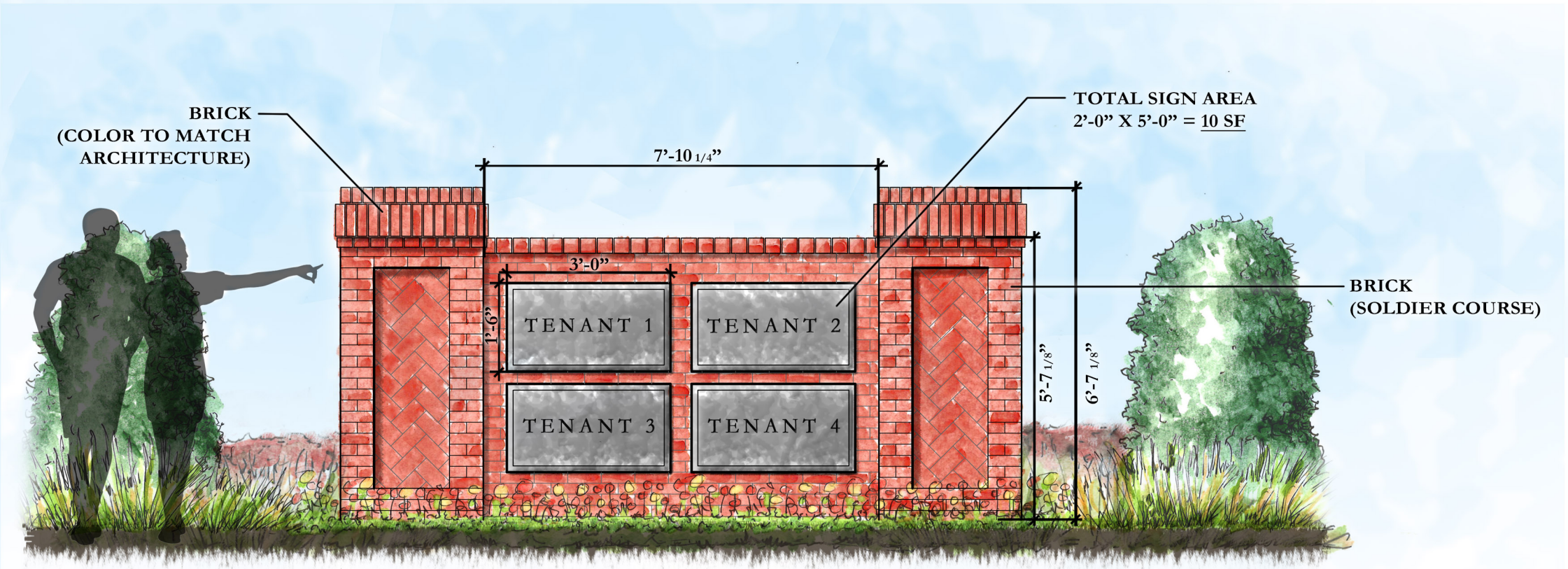
Antonio Richardson

Antonio Richardson
Energy Specialist
antonio.richardson@duke-energy.com
910-321-2949 office
910-644-0342 mobile
910-829-0215 fax

MONUMENT/SIGNAGE
CONCEPTS

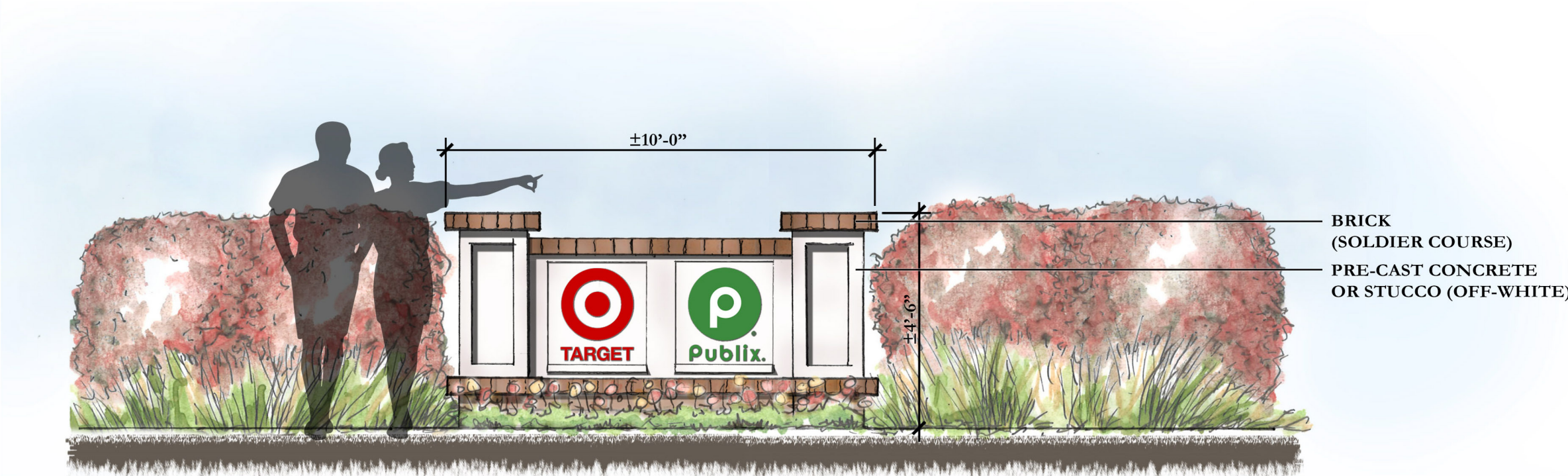
FOR
**MORGANTON
PARK**

OCTOBER, 30 2024



PHASE 4 RETAIL ENTRY SIGN

MORGANTON ROAD MONUMENT SIGN



RETAIL ENTRY SIGN

SCALE: 1/4" = 1'-0"

LEGAL DESCRIPTION FOR 9.03 ACRES
MORGANTON PARK SOUTH PHASE 4
SOUTHERN PINES, SANDHILLS TOWNSHIP
MOORE COUNTY, NORTH CAROLINA

BEING ALL OF THE 9.03 ACRES, MORE OR LESS, BOUNDED TO THE NORTH AND COINCIDENT WITH THE SOUTH MARGIN OF WEST MORGANTON ROAD (S.R. #1309 – 100' ROW), TO THE EAST AND COINCIDENT WITH THE WEST MARGIN OF CAROLINA GREEN PARKWAY (91' ROW), TO THE SOUTH BY THE REMAINDER OF 18.73 ACRES NORTH OF CAROLINA GREEN PARKWAY AS SHOWN ON A MAP TITLED "MINOR SUBDIVISION FOR MIDLAND SOUTHERN PINES RETAIL, LLC", AS RECORDED IN PLAT CABINET 20 SLIDE 401 IN THE MOORE COUNTY REGISTRY, AND TO THE WEST BY CPGKRE PINEHURST LOWES OUTPARCELS, LLC, AS SHOWN IN D.B. 5397 PG. 95, AS RECORDED IN THE MOORE COUNTY REGISTRY. SAID 9.03 ACRES BEING A PORTION OF THE AFOREDESCRIBED 18.73 ACRES, AND BEING MORE PARTICULARLY DESCRIBED BY BEARINGS AND DISTANCES BELOW.

BEGINNING AT AN EXISTING MAG NAIL COMMON TO THE SOUTHEAST CORNER OF CPGKRE PINEHURST LOWES OUTPARCELS, LLC, AS SHOWN IN D.B. 5397 PG. 95, SAID MAG NAIL LOCATED N89°55'59"W (170.37 FEET) FROM AN EXISTING IRON ROD COMMON TO THE SOUTHWEST CORNER OF SAID CPGKRE PINEHURST LOWES OUTPARCELS, LLC DESCRIBED ABOVE;

THENCE FROM SAID BEGINNING AND WITH THE EAST LINE OF SAID CPGKRE PINEHURST LOWES OUTPARCELS, LLC N00°02'26"E (359.81 FEET) TO AN EXISTING IRON ROD IN THE SOUTH MARGIN OF WEST MORGANTON ROAD;

THENCE WITH SAID SOUTH MARGIN DESCRIBED ABOVE A CURVE TO THE RIGHT HAVING A RADIUS OF 2056.05 FEET, A CHORD BEARING OF S86°01'32"E, AND CHORD DISTANCE OF 42.85 FEET TO AN EXISTING IRON ROD; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 1036.13 FEET, A CHORD BEARING OF S75°35'48"E, AND A CHORD DISTANCE OF 362.10 FEET TO AN EXISTING IRON ROD; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 1544.46 FEET, A CHORD BEARING OF S59°28'40"E, AND A CHORD DISTANCE OF 259.20 FEET TO AN EXISTING IRON ROD; THENCE S55°09'46"E (218.95 FEET) TO AN EXISTING IRON ROD; THENCE S35°33'29"E (71.22 FEET) TO AN EXISTING CONCRETE MONUMENT; THENCE N53°36'33"E (23.46 FEET) TO AN EXISTING IRON ROD; THENCE S54°48'24"E (54.94 FEET) TO AN IRON ROD SET IN THE WEST MARGIN OF CAROLINA GREEN PARKWAY;

THENCE WITH SAID WEST MARGIN DESCRIBED ABOVE A CURVE TO THE LEFT HAVING A RADIUS OF 35.00 FEET, A CHORD BEARING OF S40°13'45"E, AND A CHORD DISTANCE OF 4.19 FEET TO AN EXISTING IRON ROD; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 23.17 FEET, A CHORD BEARING OF S04°14'26"E, AND CHORD DISTANCE OF 29.42 FEET TO AN EXISTING IRON ROD; THENCE S35°10'47"W (40.27 FEET) TO AN EXISTING IRON ROD; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 452.00 FEET, A CHORD BEARING OF S46°21'17"W, AND A CHORD DISTANCE OF 175.20 FEET TO AN EXISTING IRON ROD; THENCE S57°31'48"W (257.17 FEET) TO AN IRON ROD SET, SAID IRON ROD LOCATED THE REVERSE CALL N57°31'48"E (154.47 FEET) FROM AN EXISTING IRON ROD IN SAID WEST MARGIN OF CAROLINA GREEN PARKWAY;

THENCE LEAVING SAID WEST MARGIN THE FOLLOWING CALLS:

N32°28'12"W (65.11 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 247.00 FEET, A CHORD BEARING OF N42°53'25"W, AND A CHORD DISTANCE OF 89.35 FEET TO AN IRON ROD SET; THENCE N53°18'37"W (150.08 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 4963.00 FEET, A CHORD BEARING OF N53°41'33"W, AND A CHORD DISTANCE OF 66.17 FEET TO AN IRON ROD SET; THENCE N54°04'28"W (42.43 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 30.00 FEET, A CHORD BEARING OF N78°02'27"W, AND A CHORD DISTANCE OF 24.37 FEET TO AN IRON ROD SET; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 70.00 FEET, A CHORD BEARING OF S81°18'27"W, AND A CHORD DISTANCE OF 8.10 FEET TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 30.00, A CHORD BEARING OF S60°39'22"W, AND A CHORD DISTANCE OF 24.37 FEET TO AN IRON ROD SET; THENCE S36°41'23"W (140.49 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 312.00 FEET, A CHORD BEARING OF S63°11'05"W, AND A CHORD DISTANCE OF 278.38 FEET TO AN IRON ROD SET; THENCE N00°00'06"E (1.03 FEET) TO AN EXISTING MAG NAIL COMMON TO THE SOUTHEAST CORNER OF BERNE SQUARE, LLC - WARREN CORNERS, LLC, AS SHOWN IN D.B. 5370 PG. 74;

THENCE WITH THE EAST LINE OF SAID BERNE SQUARE, LLC - WARREN CORNERS, LLC DESCRIBED ABOVE N00°00'06"E (70.06) FEET TO AN EXISTING MAG NAIL;

THENCE LEAVING SAID EAST LINE THE FOLLOWING CALLS:

N00°00'06"E (2.91 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 238.00 FEET, A CHORD BEARING OF N63°08'05"E, AND A CHORD DISTANCE OF 211.98 FEET TO AN IRON ROD SET; THENCE N36°41'23"E (140.49 FEET) TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 30.00 FEET, A CHORD BEARING OF N12°43'23"E, AND A CHORD DISTANCE OF 24.37 FEET TO AN IRON ROD SET; THENCE A CURVE TO THE RIGHT HAVING A RADIUS OF 70.00 FEET, A CHORD BEARING OF N07°10'56"W, AND CHORD DISTANCE OF 9.92 FEET TO AN IRON ROD SET; THENCE A CURVE TO THE LEFT HAVING A RADIUS OF 205.31 FEET, A CHORD BEARING OF N70°36'01"W, AND A CHORD DISTANCE OF 135.94 FEET TO AN IRON ROD SET; THENCE N89°55'57"W (1.21 FEET) TO AN EXISTING MAG NAIL, WHICH IS THE BEGINNING, AND HAVING AN AREA OF 9.03 ACRES.

Agenda Item

To: Planning Board

From: Alaina Mallette, Senior Planner

Subject: PD-07-24: Planned Development District – Preliminary Development Plan for +/- .8 Acres on the West Side of S. Bennett Street Between New York Avenue and Pennsylvania Avenue (New York Place)

Date: December 19, 2024

I. SUMMARY OF APPLICATION REQUEST

Colin Webster, on behalf of Grosvenor Land, LLC, has submitted a Planned Development District – Preliminary Development Plan application pursuant to §2.18.5 of the Town of Southern Pines Unified Development Ordinance for a mixed-use development to include 40 residential condominiums and 9,100 square feet of retail, restaurant and office space. The subject parcels are currently zoned to Planned Development (PD) pursuant to an approved Conceptual Development Plan (i.e., PD-02-23) and are identified as PIN 858105282734 (PARID 00032263) and PIN 858105281747 (PARID 00031983). Per the Moore County tax records, the parcels are owned by Grosvenor Land, LLC.

II. PROJECT INFORMATION

A. Property Owner(s)
Grosvenor Land, LLC
PO Box 1872
Southern Pines, NC 28388

B. Applicant & Authorized Agent
Grosvenor Land, LLC
PO Box 1872
Southern Pines, NC 28388

C. Property Information

The subject property is vacant, with significant change of grade and overgrowth. Though no identified wetlands or floodplain exist on the property, it does lie within the Little River Intake No. 2 Water Supply Watershed, and has received allocation credit under PD-02-23.

Street Address

The subject parcels are addressed 164 S. Bennett Street and 235 W. New York Avenue. Additional addresses may be assigned by Moore County upon approval of a development plan.

Size of Property

164 S. Bennett Street = approx. 0.3 ac.
235 New York Avenue = approx. 0.5 ac.

Figure 1: Vicinity Aerial Image



Figure 2: Vicinity Zoning Map



Legend

Parcels (Yellow Lines)

Parcels PARID Number

Streets

Overlay - Downtown Zoning District

Zoning Text

CB Zoning

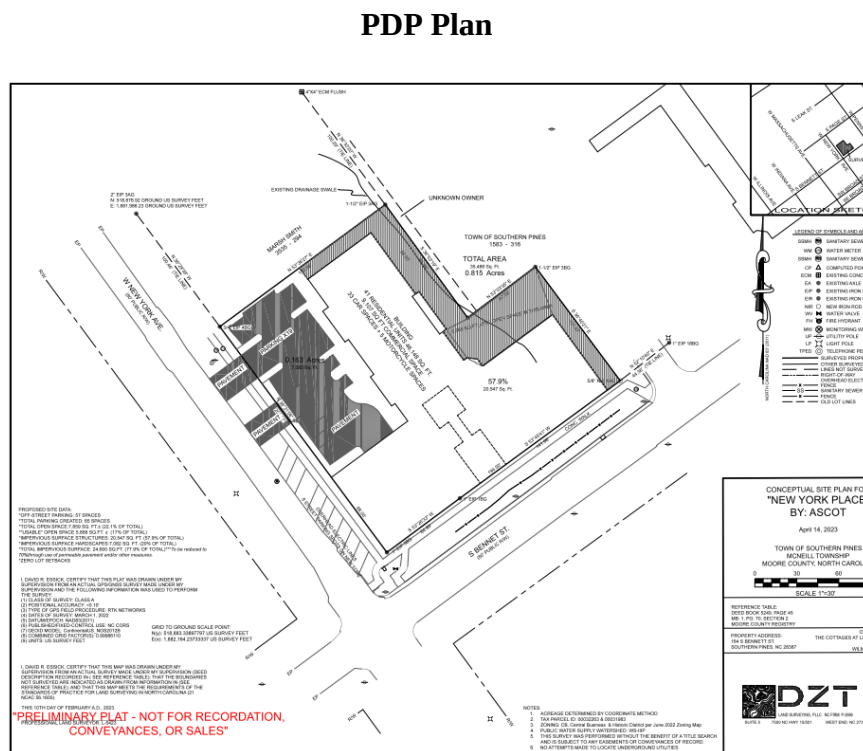
CB, Central Business

Figure 3: Oblique Aerial Image of Present Condition of Subject Property (February 3, 2023)



Figure 4: Oblique Aerial Image of Subject Property with Approximate Boundaries (February 3, 2023)



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PD-07-24 New York Place PDP

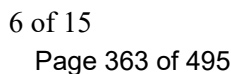
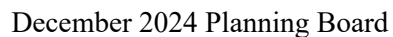


Figure 9 and 10: Conceptual Landscaping Plan

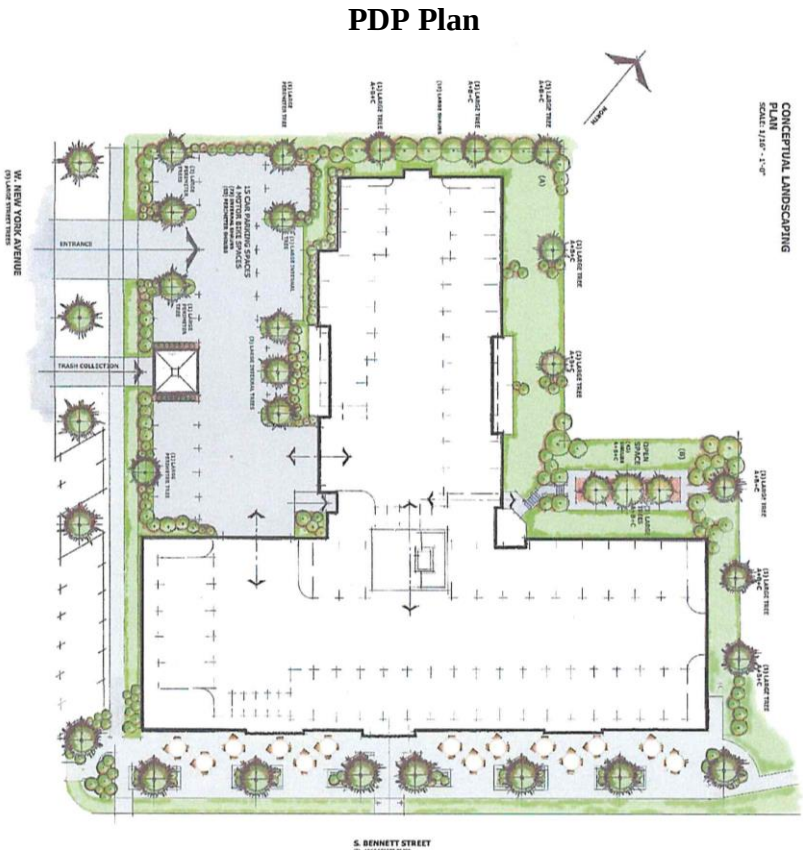


Figure 11 and 12: Conceptual Landscaping Plan

CDP Architecture



PDP Architecture



Figure 13: CDP Proposed Block Cross Section

APPENDIX H - NEW YORK ST ELEVATIONS



III. STAFF REVIEW

A. Review Process

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.

B. Summary of Procedural Requirements (Application Review Dates)

- Approval of CDP (PD-02-23): **September 12, 2023**
- Preliminary Development Plan Application Submitted: **November 13, 2024**
- Application Deemed Complete: **November 18, 2024**
- Notice of December 19, 2024, Planning Board Preliminary Forum:
 - Posted On-site: **December 05, 2024**
 - Mailed: **December 05, 2024**
 - Internet: **December 03, 2024**
 - Published: **December 11 and 18, 2024**
- Consultation with the Technical Review Committee: **December 03, 2024**
- Planning Board Regular Meeting/Preliminary Forum: **December 19, 2024**

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. Staff analysis of how the application addresses these criteria begins on the following page of this document.

Preliminary Development Plan - UDO §2.18.5(H)

1. *The application demonstrates that it will achieve the purposes of the PD 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.*

D. Staff Comments

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.

Vagueness of Proposed Land Uses

The Applicant's Preliminary Development Plan/Plat map's land use building label states "Commercial" as opposed to the Applicant's narrative, which states "Office Space/Retail/Restaurant" not "commercial"; both of which are too vague. The purpose of a PDP is to demonstrate that the proposed land use mix and intensity are consistent

with the Comprehensive Plan, the purposes of Planned Developments, and the approved Conceptual Development Plan. Furthermore, the approval of a PDP is effectively the approval of specific land uses. Knowing this information during PDP may avoid misunderstandings in the future. For instance, land uses potentially interpreted not to be within these broad categories would have to go through a PDP amendment in the future.

Additionally, not knowing more detail about the proposed land uses makes it difficult to anticipate traffic generation counts and types of on-site operations, such as loading and unloading demands, hours of operations for different businesses, and applicability of supplemental regulations. For instance, is a motorcycle dealer, tobacconist establishment, adult cabaret, pawn shop, and department store considered in “Retail”? Is a preschool, day care center, and home occupations considered “Office”? May the restaurant include a drive-through, somehow, or be a bar/drinking place?

Planning consider either an update to the Applicant’s narrative that lists the proposed land uses (and their Land-Based Classification Standard, LBCS, codes) or a condition of approval that lists of a specific approved list of land uses (and their LBCS codes) to be appropriate. Planning considers the following list to be reasonable LBCS codes under the umbrella of “Residential/Multifamily/Office Space/Retail/Restaurant.”

Multifamily Residential

- 1) 1151, multi-family (3 or more dwelling units)

Retail

- | | |
|--|--|
| 1) 2113a, motorcycle sales/service | 19) 2155, ABC store |
| 2) 2113b, bike sales/repair | 20) 2161, pharmacy or drug store |
| 3) 2121, furniture sales | 21) 2162, cosmetic and beauty supplies and personal grooming products |
| 4) 2122, home improvement sales | 22) 2163, optical and contact lenses |
| 5) 2123, lawn and garden sales | 23) 2199, craft/farmers market |
| 6) 2125, electronics/appliances | 24) 2611, beauty parlor |
| 7) 2131, computer sales | 25) 2612, dieting and weight reducing |
| 8) 2132, camera supplies | 26) 2614, tanning salon |
| 9) 2133, clothing, jewelry, luggage, shoes, clocks, sewing | 27) 2616, electrolysis, ear piercing, and other personal care services |
| 10) 2134, sporting goods, toy and hobby, and musical instruments | 28) 2621, coin-operated laundromat |
| 11) 2135, books, music, videos, stationery, school/office supplies, etc. | 29) 2622, dry cleaning and laundry |
| 12) 2141, florist | 30) 2623, linen and uniform supply |
| 13) 2142, art dealer, supplies, and sales | 31) 2630, Photofinishing |
| 14) 2145, antiques and/or thrift store | 32) 2651, massage therapist |
| 15) 2151, grocery store or bakery | 33) 2652, tattoo parlor |
| 16) 2152, convenience store | 34) 2710, pet or pet supply store |
| 17) 2153, specialty food store | 35) 4170, postal services |
| 18) 2154, fruit/veggie store | 36) 4171, national post office |

Restaurant

- 1) 2510, Full-service restaurant
- 2) 2520, Cafeteria or limited service restaurant
- 3) 2530, Snack or nonalcoholic bar
- 4) 2540, Bar or drinking place
- 5) 2560, Caterer
- 6) 2570, Food service contractor

Office (list based on land uses permitted in OS zoning district)

- | | |
|--|---|
| 1) 2210, bank/credit union | 22) 4221, video production |
| 2) 2220, credit/finance establishment | 23) 4234, telephone network office |
| 3) 2230, investment banking | 24) 4241, online IT |
| 4) 2240, insurance-related office | 25) 4242, library/archive |
| 5) 2250, fund/trust and other financial office | 26) 4243, new syndicate |
| 6) 2310, real estate services | 27) 5150, agent for management services |
| 7) 2322, rental housing-related offices | 28) 5160, independent artist |
| 8) 2336, intellectual property rental | 29) 5210, museum |
| 9) 2411, legal services | 30) 5220, historical institution |
| 10) 2412, accounting and tax services | 31) 6210, government offices |
| 11) 2413, professional design services | 32) 6221, civilian court/office |
| 12) 2414, graphic and interior design services | 33) 6410, fire and rescue services |
| 13) 2415, consulting services | 34) 6420, police services |
| 14) 2417, advertising/media services | 35) 6430, emergency response services |
| 15) 2421, office admin. services | 36) 6511, clinic and health spa |
| 16) 2422, facilities support services | 37) 6512, family planning and outpatient care |
| 17) 2423, employment agency | 38) 6561, child and youth services |
| 18) 2424, copy center | 39) 6810, political org. |
| 19) 2430, travel arrangement | 40) 6820, business/professional org. |
| 20) 4211, publishing (books) | 41) 6830, civic org. |
| 21) 4212, publishing (software) | 42) 9110, outdoor production |

The following land uses have not been added to the lists, but may be considered “Residential/Multifamily/Office Space/Retail/Restaurant” and are either intensive or controversial land uses, and should be included in the discussion:

- | | |
|--|---|
| 1) 1210, 1220, 1230, 1240, or 1250, care facilities; | 10) 2652, tattoo parlor; |
| 2) 2110 series, automobile sales; | 11) 2653, adult establishment; |
| 3) 2124, department store; | 12) 2654, adult cabaret; |
| 4) 2143, tobacco store; | 13) 2721 series, animal services and kennels; |
| 5) 2260, pawn shop; | 14) 5370, gyms and event venues; |
| 6) 2416, scientific R&D services | 15) 6110, nursery/preschool; |
| 7) 2418, veterinary services; | 16) 6120 series, grade schools; |
| 8) 2521, drive-through restaurants; | 17) 6562, day care center; and |
| 9) 2550, Food trucks; | 18) 6600 series, religious institutions. |

Plan/Plat Comments

- **Built-Up Area/Impervious Surfaces.** The built-upon area shown on the preliminary plan says 77.9% of total parcel, but that the impervious surface calculation will be reduced to 70% through “permeable pavement and/or other measure...” However, we did not find anything in the narrative that speaks to what features will be permeable. Town engineering staff stated that the Applicant will need to have an engineer properly design it and provide details in the site plan during site plan review. Planning recommends a condition of approval to ensure the site does not exceed 70% impervious surfaces: “The final approved site plan shall include permeable pavement and/or similar permeable technology to bring the built-upon area from 77.9% of total acreage to 70%. Such materials and methodologies for calculating perviousness shall be acceptable to the Town of Southern Pine’s Town Engineer prior to approval of the site plans.” The Applicant stated that they are amenable to this condition on December 10, 2024, via email.
- **PDP Labelling/Notes.** There is a label that says “57.9% 20,547 Sq. Ft.” but it is not clear what was being measured. The notes on the preliminary plan should be updated for item #3 Zoning, which is PD-02-23 New York Place Conceptual Development Plan. The property is no longer zoned Central Business and it is not within the Historic District. Total acreage of the parcel is not stated on the plan, rather square footage of sub-parts. The Preliminary Development Plan map’s land use label should be “Office Space/Retail/Restaurant” not “commercial.”
- **Easements.** Planning staff is not clear whether all easements are being shown on the site or not. The Applicant believes all easements are shown, but claims that they will be submitting a preliminary plat separately and concurrently with site plan review. Planning staff are not clear on the purpose of a Preliminary Plat as no subdivision of land appears necessary. The next steps of the entitlement process following approval of a PDP are site plan review and Architectural Compliance Permit.

Traffic Comments

It is not clear whether what is being proposed is within the scope of the original traffic design analysis. An added section of the narrative or a trip generation letter would suffice in documenting consistency with the original analysis.

Stormwater Comments

A Conceptual Stormwater Plan has been provided that proposes alterations to an existing stormwater pipe, allowing conveyance to a proposed on-site stormwater collection area. It is unclear whether the stormwater is still planned to be underground. Furthermore, the Town’s engineering staff stated that the size of the stormwater facility on the conceptual drainage plan is likely too small. These details will be addressed during site plan review, but are noteworthy.

IV. AGENCY REVIEW AND COMMENTS

A request for comments was emailed to agencies on December 3, 2024. 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. As of the writing of this staff report, no comments were received from any of the agencies. Any agency comments received between the writing of this report and the preliminary forum will be presented at the forum.

V. ATTACHMENTS

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

1. Applicant's Application
2. Applicant's Narrative
3. Applicant's Plans

VI. 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 list of issues as stated in the December 19, 2024, staff report to the Town Council as a result of the December 19, 2024 Preliminary Forum on application PD-07-24, New York Place.

List of Issues Identified

The information presented at the forum indicated that the following issues be considered in applying the criteria for a PDP to application PD-07-24:

1. Permeable pavement and/or similar permeable technology must be used to bring the built-upon area from 77.9% of total acreage to 70%
2. The PDP section 3.0.3 Allowable Uses should be limited to these Land-Based Classification Standard codes mentioned in the December 19, 2024, staff report.
3. Applicant is in excess of permitted 70% built-upon area maximum permitted under their watershed protection permit
4. An additional section of the narrative and/or a standard trip generation letter is needed to confirm whether the proposed scope of development and mix of land uses is within the scope of the original traffic design analysis
5. Stormwater design and capacity are too conceptual and potentially too small
6. Commercial loading and unloading areas will be on the street, unclear whether on S Bennett St or W New York Ave

In addition, the following concerns were raised during the forum, but do not seem to apply in determining whether the PDP criteria are satisfied:

1. All easements should be confirmed and shown on the engineering plans to ensure safe design of the site.

2. Labels should be cleared up as described in the December 19, 2024 staff report



Planned Development District Preliminary Development Plan Application

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

Project Information:

Project Name: NEW YORK PLACE

Physical Address: 164 S. BENNETT ST.

PIN: 858105282734/858105281747 Parcel ID: 00032263/00031983

Site Size: 0.786 ACRES Zoning: PD

Applicant:

Name(s): GROSSEVENOR LAND, LLC

Email: COLIN@ASCOTGRP.COM Phone: 910-688-7361

Mailing Address: _____

Authorized Agent, if different from Applicant:

Name(s): _____

Email: _____ Phone: _____

Mailing Address: _____

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

Name(s): _____

Email: _____ Phone: _____

Mailing Address: _____

1/12/22

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 West side of S. BENNETT ST. (St./Ave.), between NEW YORK (St./Ave.) and PENNSYLVANIA (St./Ave.). The property has a frontage of 201 feet and a depth of 200 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:

Residential, Office Space and General Business Services as outlined
in PD-02-23

Date: 6-13-2024

C. S. COUN NEEBSTER AS MGR
Applicant GROSVENOR LAND, LLC

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

PD - APPLICATION
PLANNED DEVELOPMENT PLAN
NEW YORK PLACE – MIXED USE DEVELOPMENT

1.0 Narrative

2.0 Consistency with Purpose of PDP

3.0 Consistency with Approved Development Standards

3.0.1 Elevation

3.0.2 Size/Density

3.0.2.1 Table

3.0.3 Allowable Uses

3.0.4 Parking

3.0.4.1 Table

3.0.5 Landscaping and Open Spaces

3.0.5.1 Table

1.0 New York Place PD Application Narrative

The purpose of this PD – Preliminary Development Plan is to fully describe the proposed single-phase development for New York Place that meets all standards of the New York Place Conceptual Development Plan (CDP). As stated in the Town of Southern Pines Unified Development Ordinance (UDO) in Section 2.18.5(A), the PDP is intended to show, with greater detail, the development and illustrate how the proposed land use mix and intensity is consistent with the approved Conceptual Development Plan.

The property is indicated as Mixed Use in the Town's CLRP. The single Phase described in this PDP application, is the only Phase in this development and includes 40 single-family apartments and 9,100 sqft of retail/restaurant/office space on the ground floor. No road or utility extensions are required and as previously submitted with the CDP application there is adequate utility capacity and impact on traffic will be negligible. Driveway access shall be on New York Ave. thus avoiding any safety concerns for Bennett St Traffic.

This development conforms with the Development Program in Section 5.1 and Table 1.0 of the CDP booklet as well as all standards indicated in the CDP document.

This three-quarter acre project will be developed as a single Phase because of its small footprint as well as to avoid extended construction downtown. Parking facilities as described in the CDP application will include additional public parking on New York Ave., as well as both covered and uncovered parking on the site accessible from New York Ave. All vehicular traffic and parking will be constructed in accordance with DOT standards.

2.0 Consistency with purpose of the CDP

Below are listed the five (5) purposes of the Preliminary Development Plan (PDP) application as described in Section 2.18.5(A) of the Town of Southern Pines Unified Development Ordinance (UDO). Following the individual criteria is an explanation describing how the project demonstrates compliance with each. A Preliminary Development Plan is permitted if the Applicant demonstrates that:

(1) The proposed land use mix and intensity are consistent with the Comprehensive Plan, the purposes of the PD and the approved Conceptual Development Plan.

This proposed New York Place PD Application is consistent with the project submitted as a CDP and approved by Ordinance #2091 last September 12, 2023. It is a mixed-use development with approximately 46,000 Square Feet (Sq Ft) (40 units) of residential condominiums, and approximately 9,100 Sq Ft of mixed office/retail space facing S. Bennett St. It provides needed space to live, work and play, reflecting a trend toward how residents are choosing to live. Closer to work, schools, restaurants, shopping, entertainment, and friends while minimizing the time and cost of commuting. It provides the town with a better investment return on infrastructure (consistent with the new CLRP Infrastructure Assessment objectives) and supports local businesses.

The project is consistent with the Town's current CLRP and zoning map. It is also consistent with the objectives of the PD (Planned Development District). Its purpose among others is to:

- Encourage planned development, including service, office, commercial, residential, public, or private recreation.
- Promote creativity and innovation in a design that leads to more appropriate relationships between land uses and features.
- Facilitate clustering of development thereby increasing the amount of saved land
- Promote both physical and fiscal health.

(2) Proposed system of streets, trails and greenways are consistent with this UDO, as well as the mobility needs of the Town and the proposed development.

This project is an in-fill project that utilizes existing roadways and pedestrian corridors that enhance the downtown appearance and experience for residents and visitors. The project will add greater pedestrian access by the building of additional sidewalks around the project area.

Conceptually, it provides needed space to live, work and play, reflecting a trend toward how residents are choosing to live. Closer to work, schools, restaurants, shopping, entertainment, and friends while minimizing the time and cost of commuting. It provides the town with a better investment return on infrastructure (consistent with the new CLRP Infrastructure Assessment objectives) and supports local businesses.

(3) The proposed development is consistent with the ability to provide and maintain public facilities and services on which the development, area and Town depend.

As demonstrated during the CDP approval process for this project, water and sewer utilities are readily available at the project site with adequate capacity (see Appendix for copies of materials presented with the CDP application). The PD is consistent with the utilities and roads requirements of the CDP.

As stated above, the project will add pedestrian access by building more sidewalks, and additional commercial space providing greater retail options for residents and revenue for the Town.

(4) The proposed development is well integrated with the protection of natural features, including Watersheds, woodlands and other natural features.

Since this is an in-fill development, there are intrinsic environmental benefits to a design that leads to more appropriate relationships between land uses and features that facilitate clustering of development thereby increasing the amount of land saved from greenfield developments. In addition, a development like this one promotes both physical and fiscal health of residents by encouraging walking rather than driving. This also contributes towards decluttering traffic and reduction of carbon emissions.

On site, stormwater will be conveyed in an appropriate way so as to avoid downstream issues, and site landscaping will improve an area in town that is blighted by an invasive vine species.

(5) The proposed development patterns and development products are compatible with the character and vitality of the neighborhood and community

The proposed CDP for New York Place is consistent with the Town's Comprehensive Long-Range Plan (CLRP) and promotes its objectives. As covered during the CDP review the property is in the Central Business area of the Town's zoning Map. The proposal is consistent with the approved CB zoning uses, the approved CDP, as well as the CLRP which has designated this zoning as suitable for mixed Residential and Commercial use.

- 3.0 Consistency with approved Development standards
- 3.0.1 Elevations

Commitment was made during the CDP approval process to submit a final elevation that would substantially conform with the sketch submitted as part of the CDP application. The elevation below is shown compared to the original conceptual elevation and is substantially the same based on its proportions, size and materials used. The architectural elevation is sharper compared to the artist's rendition but both are substantially the same.

Final Proposed Front Elevation



Artist rendition of front elevation submitted with the CDP Application



Final proposed side elevation from New York Ave



As approved:

- The building will have an articulated façade with projections of less than 5 feet.
- Many, but not all units shall have access to a private balcony.
- There are two ground entrances to the unit. One on S. Bennett and the other from the parking lot on NY Avenue. Ground floor Retail/Office/Restaurant Units Residential Ground shall have private entrances. Upper floor units shall share common entrances.
- 10% open space of which 6% shall be active for the residents of the building which shall otherwise be exempt from the requirements of UDO 3.5.14(G) due to the nature of the building's location and configuration as approved in the CDP.

- **3.0.2 Size/Density**

The roof height shall not exceed 45' from the ground facing Bennett St. As requested by the Council a few architectural devices have been added such as the parapet walls that project 2' above the roof height on the front of the building. Total number of floors including the ground floor is four (4).

The total square footage of the building is shall not exceed 60,000 sqft vs the 73,000 sqft approved in the CDP.

Table 3.0.2.1

Design Element	CDP Approved Standards	PD Proposed Standards
Recreation Areas & Amenities	+/- 0.04 acres (10%)	6% shall be active and landscaped.
Residential	41 Max – 25 Min	Up to 40 Units
Office	Up to 12,500 sqft	Up to 10'000 sqft heated

Retail/Restaurant	Up to 10,000 sqft	Up to 10'000 sqft heated
Total	64,000 Sqft	Up to 60,000 Sqft heated
Maximum Roof Height	45'	45' plus 2' where parapet is present per CDP.
Maximum Ceiling Height	44'	44'
Number of Floor	4 Floors	4 Floors
Maximum Front setback	5'	5'
Minimum Side setback	No Minimum	No minimum
Minimum Rear setback	No Minimum	No minimum

Note #1: Ground floor office square footage shall be limited to 2500 sqft per CDP.

Note #2: Office space limited to 2nd floor on the section of building facing Bennett St.

3.0.3 Allowable Uses

Residential/Multifamily/Office Space/Retail/Restaurant defined by UDO and approved in the CDP.

3.0.4 Parking

Parking Space requirements are shown in Table 2.0.4.1 below and consistent with those approved in the CDP. This PD includes the creation of 45 spaces for onsite residents. It also includes 14 spaces on-site for use by the commercial occupants. An additional 8 spaces shall be created on W. New York Ave.

Table 3.0.4.1

Land Use	CDP Approved Parking	PD Proposed Parking
Residential on-site	45 Approved	45 Proposed
Office/ Commercial/Restaurant	14 Approved	14 Proposed
Offsite Parking	8 Approved	8 Proposed

3.0.5 Landscaping and Open Space

Landscaping shall comply with the approved standards in the CDP. Details in Table 2.0.5.1 below. The proposed project meets the 10% Useable Open Space Requirement for Multifamily projects in the PD Zone and as approved in the CDP. The plan provides an overall of 17% Open Space. 6% of the property footprint shall be active Open space for the benefit of the building residents.

Table 3.0.5.1

Landscaping	CDP Approved Standard	PD Proposed Standard
STREET TREES	Total 14	Total 14
New York St SW Side	5	5
S. Bennett St. SE side	6	6
Parking Lot NE side	0	0
Marsh Property NW Side	3	3
STREET SHRUBS	Total 75	Total 75
New York St SW Side	0	0
S. Bennett St. SE side	13	13
Parking Lot NE side	0	0
Marsh Property NW Side	10	10
VEHICLE AREA TREES		
New York St SW Side	5	5
VEHICLE AREA SHRUBS	63	63
INTERNAL AREA TREES	4	4
INTERNAL AREA SHRUBS	73	73
CLEARED AREA TREES	8	8
CLEARED AREA SHRUBS	43	43
Total Trees Required	31	31
Total Shrubs Required	202	202

Alaina Mallette

From: John Spurrell <john@ascotgrp.com>
Sent: Tuesday, December 10, 2024 4:21 PM
To: Alaina Mallette
Cc: Mason Mattox; BJ Grieve; Colin Webster; Neil Salmon
Subject: RE: PD-07-24 New York Place PDP Completeness Review

Alaina - Here are responses to some of your comments. Please give me a call to discuss.

John Spurrell

Director of Land Acquisition and Development



The Ascot Corporation, LLC

540 SW Broad Street
Southern Pines, NC 28387
(919) 475-4320
john@ascotgrp.com
www.ascotgrp.com

>>>>>>>>

From: Alaina Mallette <amallette@southernpines.net>
Sent: Wednesday, December 4, 2024 5:20:02 PM
To: Colin Webster <colin@ascotgrp.com>
Cc: BJ Grieve <BJGrieve@southernpines.net>; Mason Mattox <MMattox@southernpines.net>
Subject: RE: PD-07-24 New York Place PDP Completeness Review

Hi Colin,

I just left you a voicemail. Mason and I are reviewing your New York Place PDP application and were going to sharing the following information based on our review of your application and our meeting with the Technical Review Committee yesterday. These are things that will be going in the staff report, and if you can provide us information on each item by 5:00 p.m. on Tuesday, December 10, then we'll be able to adjust the Planning Board staff report, accordingly. Feel free to call us back, and we can discuss in more detail.

General

- **Vagueness of proposed land uses.** Not knowing more detail about the proposed land uses makes it difficult to anticipate traffic generation counts and types of on-site operations, such as loading and unloading demands. We need clearer language on what land uses are being proposed. "Commercial" on the Preliminary Development Plan and "Office Space/Retail/Restaurant" are very broad. Is a motorcycle dealer, lumber yard, beer/liquor store

considered in “Retail”? Can the restaurant be a drive through, somehow, or a bar/drinking place? We want to avoid misunderstandings in the future if a tenant occupies a space in the building, but Planning may interpret the tenant’s use to not be under these broad land use categories. We can consider both an update to the narrative that lists the proposed land uses and their LBCS codes, or a condition of approval that lists of a specific list of proposed land uses and their LBCS codes.

I would resist limiting it to certain LBCS codes considering that many low-impact businesses that are compatible with downtown development exist in many code categories. However, there are natural categories that are thought of as consistent with existing uses around the area. These may include:

LBCS code **2100**, which refers to **Retail Sales and Services**. This category includes a wide range of establishments that sell goods and services directly to consumers. Here are some examples of what falls under this code:

- **Retail Stores:** Clothing stores, electronics shops, grocery stores, and specialty shops.
- **Personal Services:** Hair salons, dry cleaners, and repair services.
- **Financial Services:** Banks, credit unions, and insurance agencies.

These types of businesses are commonly found in downtown areas, contributing to the vibrant and dynamic atmosphere.

LBCS code **2200**, which refers to **Restaurant-type activity**

1. This category includes establishments that serve food and beverages to be consumed on or off the premises, such as:

- **Full-service restaurants**
- **Fast food restaurants**
- **Cafes and coffee shops**
- **Bars and pubs**

These establishments are essential components of commercial areas, especially in downtown districts, contributing to the local economy and social life.

- **Built-Upon Area/Impervious Surfaces.** The built-upon area shown on the preliminary plan says 77.9% of total parcel, but that the impervious surface calculation will be reduced to 70% through “permeable pavement and/or other measure...” However, we did not find anything in the narrative that speaks to what features will be permeable. Engineering stated that you will need to have an engineer properly design it and provide details in the site plan during site plan review. Are you comfortable with a condition of approval that states something along the lines of:
 - “The final approved site plan shall include permeable pavement and/or similar permeable technology to bring the built-upon area from 77.9% of total acreage to 70%. Such materials and methodologies for calculating perviousness shall be acceptable to the Town of Southern Pine’s Town Engineer prior to approval of the site plans.”

Fine by that wording, but it was assumed all along that this was the intention. Nothing has changed from the CDP.

- **PDP Labelling/Notes**
 - There is a label that says “57.9% 20,547 Sq. Ft.” but it is not clear what was being measured. Please let us know what this is referring to either by adding additional context to the label, or removing it altogether.
 - The notes on the preliminary plan should be updated for item #3 Zoning, which is PD-02-23 New York Place Conceptual Development Plan. The property is no longer zoned Central Business and it is not within the Historic District.

- Total acreage of the parcel is not stated on the plan, rather square footage of sub-parts. Please provide the total acreage or confirm that it is indeed still +/- 0.8 acres that were considered within PD-02-23, as it appears to be.
- Are all easements being shown on the site?

It is believed that all easements are shown, but will definitely be shown on a preliminary plat submitted as part of site plan approval.

Parking

An inconsistency was noted in the proposed parking space count; CDP Table 4.3.1 lists more than PDP Table 3.0.4.1. Clarify if parking standards are minimums or maximums, presumed maximums. Furthermore, we assumed the wider space along the parking spaces on W. New York Ave. is for ADA compliance/passenger loading and unloading zone, but noticed it was a parking island on the Conceptual Landscaping Plan. Can you confirm what the space, as shown in my November 18th email, is to become? Worth adding a site note or striping to clarify on the plan.

To my knowledge the parking count noted and shown on the CDP has not changed. Perhaps this is a revision error.

There's always been zero disabled spaces indicated, thus far. UDO Section 4.5.3 (C) refer us to the NC State Building Code in respect of Handicapped parking provisions. This is relative to the end uses, types and designs of units, building use classifications and **IF** they are deemed to be accessible Types A or Type B unit designs. The area mentioned as thought to be a wider disabled access margin **IS** a landscaped zone to accord with the provisions of locating street trees, per the UDO.

Traffic

It is not clear whether what is being proposed is within the scope of the original traffic design analysis. If so, then an added section of the narrative or a trip generation letter would suffice in documenting consistency with the original analysis.

Nothing has changed. Not sure why this would be necessary?

Stormwater

A Conceptual Stormwater Plan has been provided that proposes alterations to an existing stormwater pipe, allowing conveyance to a proposed onsite stormwater collection area that is immediately adjacent to land that appears to be a narrow unimproved Town right-of-way running north to S. Page Street. We need you to confirm that the stormwater is still planned to be underground. Furthermore, our Engineering team stated that the size of the stormwater facility on the conceptual drainage plan is likely too small, however, will be hammered out at site plan review.

Water Meters

Each individually plumbed unit will need to be metered, which will be dealt with at site plan review. See code references below my signature.

Dumpster

Dumpster location is not being shown on the plans, and will need to be identified, especially considering the impervious surface being proposed in excess of the maximum permitted.

There is a designated building located in the parking lot which will house the dumpster / compacter with its own entrance (*labelled on the Landscaping plan*) via N Y Ave. Same design as the CDP.

This structure is also illustrated in the 3D renderings.



Loading and Unloading Zones

Where are the loading and unloading areas for retail/commercial development? Is the parking lot (underground and exterior) designed to accommodate tractor trailers or large box trucks?

There are no specific loading and unloading zones. Parking lots are not designed for tractor trailers. Any such large deliveries would have to be done on the street, as is done for most downtown establishments.

We look forward to receiving the additional information to ensure that correct and complete information is be shared and documented in our staff report prior to the preliminary forum in front of the Planning Board on December 19th.

Regards,
Alaina

Alaina Mallette, MSc

Senior Planner

Town of Southern Pines

801 SE Service Road

Southern Pines, NC 28387

Office: (910) 692-4003

<http://www.southernpines.net/>



CODE OF ORDINANCE

- § 50.032 SEPARATE METERS, MASTER METERS AND YARD METERS.
 - (A) Water furnished for a given lot shall be used on the lot only. Each consumer's service must be separately metered at a single delivery and metering point.
 - (B) Master meters may be required to serve apartment buildings, duplex buildings, bulk purchasers, or Town Housing Authority developments.
 - (C) Water used for purposes that do not result in the water entering the Town's sanitary sewer system may be metered by a separate yard meter.
- § 50.007 SEPARATE CONNECTION REQUIRED; EXCEPTIONS.

- (A) Every house, apartment, trailer, building, condominium, or independently owned or plumbed unit requiring a water or sewer connection pursuant to this chapter shall be separately and independently connected, except in those case where laterals have already been laid in asphalt or improved streets from the main, provision being made for the house or building, in which case the connection may be made for the house or building, in which case the connection may be made to an existing lateral. Minimum size for multiple service laterals are 1 inch for water and 6 inches for sewer or larger as may be required by the Town in specific situations. When 2 or more houses or units are connected with the same water lateral, a separate meter shall be provided for each house or unit.

PARKING CDP TABLE

Table 4.3.1

Land Use	Parking Standard	Discussion
Dedicated Residential on-site	65 Proposed	79 required by UDO
Residential/Office/ Commercial/Restaurant (Fax spaces) On-Site	19 Proposed* See Note #2	30 Required by UDO

Note #1: Angled parking allowed on public roads but only proposed for NY Avenue based on Planning Board input.

Note #2: Eight (8) spaces added on New York.

PARKING PDP TABLE

Table 3.0.4.1

Land Use	CDP Approved Parking	PD Proposed Parking
Residential on-site	45 Approved	45 Proposed
Office/ Commercial/Restaurant	14 Approved	14 Proposed
Offsite Parking	8 Approved	8 Proposed

From: Alaina Mallette

Sent: Monday, November 18, 2024 4:31 PM

To: 'Colin Webster' <colin@ascotgrp.com>

Cc: Cindy Williams <CWilliams@southernpines.net>; BJ Grieve <BJGrieve@southernpines.net>; Mason Mattox <MMattox@southernpines.net>

Subject: PD-07-24 New York Place PDP Completeness Review

Good afternoon, Colin,

On November 12, 2024, the Planning Department received your submittal of the New York Place Preliminary Development Plan (PDP) for PARIDs 00031983 (i.e., 235 W. New York Ave.) and 00032263 (i.e., 164 S. Bennett St.) to develop a mixed use building with 45 residential units and 9,107 square feet of commercial (i.e., residential/multifamily/office space/retail/restaurant) space. The application includes off-street and on-street parking and 5,868 square feet of open space. Upon reviewing all the information submitted November 12, 2024, for preliminary development plan review—and in accordance with the Town of Southern Pines UDO §2.6 Completeness Review, §2.18 Planned Development, and page A-11 and A-12 of UDO Appendix A—the application PD-07-24 for New York Place (PDP) is deemed **complete** for review.

Review for completeness of application forms is solely for the purpose of determining whether preliminary information required for submission with the application is complete to allow further processing, and shall not constitute a decision as to whether application complies with the provisions of the UDO. In fact, Planning did notice some issues with the preliminary development plan, which are bulleted below.

- We need clearer language on what land uses are being proposed. “Commercial” on the Preliminary Development Plan and “Office Space/Retail/Restaurant” are very broad. Is a motorcycle dealer, lumber yard, beer/liquor store considered in “Retail”? Can the restaurant be a drive through, somehow, or a bar/drinking place? We want to avoid misunderstandings in the future if a tenant occupies a space in the building, but Planning may interpret the

tenant's use to not be under these broad land use categories. We can consider both an update to the narrative that lists the proposed land uses and their LBCS codes, or a condition of approval that lists of a specific list of proposed land uses and their LBCS codes.

- I assumed the wider space along the parking spaces on W. New York Ave. is for ADA compliance/passenger loading and unloading zone, but noticed it was a parking island on the Conceptual Landscaping Plan. Can you confirm what the space, as marked "H" in the image below, is to become? Worth adding a site note or stripping to clarify on the plan.



- Total acreage of the parcel is not stated on the plan, rather square footage of sub-parts. Please provide the total acreage or confirm that it is indeed still +/- 0.8 acres that were considered within PD-02-23, as it appears to be.
- The built-upon area shown on the preliminary plan says 77.9% of total (assumed) 0.8-acre parcels, but that the impervious surface calculation will be reduced to 70% through "permeable pavement and/or other measure..." However, we did not find anything in the narrative that speaks to what features will be permeable. Are you comfortable with a condition of approval that states something along the lines of:
 - "The final approved site plan shall include permeable pavement and/or similar permeable technology to bring the built-upon area from 77.9% of total acreage to 70%. Such materials and methodologies for calculating perviousness shall be acceptable to the Town of Southern Pine's Town Engineer prior to approval of the site plans."
- There is a label that says "57.9% 20,547 Sq. Ft." but it is not clear what was being measured. Please let us know what this is referring to either by adding additional context to the label, or removing it altogether.
- The notes on the preliminary plan should be updated for item #3 Zoning, which is PD-02-23 New York Place Conceptual Development Plan. The property is no longer zoned Central Business and it is not within the Historic District.
- Are all easements being shown on the site?

Furthermore, it is not clear whether what is being proposed is within the scope of the original traffic design analysis. If so, then a section of the narrative or a trip generation letter would suffice in confirming consistency with the original analysis.

The above issues were identified in an initial, cursory review by Planning staff. We will be bringing this application before the Technical Review Committee on December 3, 2024. So, there may be some additional feedback received during the full review period, which I will communicate to you prior to completing the staff report. In the meantime, if you wish to address or send additional information regarding the issues above, please do send that information as soon as you have it compiled and I will add it to the file.

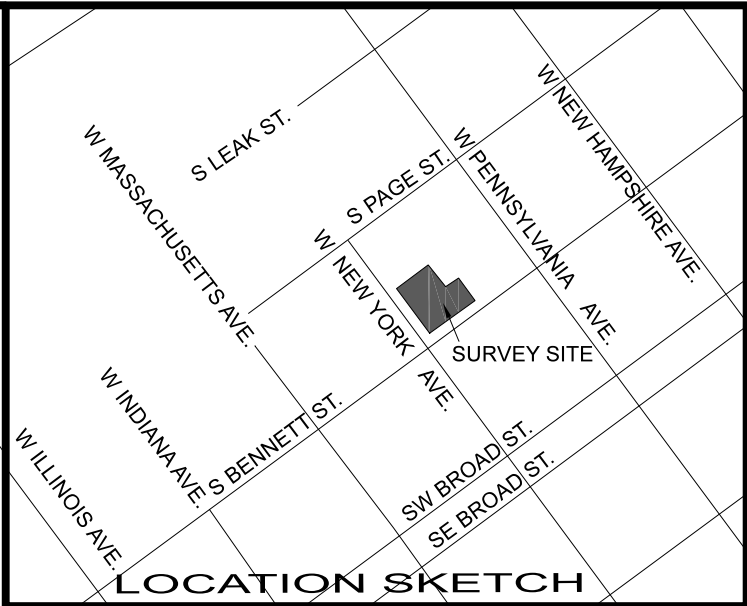
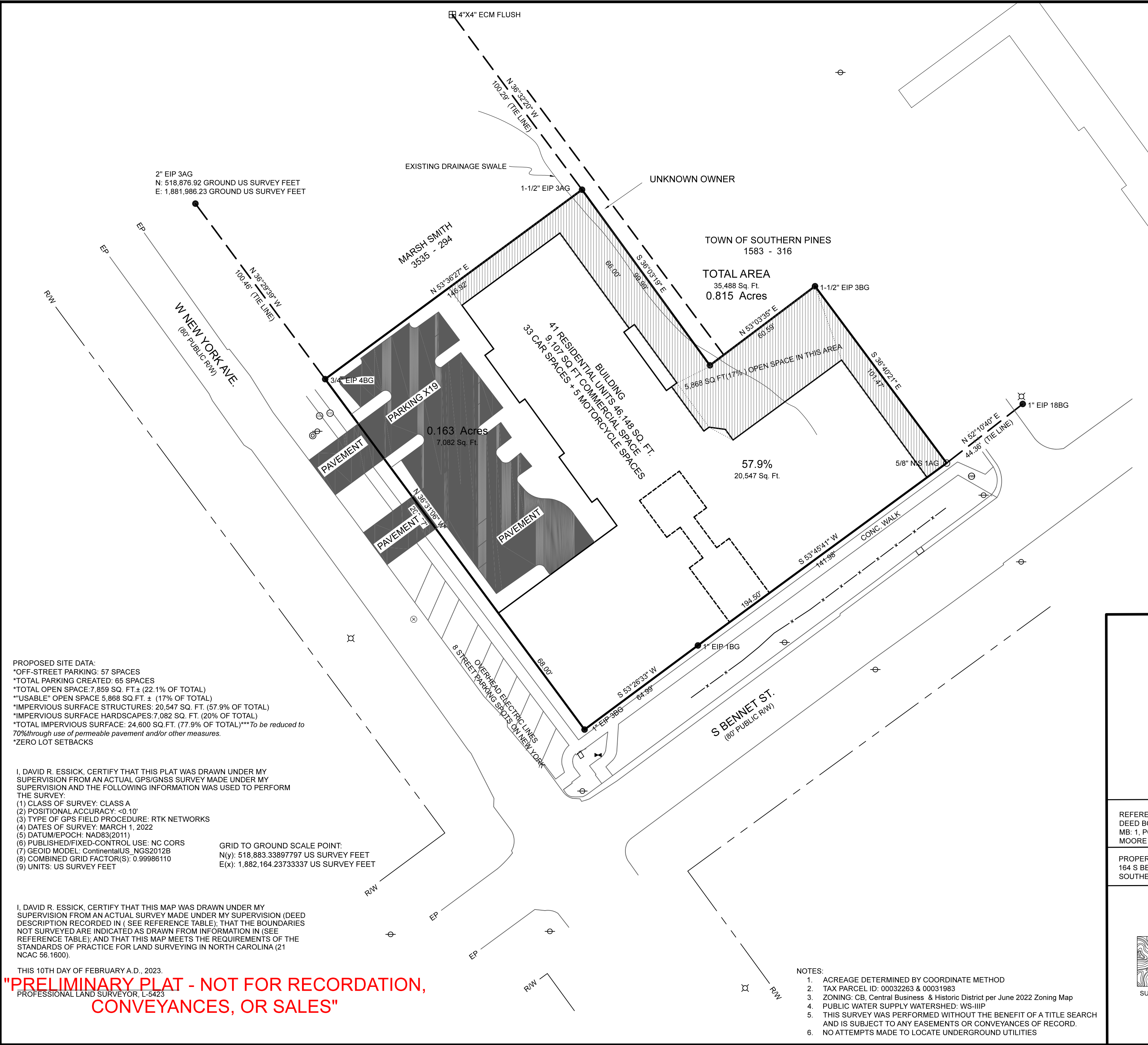
This application is currently scheduled for a preliminary forum before the **Planning Board** at its **regular meeting on December 19, 2024 at 6:00 p.m.** in the **E.S. Douglass Community Center, 1185 W Pennsylvania Ave, Southern Pines, NC 28387.**

Best wishes,
Alaina

Alaina Mallette, MSc
Senior Planner

Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387
Office: (910) 692-4003
<http://www.southernpines.net/>





LEGEND OF SYMBOLS AND ABBREVIATIONS	
SSMH	SANITARY SEWER MANHOLE
WM	WATER METER
SSMH	SANITARY SEWER MANHOLE
CP	COMPUTED POINT
ECM	EXISTING CONCRETE MONUMENT
EA	EXISTING AXLE
EIP	EXISTING IRON PIPE
EIR	EXISTING IRON ROD
NIR	NEW IRON ROD
WV	WATER VALVE
FH	FIRE HYDRANT
MW	MONITORING WELL
UP	UTILITY POLE
LP	LIGHT POLE
TPED	TELEPHONE PEDESTAL
—	SURVEYED PROPERTY BOUNDARY
---	OTHER SURVEYED LINE
---	LINE NOT SURVEYED
---	RIGHT-OF-WAY
---	OVERHEAD ELECTRIC LINES
---	FENCE
---	SANITARY SEWER LINES
---	FENCE
---	OLD LOT LINES

CONCEPTUAL SITE PLAN FOR:
"NEW YORK PLACE"
BY: ASCOT

April 14, 2023

TOWN OF SOUTHERN PINES
MCNEILL TOWNSHIP
MOORE COUNTY, NORTH CAROLINA



REFERENCE TABLE:
DEED BOOK 5249, PAGE 45
MB: 1, PG: 70, SECTION 2
MOORE COUNTY REGISTRY

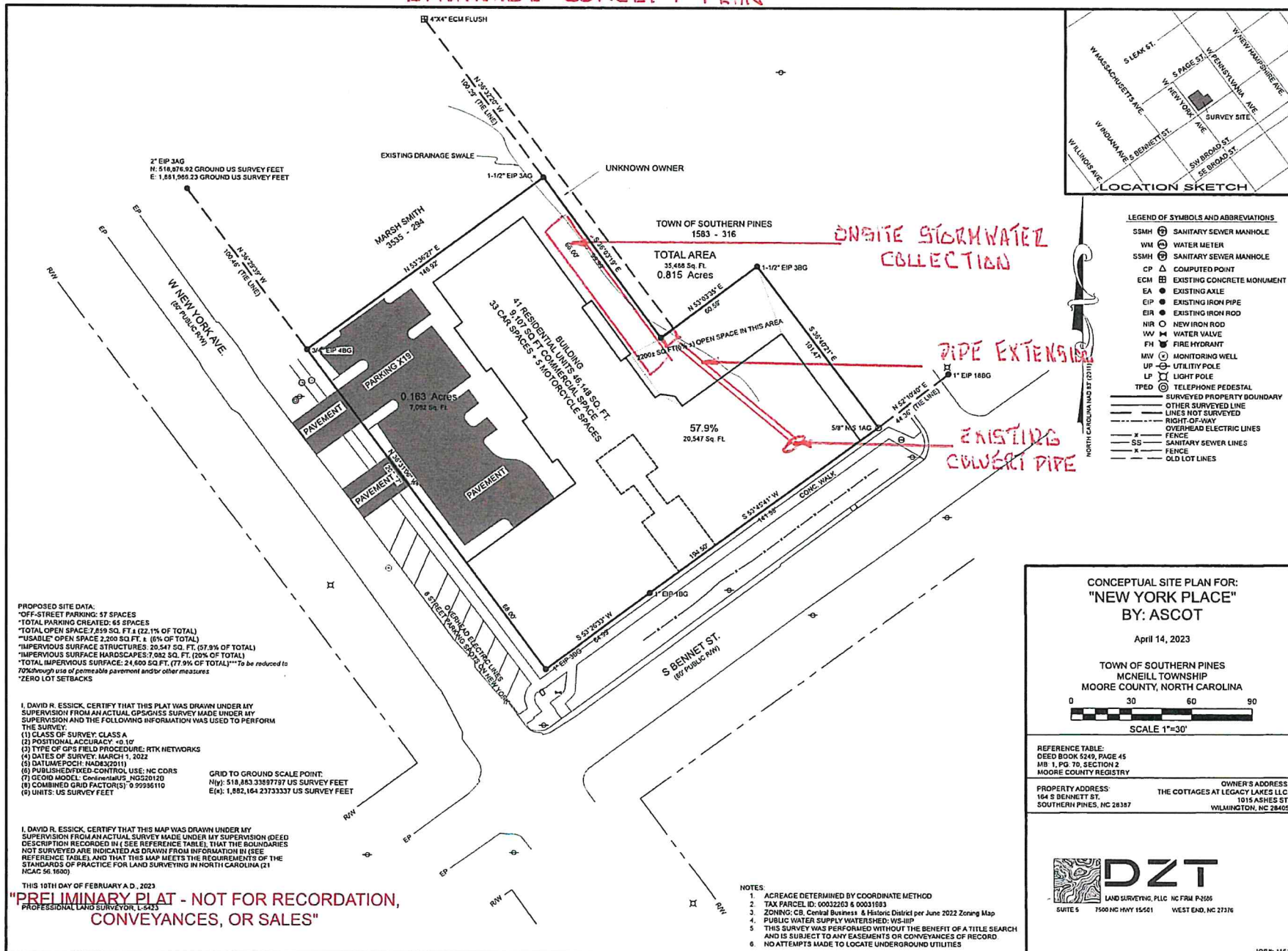
PROPERTY ADDRESS:
164 S BENNETT ST.
SOUTHERN PINES, NC 28387

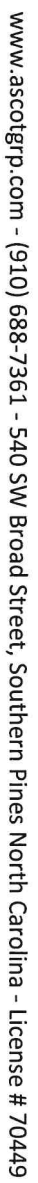
OWNER'S ADDRESS:
THE COTTAGES AT LEGACY LAKES LLC.
1015 ASHES ST.
WILMINGTON, NC 28405



JOB#: 1161

DRAINAGE CONCEPT PLAN





Agenda Item

To: Planning Board

From: James Broadwell, Planner I

Subject: PD-08-24: Planned Development District – A Revised Preliminary Development Plan for Phase 2 of the Ace Hardware Planned Development located SW of the Airport Rd. & NC Hwy 22 Traffic Circle; Petitioner: Southern Pines Ace Land Company, LLC by KoontzJones Design, Agent

Date: December 19, 2024

I. SUMMARY OF APPLICATION REQUEST

Mr. Bob Koontz, on behalf of Southern Pines Ace Land Company, LLC, has submitted a revised Planned Development District – Preliminary Development Plan application pursuant to §2.18.5 of the Town of Southern Pines Unified Development Ordinance (UDO) for Ace Hardware Phase 2, 14,500 square feet of Retail, Restaurant, Professional Office, Personal Services, Gym, Other Office, Medical Office, or Health and Human Services space on 13.4 total acres on parcels identified as PIN 857300963887 (PARID 00033603) and PIN 857300974451 (PARID 00033604). Per the Moore County tax record, the subject property is owned by Southern Pines Ace Land Company, LLC.

II. PROJECT INFORMATION

A. Property Owner & Applicant Information:

1. Property Owners:

Southern Pines Ace Land Company, LLC
215 Capital Drive
Whispering Pines, NC 28327

2. Applicant

Rhetson Companies, Inc.
2075 Juniper Lake Road
West End, NC 27376

3. Authorized Agent:

Koontz Jones Design, PLLC – Attn: Paul Saathoff
140 Applecross Road, Suite B
Pinehurst, NC 28374

B. Property Information:

- 1. Street Address:** No addresses assigned yet.

2. Size of Property

Total Size of Existing Parcels: 13.4 acres (deed acres)
Total Project Acreage: 1.87 acres

3. Existing Infrastructure:

The subject property is accessed by Airport Road to the northwest, NC-22 (Central Drive) to the northeast, and Capital Drive internally. From prior development, sanitary sewer and water lines exist within the parcel to the immediate East (Parcel ID: 20110245) along Capital Drive. Sidewalks internal to the Ace Planned Development provide internal pedestrian access, access to the Tyler's Ridge apartment complex to the southeast, and access to the Southern Pines Greenway System (see Figure 2: Existing Infrastructure below).

4. Property Zoning and Comprehensive Plan Classification:

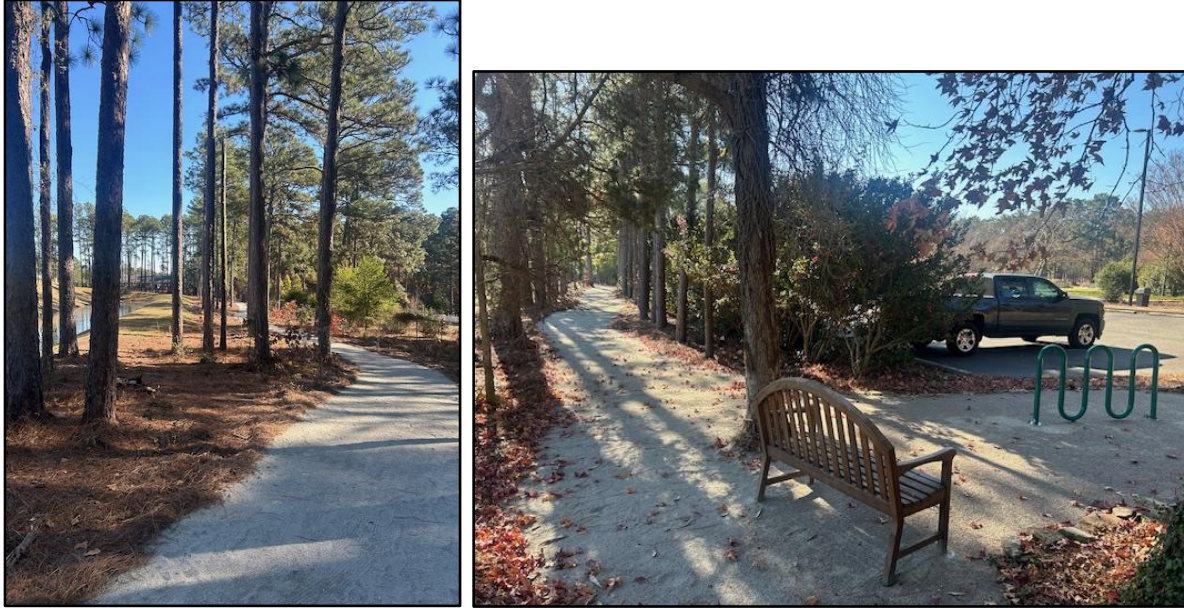
The current zoning of the subject property is PD (Planned Development). Adjoining properties are FRR (Facilities, Resource and Recreation) and the same PD classification as the subject property (see Figure 3: Existing Zoning below). The Southern Pines Ace Hardware Conceptual Design Plan (CDP) was adopted pursuant to Southern Pines' Comprehensive Long-Range Plan (CLRP) in April 2022 as a "Traditional Mixed-Use" development. Under the Town's current 2040 Comprehensive Plan, the area is designed as a "Complete Community." Given the CDP was adopted under the older CLRP's designation, this current Phase 2 Preliminary Development Plan (PDP) is compliant with zoning and Comprehensive Plan classification.

C. Planned Development History & Current Project Description:

1. Planned Development History:

The subject property is part of the 13.4-acre Southern Pines Ace Hardware CDP that was approved by the Town of Southern Pines on April 12, 2022 (PD-01-22). Phase 1, which was reviewed concurrently with the CDP, includes the "Provision Ace Hardware" and its parking lot, the primary stormwater pond, and a Greenway Trail to the building's South and West. The Greenway Trail has begun construction and is expected to be complete by January 2025. The greenway's progress is shown in the two photos under figure 1 below:

Figure 1: Ace Hardware Greenway Trail – Progress as of 12/4/2024



Phase 2 and 3A were previously reviewed and approved as PD-03-24 in July and August of 2024. Phase 3 was split into Phase 3A and 3B. Phase 3A was approved for a retail/office and warehouse use (for ABC Liquor) in a written decision at the August 27, 2024 Town Council Work Session. Phase 3B has yet to undergo review.

The original Phase 2 under PD-03-24, which was approved at the August 27, 2024 Town Council Work Session, was approved for retail, restaurant, and office uses. The approval decision also included two conditions from the Town Council associated with the Phase 2 site:

1. The Phase 2 Usable Open Space shall include four prescribed character defining features.
2. No parking shall be permitted in association with Phase 3B. That phase shall share all of its parking with prior approved phases pursuant to the purpose of a PD – incorporating shared parking.

(See Attachment 1 – PD-03-24 Written Decision – Filed 8/30/24)

The reason the applicant has resubmitted Phase 2 under a new PDP (PD-08-24) is to accommodate additional uses other than office, retail, or restaurant. The applicant has expanded the uses for these buildings in PD-08-24 to include 8 overarching use types: **Retail, Restaurant, Professional Office, Other Office Services, Personal Services, Gym, Medical Office, or Health and Human Services uses.** These use types are authorized as part of the Ace CDP.

Phase 3A from PD-03-24 remains an active development approval. If PD-08-24 is ultimately approved, then it will become the active development approval

for Phase 2 only. For reference, the PD-03-24 site plan that includes the original Phase 2 and 3A can be found below in Figure 4.

2. Current Project Description:

This 1.87-acre portion of property is being proposed for development as:

- **Building A:** One 6,000 SF retail, restaurant, office, personal services, gym, medical office, or health and human services building.
- **Building B:** One 8,500 SF retail, restaurant, office, personal services, gym, medical office, or health and human services building.

The proposed uses are consistent with the “General Sales or Services”, “Food Services,” and land use designation on the approved Southern Pines Ace Hardware CDP. Access to both developments will be from Capital Drive (private road), which meets Airport Road on the West side and NC Hwy 22 via Olive Tree Lane on the East side (see Figure 5 for this PDP’s overall site plan). The buildings will require separate reviews for compliance with the Town’s Architectural Standards for commercial buildings, as well as all Town development standards prior to construction. The applicant has provided a narrative and original Traffic Impact Analysis (from PD-03-24) for initial review, which are attached with this report.

Figure 2: Existing Infrastructure (Subject Property Outlined in **Red**, Phase 2 in **Dashed-Red**)



Figure 3: Existing Zoning (Subject Property Outlined in Red)

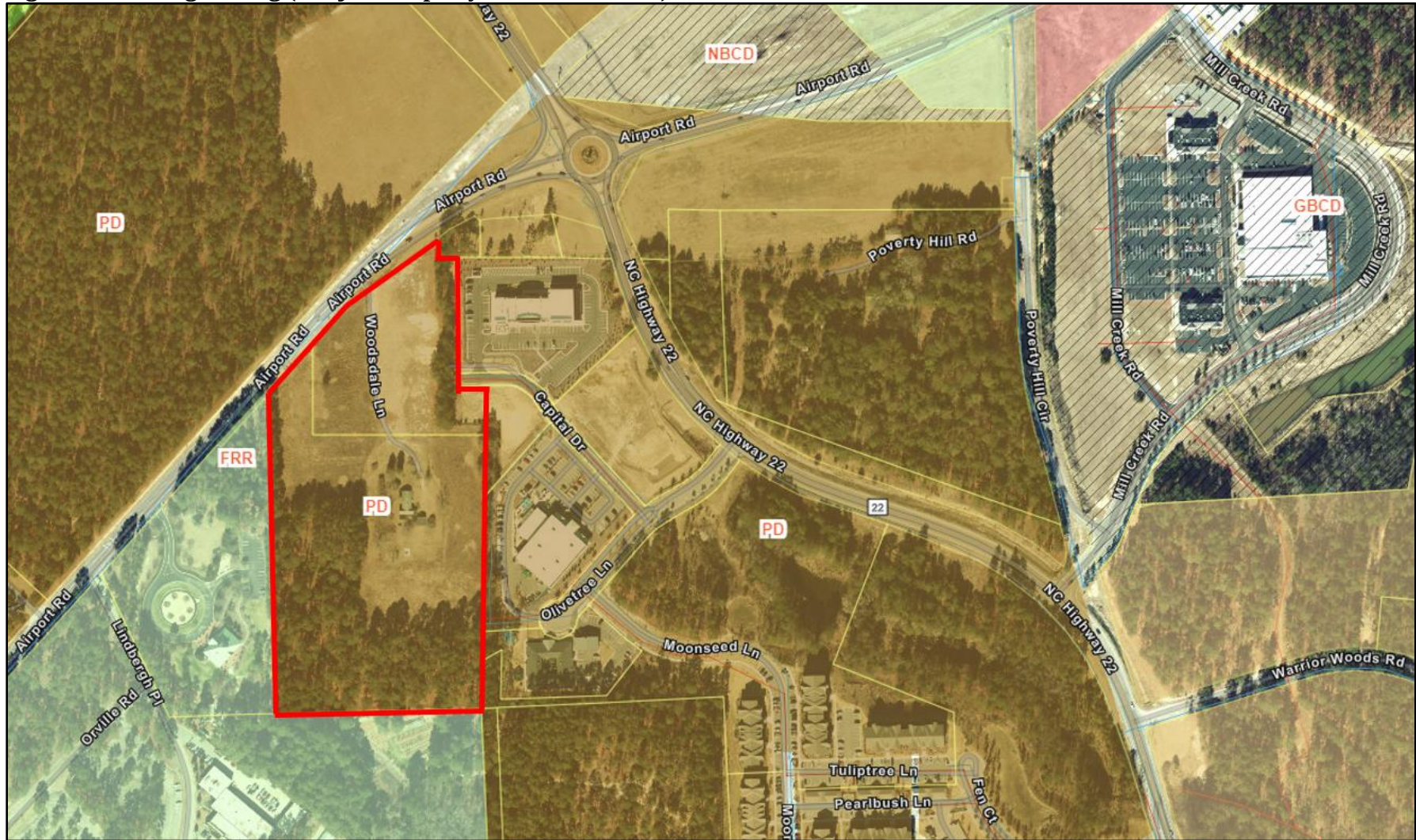


Figure 4: *(Historical Reference)* PD-03-24, Phase 2 and 3A, PDP Site Plan – Approved August 27, 2024

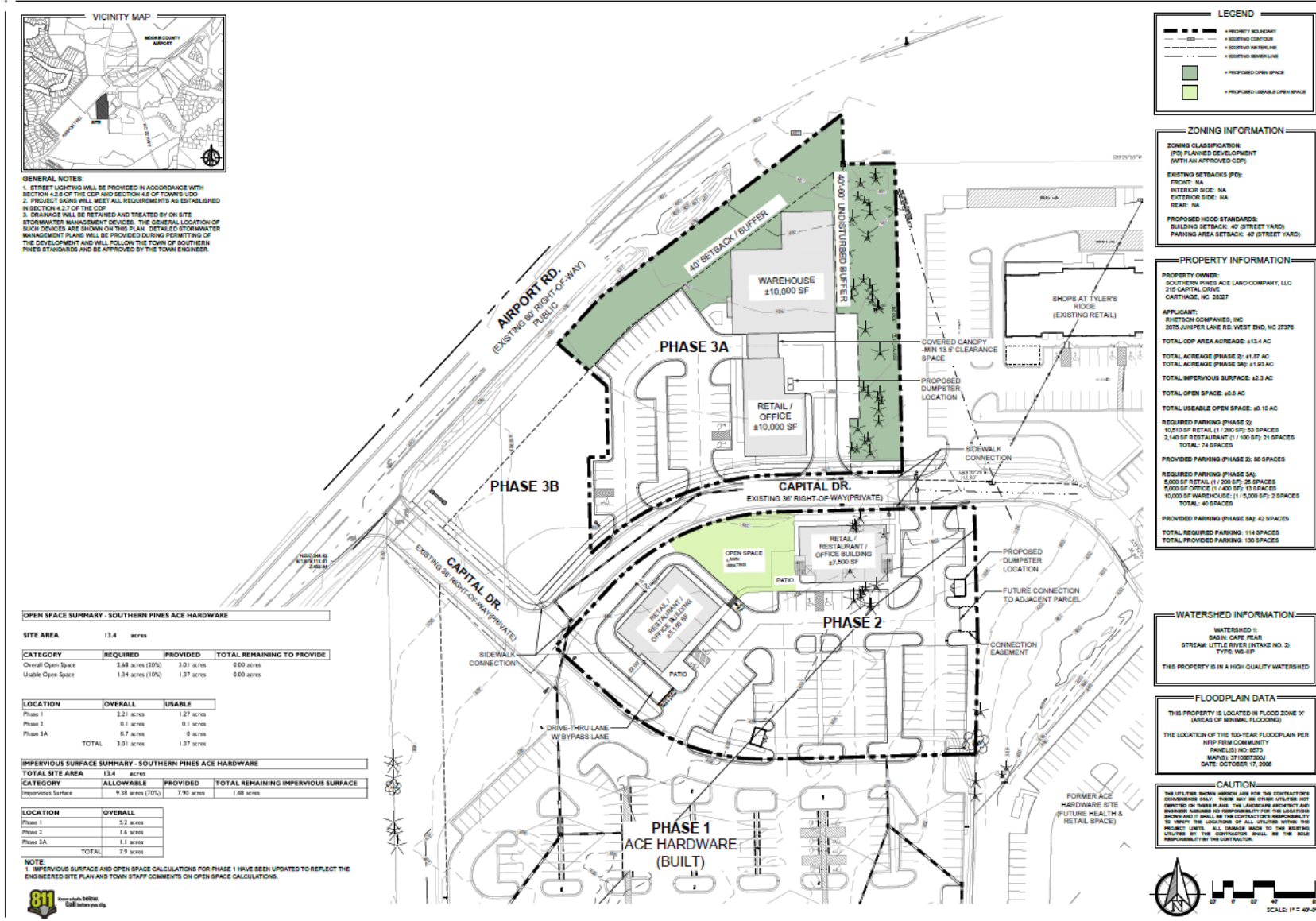
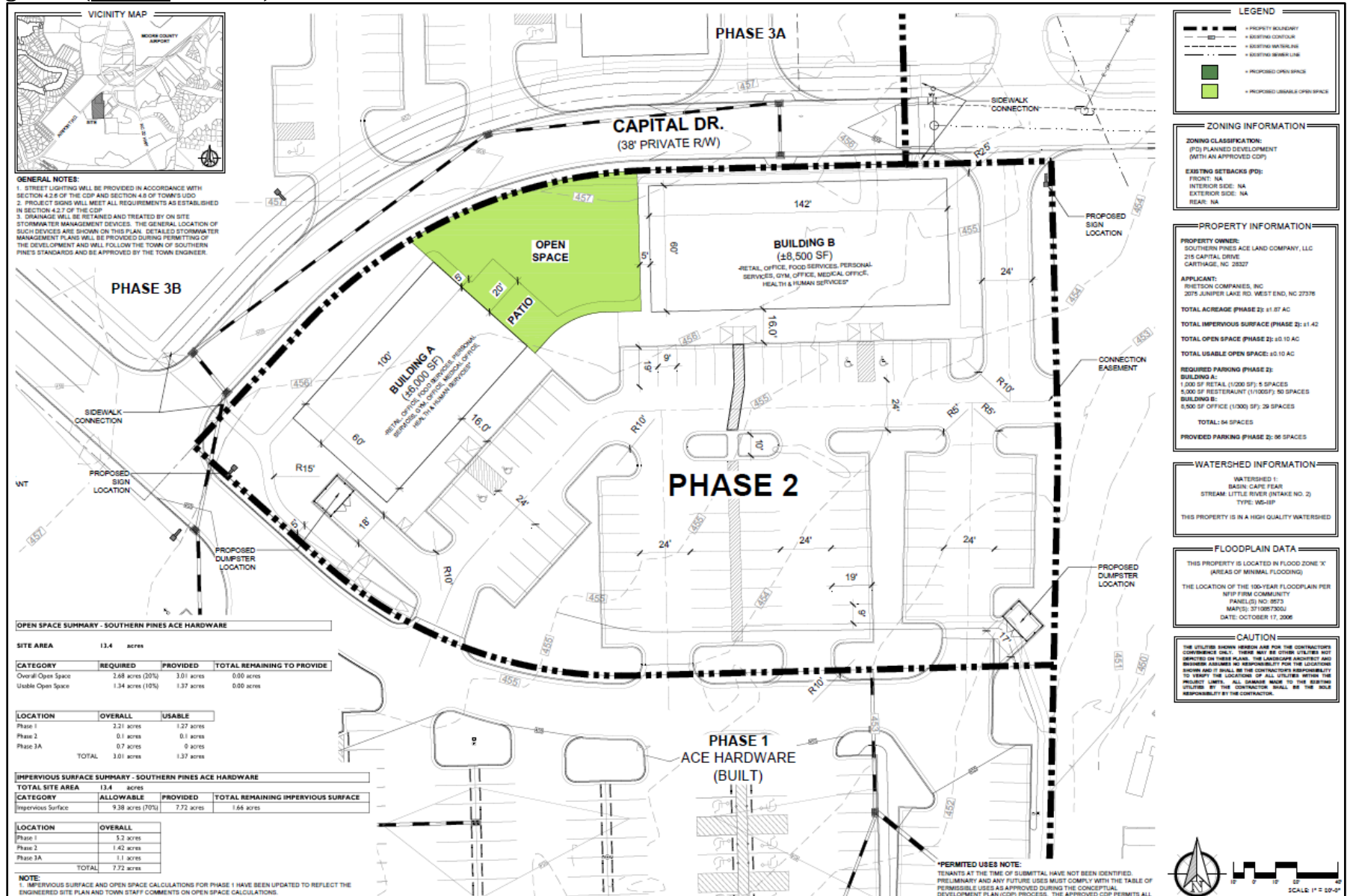


Figure 5: (Current Site Plan) PD-08-24, Phase 2 PDP Site Plan



III. STAFF REVIEW

A. Review Process

The procedures for review and approval of a Planned Development (PD) District are established within Chapter 2 of the Town of Southern Pines Unified Development Ordinance (UDO). Chapter 2 describes a three-step process of Conceptual Development Plan (CDP), Preliminary Development Plan (PDP), and Final Development Plan to complete a PD District. This application is for a PDP.

B. Summary of Procedural Requirements

- PD-03-24 (with associated two conditions) approved: **August 27, 2024**
- PDP application submitted: **November 12, 2024**
- Application deemed incomplete: **November 19, 2024**
- Application deemed complete: **November 20, 2024**
- Notice of December 19, 2024, Planning Board Preliminary Forum:
 - Posted On-site: **December 3, 2024**
 - Mailed: **December 5, 2024**
 - Internet: **December 3, 2024**
 - Publication Dates: Emailed to The Pilot on November 22, 2024, for publication on **December 4** and **December 11, 2024**
- Consultation with the Technical Review Committee: **December 3, 2024**
- Call between staff and the applicant to discuss issues: **December 6, 2024**
- Additional materials submitted: **December 10, 2024**
- Planning Board Regular Meeting/Preliminary Forum: **December 19, 2024**

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 UDO. Staff analysis of how the application addresses these criteria begins on the following page of this document.

Preliminary Development Plan Criteria - UDO §2.18.5(H):

1. *The application demonstrates that it will achieve the purposes of the PD 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.*

D. Town Staff Review and Comments

Planning staff have reviewed the PDP application materials for consistency with each of the four criteria for PDPs. The applicant has also provided a document entitled “Justification” addressing compliance with each of the four criteria for a PDP. A copy of the applicant’s Justification document is attached to this staff report.

i. Achieving the purposes of the Planned Development:

The Southern Pines Ace Hardware CDP is a General Business and General Business / Office Service development that was approved in 2022. The CDP establishes a vision for this property as a “high-quality commercial and office center that will be carefully integrated into the surrounding development areas.” The prior phase 1 of development has resulted in a large retail center in the southern-most portion of the property, and is near completion of the required Phase 1 greenway trail. According to §3.5.14 of the UDO:

*“The **PD** district is designed to accommodate mixed land uses, such as office, residential, service, commercial, public or private recreational Development, and where consistent with the future land use map, light manufacturing and assembly uses that comply with the employment center Development Patterns in section 6.5 of this UDO. This district is intended to allow mixed-use Developments in areas where sufficient public water and sewer service is available (or can be readily extended) and where the street system is adequate (or can be readily improved) to handle the projected traffic volumes generated by the Development. The regulations of this district are intended to:*

- 1. Encourage planned, large-tract Development, including service, office, commercial, residential, public or private recreational Development or light industrial uses;*
- 2. Exclude heavy commercial and heavy industrial land uses;*
- 3. Encourage Development in areas located on major thoroughfares and collector streets;*
- 4. Encourage vehicular access from service drive and other local streets;*
- 5. Provide performance standards to help ensure Compatible land uses;*
- 6. Encourage common or shared parking;*
- 7. Promote creativity and innovation in the design that leads to more appropriate relationships between land uses and features;*
- 8. Facilitate clustering of Development thereby increasing the amount of saved land;*
- 9. Foster Development of a network of open space to serve a variety of recreational and environmental purposes designed and located with respect to existing unique natural features and environmentally sensitive areas;*
- 10. Improve connectivity within and between Developments to promote mobility and enhance walkability;*
- 11. Integrate public spaces and amenities to promote community gatherings and activities;*
- 12. Establish coordinated land plan and consistent treatment of common design elements;*

13. *Provide the flexibility to respond to market conditions over longer projected Development periods due to the scale of such Developments; and*
14. *If residential land uses are proposed, provide a variety of Lot sizes and Dwelling types to expand the spectrum of housing choices for households of various type, size, income and age.”*

Following review of the Southern Pines Ace Hardware CDP and the Planned Development District section in the UDO, planning staff do not find significant inconsistency between the proposed land uses and design in Ace Hardware Phase 2 and the text of either document. If the two conditions of approval from PD-03-24 (prescribe the four usable open space components and prohibit additional parking with phase 3B) are transferred to this PDP exactly, then staff assess the application complies with this criterion. See Attachment 1 – *PD-03-24 Written Decision* – for the precise conditions mentioned.

ii. Consistency with the Conceptual Development Plan (CDP) and the Unified Development Ordinance (UDO):

Planning staff reviewed the initial PDP application materials (including project narrative and justification) and shared concerns with the applicant regarding issues related to compliance with the approved CDP and the UDO on December 6, 2024. Topics with which planning staff initially had concerns included:

- The conditions of approval associated with Phase 2, under PD-03-24 approval, need to transfer as the same conditions under PD-08-24:
 - **Phase 2 Usable Open Space incorporating four prescribed components** (*Reference Attachment 1 – PD-03-24 Written Decision, Condition 1*).
 - **Shared parking must remain an overall priority**, and that Phase 3B (when reviewed for development) shall not include any additional parking in excess of Phase 2 and 3A approved parking (*Reference Attachment 1 – PD-03-24 Written Decision, Condition 2*).

Additionally, should condition #2 not transfer, staff find that the current proposed parking for Phase 2 of 86 spaces exceeds the appropriate level for a PD pursuant to UDO 3.5.14(A)(6), “*encourage common or shared parking.*”

- Inadequate space at the entrance of each building for frontage zone requirements pursuant to UDO §4.10.5. Only 8’ was shown in front of building A, and 8.5’ in front of building B. Total frontage zone width is 16’ with three delineated sections in §4.10.5.

The applicant revised the application materials to include the space required to incorporate frontage zone requirements at site plan review, and resubmitted materials on December 10, 2024. Based on the revised application materials (see attachment 5), planning staff feel that the application contains enough information to be consistent with the CDP and UDO. With the inclusion of the

two conditions of approval from PD-03-24 (open space requirements and no parking associated with Phase 3B), staff assess this project is consistent with Criterion 1.

Additional detailed analysis of compliance with both the CDP and the UDO will involve representatives from all other Community Development departments (such as Streets, Engineering, Fire, etc.) and will occur during site plan and Architectural Compliance Permit review.

iii. Location in an area of town that is appropriate:

The proposed development is Phase 2 of the Southern Pines Ace Hardware CDP. The area being developed, which was approved and given vested rights by the legacy CLRP in 2022, is designated a “Traditional Mixed-Use” development. The proposed land use will provide additional commercial uses and will further expand a growing retail and service industry job base. The proposed development will also be within walking distance of a large apartment complex, Sandhills Community College, a traditional residential community, restaurants, a grocery store, and the Southern Pines Greenway System. Building heights are restricted to 50’.

Planning staff finds that given the prior phase of development, the connectivity to residential and commercial uses, the Comprehensive Plan designation, and the relative convenience of the location near a variety of existing and planned land uses, the proposed development is located in an appropriate area of town.

iv. Efficient extensions and expansions of public facilities, utilities and services:

The property is served by all necessary utilities and transportation infrastructure and the development will bear the cost of all infrastructure modifications and/or extensions. Development of the subject property in the manner proposed is an efficient way to increase jobs and tax base, while providing for a more vibrant community atmosphere. For these reasons, staff assess the application is consistent with this criterion.

v. General Comments:

- **Transfer Two PD-03-24 Conditions of Approval.** To prevent any ambiguity or confusion, staff highly recommend including the exact same conditions of approval, verbatim, associated with Phase 2 under PD-03-24 in this PD-08-24 (as approved with the Town Council’s written decision on August 30, 2024). For reference, those conditions are:

Condition 1 – Phase 2 Usable Open Space Usage.

The Phase 2 Usable Open Space shall include a minimum of these four featured components:

1. A grass lawn, as depicted on the PDP, to be maintained by the Phase 2 lessees, developer, or property owner’s association.

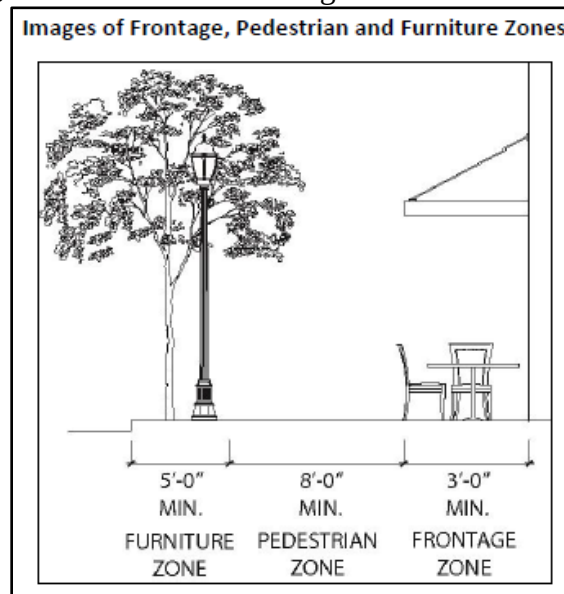
2. Three separate planting beds that encompass at least 30 square feet each OR eight planters at least 3½ feet in diameter, to be maintained by the Phase 2 lessees, developer, or property owner's association.
3. Permanent seating as depicted on the PDP, directly on or adjacent to the lawn. The developer can opt for picnic tables, benches, stand-alone chairs, or a combination of these, all rated for outdoor use.
4. One pergola structure, similar shade structure, or two (2) shade trees, including adjacent landscaping, located within the Open Space. The structure or tree locations will be at the developer's discretion.

Condition 2 – Phase 2 and 3A Parking Volume.

No parking will be permitted with the development of Parcel 3B to encourage shared parking throughout the development. All parking to serve parcel 3B will be shared with all other parcels within the Ace Hardware CDP area. Any uses on parcel 3B will not be required to meet minimum parking standards for their particular use as it is understood that all parking for this parcel will be shared parking.

Please see Attachment 1 (PD-03-24 Written Decision – Filed 8/30/24) for reference. Both of these conditions are consistent with the purpose of a PD, specifically §3.5.14(A)(6) and §3.5.14(A)(9).

- **Frontage Zone Requirements.** Pursuant to Ace CDP §4.2.3 and UDO §4.10.5, a frontage zone of 16 total feet is required in front of buildings A and B. UDO §4.10.5 reflects the frontage zone broken into 3 sections:



Staff recognize that the purpose of a frontage zone is to give development pedestrian-friendly character and to create a sense of place in the Hybrid Zone where one transitions between buildings and the Public Realm. The UDO's frontage zone depiction is prescriptive and may not always be the

best fit for every site. A quintessential frontage zone should incorporate multiple elements like seating, shade trees, shrubs, flower planters or natural plantings, bike racks, and/or creative lighting. For that reason, frontage zone design has been historically modified for what the best fit for a site turns out to be.

Though confirming frontage zone design is typically a site plan review task, planning staff wish to highlight that negotiating and approving more detail in this design – from the applicant and/or the Town Council – during PDP is also appropriate. A mutually agreed upon frontage zone design that best meets the town’s and the applicant’s vision for the site holds potential for a positive outcome in line with the PD purpose and Ace Hardware CDP vision.

- **Traffic Impact Analysis (TIA).** The original TIA for the Ace Planned Development covers the entire Ace Hardware CDP development. In the interest of realigning to new conditions, the applicant updated the original TIA with PD-03-24 in June 2024. The Town Engineer reviewed that update, noting that the traffic was projected as less than expected, and subsequently approved it. The applicant has resubmitted that TIA with this Phase 2 application. See Attachment #6 (Traffic Impact Analysis) for reference.
- **Watershed Exemption Allocation.** This project falls within the Cape Fear, Little River (Intake No. 2) watershed, which is designated as a high-quality watershed. A High-Quality Watershed Protection Exemption allocation has been given to the project, so they can build upon 70% of the site. The project is currently below that percentage threshold.
- **Open Space Usage.** 20% Open Space is called for in the CDP for this project overall. The overall tabulation for 20% will be met with the development of Phase 2.

Regarding the Usable Open Space between the Phase 2 buildings, the applicant’s narrative generally reflects PD-03-24’s condition #2. However, to prevent any ambiguity in transferring the Phase 2 Usable Open Space’s condition of approval from PD-03-24 to PD-08-24, staff (as mentioned above) highly recommend including the same wording, verbatim, as a condition of approval for this PDP.

For reference, below is the purpose statement for open space in a PD:

- UDO 3.5.14(A)(9): *Foster Development of a network of open space to serve a variety of recreational and environmental purposes designed and located with respect to existing unique natural features and environmentally sensitive areas.*
- **Stormwater.** The applicant stated that the stormwater infrastructure is adequate to accommodate Phase 2. The Phase 2 stormwater will flow into

the primary Stormwater Management (SWM) Pond behind the Phase 1 “Provision Ace” building. Stormwater management will ultimately be reviewed and approved by the town’s Engineering Department at the time of site plan review.

- **Pedestrian Connectivity.** Phase 2 provides internal sidewalks and connections to sidewalks along streets. Phase 1 also provides a Greenway connection. Staff feel that the sidewalks and sidewalk connections as depicted on the PDP meet the general purpose of a PD having pedestrian connectivity.

Figure 6: Sidewalk and Street Crossing on Capital Drive
(Private Right-of-Way)



- **Parking.** The applicant has proposed 86 parking spaces for Phase 2. This is in addition to the 176 spaces in Phase 1 and 42 in Phase 3A.

If the parking rates for each of the 8 possible uses listed by the applicant for Phase 2 are averaged (pursuant to UDO Exhibit 4-6), the average rate is 1 space per 218.75 square feet. With 14,500 square feet of total building area, that rate would call for **67 spaces**.

The applicant has requested in their narrative an above-minimum number of parking spaces to provide flexibility for possible restaurant uses. UDO 3.5.14(A)(6) describes a Planned Development (PD) District’s purpose, encouraging common or shared parking. Staff recognizes that commercial lease agreements typically place a high value on committed guaranteed parking for each unit. However, staff feel this development should prioritize shared parking everywhere possible pursuant to the PD’s purpose.

If the second condition of approval from PD-03-24, prohibiting additional parking with Phase 3B (and requiring shared parking with other phases only), is applied to this PDP, then staff feel the 86 spaces the applicant has proposed is reasonable. Staff find this condition is essential in meeting this aspect of the Planned Development purpose. If PD-03-24 condition #2 is not applied to this PD-08-24, then staff assess that only 67 spaces should be approved for Phase 2.

- **Landscape Standards.** Phase 2 and 3A must conform to all applicable standards outlined in UDO Chapter 4, with the exception of the Planned Development specific standards mentioned in UDO section 3.5.14(H).
- **Connection Easement.** To ensure future parking lot connectivity, a connection easement is provided within the Phase 2 parking lot on its east side.
- **Architectural Review.** The buildings associated with this plan required 4-sided architecture that complies with UDO §4.10, per section 4.2.3 of the CDP (due to visibility from multiple angles). An Architectural Compliance Permit will not be granted until the architecture complies with the standards. If all renderings meet Architectural Compliance standards, then the buildings will qualify for administrative review (as they are under 10,000 square feet).

The applicant has submitted architectural renderings for both buildings (see attachment 7 of this staff report). The renderings generally meet architectural requirements, with the exception of the grey Exterior Insulation and Finish System (EIFS) appearing material on the second building. Staff informed the applicant in a call on December 11 that, in order to comply with UDO §4.10 standards, those facades must be of an 80% brick or brick appearing material. For instance, the EIFS material may remain as such – but use a brick veneer for its facade.

As long as the final materials meet §4.10 standards during Architectural Review, staff do not foresee any issues with project architecture.

- **TRC Review.** The Technical Review Committee reviewed the current PDP application at their December 3, 2024 meeting. Topics of discussion included architectural compliance and the original stormwater report. The Engineering Technician noted that the applicant will need to recalculate their impervious surface calculations as they related to stormwater pond capacity. This detail is one that can be ironed out during site plan review, but the applicant should be aware and taking steps to address this concern in the meantime.

A list of planning staff and Technical Review Committee comments were subsequently discussed with the applicant on December 6, 2024. The applicant then addressed these comments by amending and sending a new

PDP site plan on December 10, 2024. Further site plan review and Architectural Compliance Permit approval will be required prior to issuance of any building permits for development, if approved.

E. Cooperating Agency and Technical Review Committee Review and Comments

- A request for comments was emailed to agencies on December 3, 2024. Agencies notified include Town of Southern Pines Streets, Utilities, Fire, Recreation and Parks, and Engineering departments, the Regional Land Use Advisory Commission (RLUAC), U.S. Fish and Wildlife Service (USFWS), Moore County Airport, and the North Carolina Department of Transportation (NCDOT).
- The Regional Land Use Advisory Commission replied on December 11, 2024 indicating they have no comment for this project.

IV. ATTACHMENTS

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

1. PD-03-24 Written Decision (Original Phase 2 Entitlement filed 8/30/24)
2. Preliminary Development Plan Application
3. Preliminary Development Plan Narrative
4. Preliminary Development Plan Justification
5. Preliminary Development Plan Site Plan
6. Traffic Impact Analysis
7. Phase 2 Building Elevations (Renderings)
8. Purchase Agreement
9. Purchase Agreement Amendment

Additional documents related to this application including (but not limited to) 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.

V. 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.

I move to adopt the following for transmission to the Town Council as a result of the December 19, 2024 Preliminary Forum on application PD-08-24, Southern Pines Ace Hardware:

The information presented at the forum indicated that the following issues be considered in applying the criteria for a PDP to application PD-08-24:

- 1.

In addition, the following concerns were raised during the forum, but do not seem to apply in determining whether the PDP criteria are satisfied:

- 1.



CASE NUMBER: PD-03-24

**FINDINGS OF FACT, DECISION OF THE BOARD, AND ORDER IN THE MATTER
OF A PRELIMINARY DEVELOPMENT PLAN APPLICATION FOR THE ACE
HARDWARE PLANNED DEVELOPMENT**

DESCRIPTION OF MATTER

Mr. Bob Koontz, on behalf of Southern Pines Ace Land Company, LLC submitted a Planned Development District – Preliminary Development Plan application pursuant to §2.18.5 of the Town of Southern Pines Unified Development Ordinance for 32,650 square feet of Retail, Restaurant, Office, and Warehouse space on 13.4 total acres on parcels identified as PIN 857300963887 (PARID 00033603) and PIN 857300974451 (PARID 00033604). Phase 1 of this Planned Development District has already been constructed, and this Preliminary Development Plan, being Phase 2 and 3A, will expand on the District’s establishments and uses. Per the Moore County tax record, the subject property is owned by Southern Pines Ace Land Company, LLC.

A public evidentiary hearing regarding a proposed Preliminary Development Plan (PDP) for the Ace Hardware Planned Development was called to order with five members present on August 13, 2024. The oath was administered to all witnesses choosing to speak. Planning staff entered the August 13, 2024 Staff Report as Exhibit A and staff’s August 13, 2024 presentation as Exhibit B. The authorized agent, Bob Koontz of KoontzJones Design, entered their presentation as Exhibit C. Qualified witnesses entered a Traffic Assessment as Exhibit D, an Appraisal Impact Assessment as Exhibit E, and the applicant’s alternative conditions proposal as Exhibit F. After closing the hearing, Town Council discussed and voted on the draft findings of fact. Detailed discussion during the evidentiary hearing can be found in the meeting minutes on record in the Town Clerk’s office and online.

FINDINGS OF FACT

Finding of Fact #1:

The Town Council finds that the application is complete and that the facts submitted are relevant to the case because the request for Preliminary Development Plan approval has met the specified submittal requirements as required in the Town of Southern Pines UDO Appendices, the applicants have submitted adequate evidence addressing criteria for a Preliminary Development Plan, and the evidence submitted was sworn testimony by qualified experts or provided through substantiated documentation.

Finding of Fact #2:

The Town Council finds that the application complies with UDO §2.18.5(H) Criteria for a Preliminary Development Plan (Criteria 1-4), with the imposition of conditions of approval, in that:

1. The application demonstrates that it will achieve the purposes of the PD district and the UDO.

The Ace Hardware CDP is a Traditional Mixed-Use development that was approved in April 2022. The CDP does not set forth a clear “purpose” for the development but does describe allowable land uses as General Business and Office Services. Prior phases of development have resulted in a hardware store and stormwater pond, and a proposed Greenway Trail that is still undergoing development.

The purposes of a PD district are described in UDO §3.5.14. Based on the planning staff’s review of this section and based on testimony and evidence presented at the evidentiary hearing held on August 13, 2024, the Town Council finds two inconsistencies between the proposed site plan in the Ace Hardware Phases 2 and 3A PDP and the overall purpose and intent of a Planned Development:

1. **Usable Open Space Usage.** The Usable Open Space depicted in Phase 2 leaves too much ambiguity and room for a lessee to deviate from what UDO §3.5.14(A)(9) calls for - *Foster Development of a network of open space to serve a variety of recreational and environmental purposes designed and located with respect to existing unique natural features and environmentally sensitive areas*. Lessees could employ large portions of the open space for graveled-over seating or leave it as a largely unutilized space.
2. **Parking Volume.** The Phase 2 and 3A parking spaces amount to 130, with the UDO parking standards calling for a minimum of 114. Phase 1 has 176 spaces, with Phase 3B yet to be determined. This will amount to well over 306 spaces for the Ace development. UDO §3.5.14(A)(6) reads *to encourage common or shared parking*. This development should improve its design by anticipating peak hours of customer traffic per business, sharing parking according to those hours, and ultimately eliminating some spaces.

The Town Council finds that the Preliminary Development Plan achieves the purposes of the Planned Development and UDO by including two conditions of approval related to the development of Usable Open Space and parking volume. This is because the conditions of approval will align the PDP with the purposes of a Planned Development as set forth in UDO §3.5.14(A)(6), §3.5.14(A)(9), and §3.5.14(A)(10).

With the inclusion of these conditions, the Town Council finds the Phase 2 and 3A PDP is consistent with the purpose of the Planned Development District and the UDO.

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

Based on statements made in the revised application materials attached to the Planning Department's staff report dated August 13, 2024, the Town Council finds that with the conditions set forth under Criteria 1 above, the application contains enough information and commitments to be deemed generally consistent with the CDP and UDO. Therefore, the PDP is appropriate given the specific mix of uses and character of the development and achieves an efficient, safe, and economical land use without detracting from the quality of the overall Ace Hardware development or the community as a whole.

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

The proposed development is Phase 2 and 3A of the Ace Hardware CDP. The area being developed is designated "Traditional Mixed-Use" in the Comprehensive Long-Range Plan (CLRP), the predecessor of the 2040 Comprehensive Plan, under which this project is vested. The proposed land use will provide additional retail, restaurant, and office services and will further expand a growing retail and service industry job base within walking distance of a large apartment complex, Sandhills Community College, a traditional residential community, restaurants, a grocery store, and the Southern Pines Greenway System. Building heights are restricted to 50'.

The Town Council finds that given the prior phase of Ace Hardware's development, the CLRP designation, and the relative convenience of the location near a variety of existing and planned land uses, the proposed development is located in an appropriate area of town. Furthermore, the development is located in an area of town with existing access to necessary infrastructure and where the street system is adequate, or will be improved to be adequate, to accommodate the projected traffic volumes.

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

Town Council finds that the proposed PDP is served by all necessary utilities and transportation infrastructure and the development will bear the cost of all infrastructure modifications and/or extensions. Development of the subject property in the manner proposed is an efficient way to increase jobs and tax base, while providing for a more vibrant community atmosphere.

CONCLUSION AND DECISION

Therefore, by a vote of 5-0, the Town Council voted to approve with conditions the Ace Hardware Preliminary Development Plan PD-03-24 with the following additional conditions as drafted by the applicant and submitted as Exhibit F:

Condition 1 – Phase 2 Usable Open Space Usage.

The Phase 2 Usable Open Space shall include a minimum of these four featured components:

1. A grass lawn, as depicted on the PDP, to be maintained by the Phase 2 lessees, developer, or property owner's association.

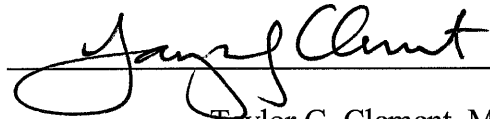
2. Three separate planting beds that encompass at least 30 square feet each OR eight planters at least 3½ feet in diameter, to be maintained by the Phase 2 lessees, developer, or property owner's association.
3. Permanent seating as depicted on the PDP, directly on or adjacent to the lawn. The developer can opt for picnic tables, benches, stand-alone chairs, or a combination of these, all rated for outdoor use.
4. One pergola structure, similar shade structure, or two (2) shade trees, including adjacent landscaping, located within the Open Space. The structure or tree locations will be at the developer's discretion.

Condition 2 – Phase 2 and 3A Parking Volume.

No parking will be permitted with the development of Parcel 3B to encourage shared parking throughout the development. All parking to serve parcel 3B will be shared with all other parcels within the Ace Hardware CDP area. Any uses on parcel 3B will not be required to meet minimum parking standards for their particular use as it is understood that all parking for this parcel will be shared parking.

This is the 27th day of August, 2024.

FOR THE TOWN COUNCIL:


Taylor G. Clement, Mayor



**Planned Development District -
Preliminary Development Plan**

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

Project Information:

Project Name: ACE Hardware PHASE 2

Physical Address: 445 Capital Dr. Carthage, NC 28327

PIN: 857300974451, 857300963887

Parcel ID: 00033604, 00033603

Site Size: ±1.87 AC

Zoning: PD

Applicant:

Name(s): Rhetson Companies, INC.

Email: permits@rhetson.com

Phone: (910) 944-0881

Mailing Address: 2075 Juniper Lake Rd. West End, NC 27376

Authorized Agent, if different from Applicant:

Name(s): Koontz Jones Design

Email: bkoontz@kootnzjones.com

Phone: (910) 684-8487

Mailing Address: 140 Applecross Rd, Pinehurst, NC 28374

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

Name(s): Southern Pines Ace Land Company, LLC.

Email: rsaunders@southernpinesace.com

Phone: (910) 684-8817

Mailing Address: 215 Capital Dr. Carthage, NC 28327

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 SOUTH side of CAPITAL DR., between CAPITAL DR. and ACE HARDWARE (BUILT). The property has a frontage of 454' FEET and a depth of 240' 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: ±14,500 SF of building space to accommodate a mixture of uses.

Date: 11/11/2024


Applicant

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

4.17.24

APPOINTMENT OF AGENT

The undersigned owner(s), Southern pines Ace Land Company, LLC, hereby appoint(s) Rhetson Companies INC. & Koontz Jones Design 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.

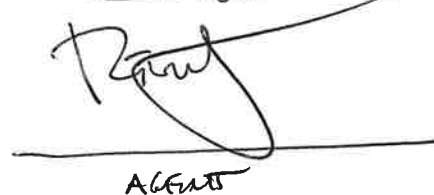
This Appointment of Agent shall remain in effect until final resolution of the attached application.

Signed this 12th day of November, 2024.



Property Owner

Property Owner


Agent
AGENTS

4.17.24

ADJACENT PROPERTY OWNERS

PARID	PIN	DEED_BOOK	DEED_PAGE	NAME	NAME2	ADDRESS	CITY	STATE	ZIP
00033604	857301000000	5782	400	SOUTHERN PINES ACE LAND	COMPANY LLC	215 CAPITAL DR	CARTHAGE	NC	28327
00035777	8583000000000	3918	351	TYLER'S RIDGE PHASE II LLC		211 TRIMBLE PLANT ROAD	SOUTHERN PINES	NC	28387
00035939	857301000000	5746	327	MDC NC3 LP		11995 EL CAMINO REAL	SAN DIEGO	CA	92130
00037050	857301000000	937	262	SANDHILLS COMMUNITY COLLEGE	BOARD OF TRUSTEES	3395 AIRPORT RD	PINEHURST	NC	28374
00991683	857301000000	270	375	MOORE COUNTY COMMUNITY COLLEGE	BOARD OF TRUSTEES	2200 AIRPORT RD	PINEHURST	NC	28374
10001650	857313000000	905	544	SANDHILLS COMMUNITY COLLEGE	BOARD OF TRUSTEES	3395 AIRPORT RD	PINEHURST	NC	28374
20150296	857301000000	6071	458	CAPITAL DRIVE PARTNERS LLC		2075 JUNIPER LAKE ROAD	WEST END	NC	27376
20190158	857301000000	3914	109	TYLER'S RIDGE BUSINESS PARK LLC		211 TRIMBLE PLANT ROAD	SOUTHERN PINES	NC	28387-3445
00032134	857301000000	4047	117	COUNTY OF MOORE		PO BOX 905	CARTHAGE	NC	28327
00033603	857301000000	5749	375	SOUTHERN PINES ACE LAND	COMPANY LLC	215 CAPITAL DR	CARTHAGE	NC	28327
20110245	857301000000	3914	109	TYLER'S RIDGE BUSINESS PARK LLC		211 TRIMBLE PLANT ROAD	SOUTHERN PINES	NC	28387
20190157	857301000000	5159	43	THE SHOPS AT TYLERS RIDGE LLC		35 MARTIN DR	CARTHAGE	NC	28327
20190158	857301000000	3914	109	TYLER'S RIDGE BUSINESS PARK LLC		211 TRIMBLE PLANT ROAD	SOUTHERN PINES	NC	28387-3445

SOUTHERN PINES ACE HARDWARE – PHASE 2

PRELIMINARY DEVELOPMENT PLAN (PDP) NARRATIVE

The development of the property described as Southern Pines Ace Hardware – Phase 2 in the submitted exhibits will be completed as a mixed use development which could include a mixture of uses including, but not limited to, restaurant, retail, office, or medical uses. Future uses must be compliant with the CDP and the approved list of uses. Uses not included in this document but approved in the CDP may be permitted. Overall, the project will cover a total of approximately 1.87 acres. All information, descriptions and calculations included in this application are related to the development of this parcel of property.

Phase 2 of the project will include the development of ±14,500 SF of mixed-use space with the construction of two buildings and adequate parking facilities. Phase 2 will be accessed from Capital Drive and from the Ace Hardware parking area that was built with Phase 1 of the project. The overall character of the development will provide a high-quality commercial center that will be carefully integrated into the surrounding area and compatible with the surrounding development areas. Architectural themes, landscaping and design elements common to Southern Pines will be utilized as described in the Town of Southern Pines UDO or in the CDP document.

The project falls within the Cape Fear, Little River (Intake No. 2) watershed which is designated as a high-quality watershed. A watershed protection permit was approved by the Town of Southern Pines during Phase 1 of the development. The project also falls within foraging partitions of one active and one abandoned red-cockaded woodpecker (RCW) cluster. Dr. J. H. Carter III and Associates have conducted a foraging habitat analysis for the property which has been reviewed by the US Fish and Wildlife Service (USFW). The review letter from USFW was submitted during previous phases of the project. The phase 2 area has been generally cleared of existing vegetation prior to the current development. There are no floodplains or wetlands located on the property. The project will fully comply with all general notes and standards included in the approved Southern Pines Ace Hardware Conceptual Development Plan (CDP).

Design standards for individual elements of the development are described below.

- **Pedestrian Connectivity**
 - Pedestrian access will be provided throughout the site. Parking areas throughout the site will connect to sidewalks leading to the building entrances and provide accessible access as required by state and federal standards. Sidewalk connections will be provided connecting to the sidewalk on the north side of Capital drive which will provide pedestrian connections to phase 3 of the development as well as previously developed neighboring retail areas.
- **Parking**
 - Parking areas will be designed and landscaped per Town of Southern Pines Unified Development Ordinance standards in Section 4.5.



- Required and provided parking tabulations have been included on Sheet L-1.1 with this application. At the time of this application submittal, uses within the proposed buildings located in Phase 2 have yet to be identified. Excess parking over the minimum parking space requirement is intended to provide flexibility for future uses. For example, if additional restaurant space is leased within the proposed buildings, the minimum parking requirement calculations would increase and could potentially provide a number of spaces below the minimum required number of spaces. Parking is intended to be shared within the overall development including possible future phases.
- **Streets and Access**
 - Main access to the property as described in this PDP will be provided from Capital Drive. Access to the property from NC Highway 22 and Airport Rd is also available via Olivetree Lane and the Capital Drive.
 - A Traffic Impact Analysis (TIA) has been submitted during previous phases of the development.
- **Landscaping**
 - Landscaping will be provided as required by the Town of Southern Pines UDO in Section 4.3. This will include tree islands, parking lot landscaping and streetscape plantings.
 - Buffer plantings will follow the guidelines and standards as approved in the CDP.
- **Lighting**
 - All lighting on the property will follow Section 4.8 of the CDP and Section 4.2.6 of the CDP. Lighting levels along streets and in parking areas will be provided to meet the UDO standards for safety and match the existing community. Proposed lighting fixtures will match previous phases of development. All light will be projected downward to limit any light spilling onto adjacent properties.
- **Open Space**
 - Required open space for the overall Southern Pines Ace Hardware development per section 4.2.2 of the CDP is 20%. A minimum of 10% of the provided open space shall be usable open space as described in section 3.5.14 of the UDO. While no open space is required for each individual phase of the development, the overall development must meet the open space requirements.
 - The area identified as useable open space between the proposed buildings in Phase 2 is intended to provide a mixture of lawn and outdoor seating space. This area will include at minimum the following:
 - A grass lawn, as depicted on the PDP, to be maintained by the Phase 2 lessees, developer, or property owner's association
 - Three separate planting beds that encompass at least 30 square feet each OR eight planters at least 3.5 feet in diameter, to be maintained by the Phase 2 lessees, developer, or property owner's association.
 - Permanent seating as depicted on the PDP, directly on or adjacent to the lawn. The developer can opt for picnic tables, benches, stand-alone chairs, or a combination of these, all rated for outdoor use
 - One pergola structure, similar shade structure, or two (2) shade trees, including adjacent landscaping, located within the open space. The structure or tree locations will be at the developers discretion.
 - An updated 'running' tabulation for the overall Southern Pines Ace Hardware property has been provided on Sheet L.1.1 of the submission set.

- **Stormwater**

- The property is located within a state regulated and protected drainage basin. As such stormwater design will fully comply with all aspects of applicable local and state standards and regulations for storm water management and watershed protection, including specific requirements for erosion and sedimentation control. Best management practices at the time of development for each phase shall be utilized in accordance with NCDEQ guidance. Stormwater must be maintained on the overall property to meet the Town of Southern Pines, NCDEQ, and any other stormwater regulations.
- It was intended that the stormwater management device located in Phase 1 would be a regional facility that would accomodate the runoff from all phases of the overall Southern Pines Ace Hardware property shown in the CDP.
- Detailed plans and calculations will be provided during the detailed site engineering process.

- **Utility Service**

- Adequate water and sewer service can be provided by the Town of Southern Pines to service this development. Utility extensions were installed with the completion of Capital Drive that was part of Phase 1 of the project. All utilities on the site will be located underground and installed per the policies of the local utility providers and the Town of Southern Pines.

- **Architectural Character**

- The proposed buildings will be required to meet the standards of the commercial building design guidelines described in Section 4.10 of the Town of Southern Pines UDO. Furthermore, all buildings are required to have four (4) sided architecture as described in the CDP

- **Signage**

- All signage will be designed in conformance with the requirements of the Town of Southern Pines UDO in Section 4.6. Signs for “Shopping Centers” will follow Section 4.6.13 and maintain a Unified Sign Plan.
- Sign locations as shown on Sheet L-1.1 of the submission set are permitted in the CDP. Signage, internal to the development, may be provided throughout the property for purposes of identification and wayfinding.
- Overall Shopping Center signs, along Airport Road, may include signage for businesses from the adjoining retail buildings and shopping center area for parcels with access along Capital Drive and Olivetree Lane.

The descriptions and conditions described above will apply to the development as indicated in the Preliminary Development Plan document. The proposed plan utilizes the CDP's development standards and implements the second and third phases of development within the Southern Pines Ace Hardware development. These phases of development meet the standards of the Southern Pines Ace Hardware CDP. Should the CDP be amended, any standards indicated on the attached plans may be amended to accommodate the revised standard, without requiring amendment to these PDP documents.

In summary, the proposed PD – PDP and surrounding development is consistent with the Town's Comprehensive Long-Range Plan (CLRP) and promotes its objectives. The CLRP designates the property as Traditional Mixed-Use. This PDP contains retail buildings within the overall and adjacent mixed-use development, and will be similar in scale and size to these developments. The approved CDP describes a master planned mixed-use development. The proposed PDP complies with the standards as established in the CDP and Southern Pines UDO.

EXHIBIT A

Southern Pines Ace Hardware – Phase 2 Preliminary Development Plan Justification

Below are listed the four (4) criteria required to approve a Preliminary Development Plan (PDP) application as described in Section 2.18.5(H) of the Town of Southern Pines Unified Development Ordinance (UDO). Following the individual criteria is an explanation, indicated in red, describing how the project demonstrates compliance with each of these criteria.

A Preliminary Development Plan is permitted if the Applicant demonstrates that:

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

The PDP conforms to all standards set forth in the Conceptual Development Plan (CDP) and the standards set forth in the UDO. The plans included with the CDP demonstrates the overall compliance with the UDO and this PDP follows the standards of the CDP. The PD District, Comprehensive Long-Range Plan (CLRP) and the CDP all encourage a traditional mixed-use development that reflects the standards of the existing area that surrounds the phase of development described in the PDP. The PDP submitted meets these goals.

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

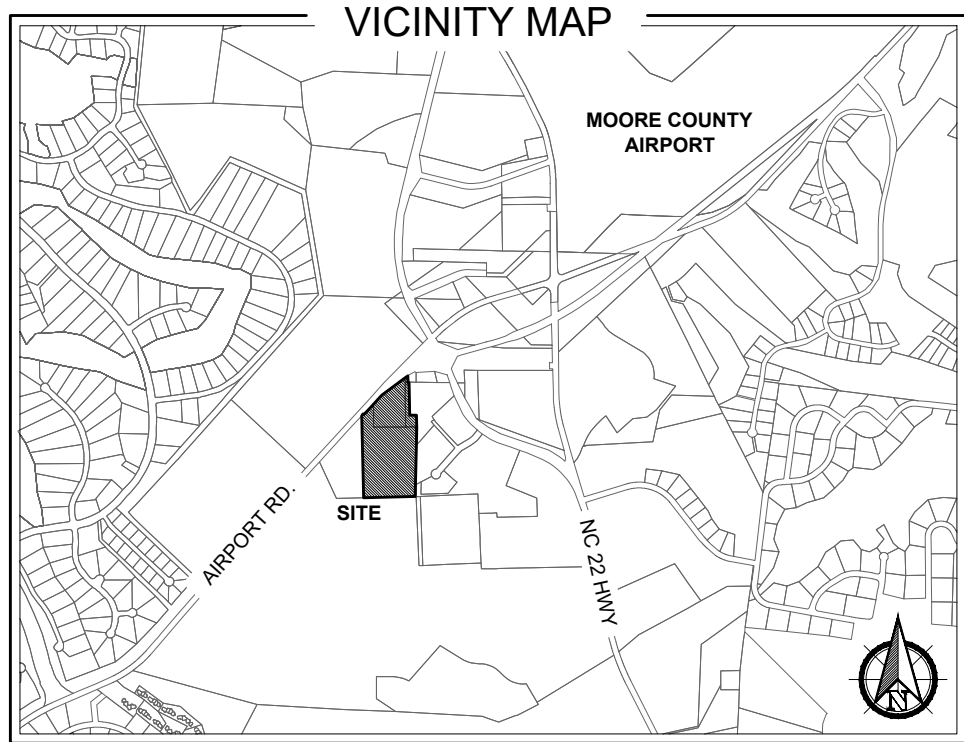
The PDP is consistent with and meets all standards and requirements provided in the CDP plans and conforms to the standards of the UDO. The mixed-use development proposed with Phase 2 is consistent with the Conceptual Land Use Plan shown on Sheet L 1.1 of the CDP master plan. Any future uses must comply with the list of uses that were approved with the CDP.

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

The PDP is consistent with the CDP and the surrounding community which includes a mixed-use building (office, medical office, and restaurant), hardware supply store, multi-family apartment, and child day care center. The CLRP, which takes into account surrounding land uses, designates this property as traditional mixed-use. The development of the commercial, retail, and office space included in the PDP is consistent with the surrounding land uses and appropriate for this area. With the development standards set forth in the UDO and CDP, the PDP will be compatible with the surrounding neighborhoods and land uses.

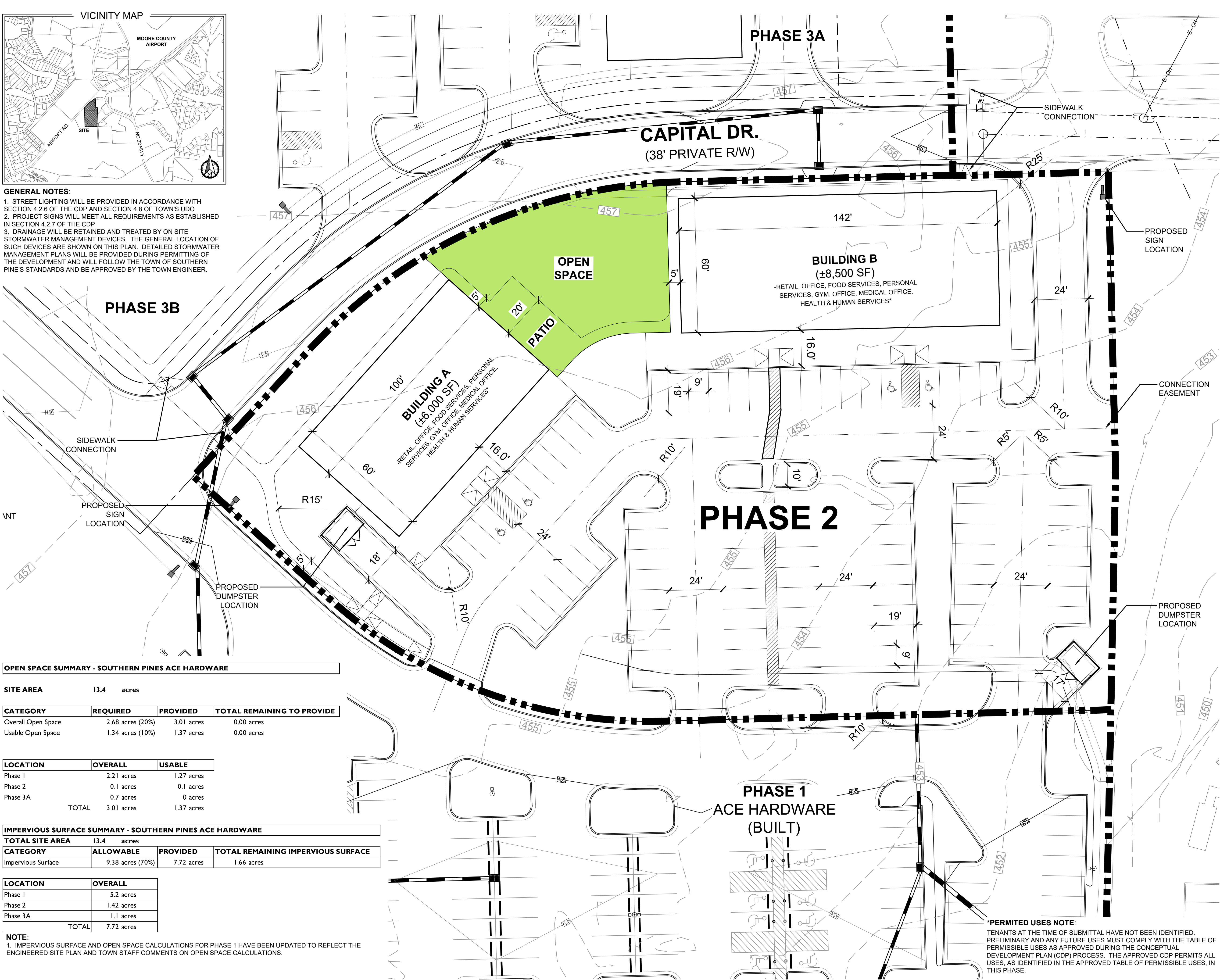
(4) The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services

Water and sewer utilities are readily available for the project. Water and sewer utilities are located in Captial Drive, Olivetree Lane, and Airport Road. Capital Drive was extended to Airport Rd during Phase 1 of the project and included utility extensions that will serve Phase 2. Stormwater management devices will be provided as necessary and required to control stormwater runoff for the property. Stormwater will be piped to the stormwater management device that was built with Phase 1. Detailed plans and calculations will be provided during the detailed site engineering process.



- GENERAL NOTES:**
1. STREET LIGHTING WILL BE PROVIDED IN ACCORDANCE WITH SECTION 4.2.6 OF THE CDP AND SECTION 4.8 OF TOWN'S UDO
 2. PROJECT SIGNS WILL MEET ALL REQUIREMENTS AS ESTABLISHED IN SECTION 4.2.7 OF THE CDP
 3. DRAINAGE WILL BE RETAINED AND TREATED BY ON SITE STORMWATER MANAGEMENT DEVICES. THE GENERAL LOCATION OF SUCH DEVICES ARE SHOWN ON THIS PLAN. DETAILED STORMWATER MANAGEMENT PLANS WILL BE PROVIDED DURING PERMITTING OF THE DEVELOPMENT AND WILL FOLLOW THE TOWN OF SOUTHERN PINE'S STANDARDS AND BE APPROVED BY THE TOWN ENGINEER.

PHASE 3B



OPEN SPACE SUMMARY - SOUTHERN PINES ACE HARDWARE

SITE AREA 13.4 acres

CATEGORY	REQUIRED	PROVIDED	TOTAL REMAINING TO PROVIDE
Overall Open Space	2.68 acres (20%)	3.01 acres	0.00 acres
Usable Open Space	1.34 acres (10%)	1.37 acres	0.00 acres

LOCATION	OVERALL	USABLE
Phase 1	2.21 acres	1.27 acres
Phase 2	0.1 acres	0.1 acres
Phase 3A	0.7 acres	0 acres
TOTAL	3.01 acres	1.37 acres

IMPERVIOUS SURFACE SUMMARY - SOUTHERN PINES ACE HARDWARE

TOTAL SITE AREA		13.4 acres	
CATEGORY	ALLOWABLE	PROVIDED	TOTAL REMAINING IMPERVIOUS SURFACE
Impervious Surface	9.38 acres (70%)	7.72 acres	1.66 acres

LOCATION	OVERALL
Phase 1	5.2 acres
Phase 2	1.42 acres
Phase 3A	1.1 acres
TOTAL	7.72 acres

NOTE:

1. IMPERVIOUS SURFACE AND OPEN SPACE CALCULATIONS FOR PHASE 1 HAVE BEEN UPDATED TO REFLECT THE ENGINEERED SITE PLAN AND TOWN STAFF COMMENTS ON OPEN SPACE CALCULATIONS.

LEGEND

- — — — — = PROPERTY BOUNDARY
- - - - - = EXISTING CONTOUR
- - - - - = EXISTING WATERLINE
- - - - - = EXISTING SEWER LINE
- = PROPOSED OPEN SPACE
- = PROPOSED USEABLE OPEN SPACE

ZONING INFORMATION

ZONING CLASSIFICATION:
(PD) PLANNED DEVELOPMENT
(WITH AN APPROVED CDP)

EXISTING SETBACKS (PD):
FRONT: NA
INTERIOR SIDE: NA
EXTERIOR SIDE: NA
REAR: NA

PROPERTY INFORMATION

PROPERTY OWNER:
SOUTHERN PINES ACE LAND COMPANY, LLC
215 CAPITAL DRIVE
CARTHAGE, NC 28327

APPLICANT:
RHETSON COMPANIES, INC
2075 JUNIPER LAKE RD. WEST END, NC 27376

TOTAL ACREAGE (PHASE 2): ±1.87 AC

TOTAL IMPERVIOUS SURFACE (PHASE 2): ±1.42

TOTAL OPEN SPACE (PHASE 2): ±0.10 AC

TOTAL USABLE OPEN SPACE: ±0.10 AC

REQUIRED PARKING (PHASE 2):
BUILDING A:
1,000 SF RETAIL (1/200 SF); 5 SPACES
5,000 SF RESTAURANT (1/100SF); 50 SPACES
BUILDING B:
8,500 SF OFFICE (1/300) SF; 29 SPACES

TOTAL: 84 SPACES

PROVIDED PARKING (PHASE 2): 86 SPACES

WATERSHED INFORMATION

WATERSHED 1:
BASIN: CAPE FEAR
STREAM: LITTLE RIVER (INTAKE NO. 2)
TYPE: WS-IIIP

THIS PROPERTY IS IN A HIGH QUALITY WATERSHED

FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X'
(AREAS OF MINIMAL FLOODING)

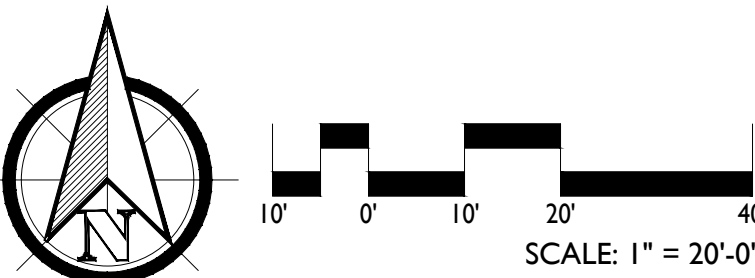
THE LOCATION OF THE 100-YEAR FLOODPLAIN PER
NFIP FIRM COMMUNITY
PANEL(S) NO: 8573
MAP(S): 3710857300J
DATE: OCTOBER 17, 2006

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 ASSUMES 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 BY THE CONTRACTOR.

***PERMITTED USES NOTE:**

TENANTS AT THE TIME OF SUBMITTAL HAVE NOT BEEN IDENTIFIED. PRELIMINARY AND ANY FUTURE USES MUST COMPLY WITH THE TABLE OF PERMISSIBLE USES AS APPROVED DURING THE CONCEPTUAL DEVELOPMENT PLAN (CDP) PROCESS. THE APPROVED CDP PERMITS ALL USES, AS IDENTIFIED IN THE APPROVED TABLE OF PERMISSIBLE USES, IN THIS PHASE.



REVISIONS:

June 21, 2024

DRMP Job #:24507

James Michel, PE, MBA
Town Engineer/Asst. Public Works Director
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387
E: JMichel@southernpines.net

Subject: Traffic Assessment for Phases 2 and 3
Ace Hardware Development – Southern Pines

Dear Mr. Michel:

This letter provides a Traffic Assessment for Phase 2 and Phase 3 of the Ace Hardware Development located at Airport Road and NC 22 (Central Drive) in Southern Pines. Phase 2 and Phase 3 are part of the overall Ace Hardware development that has an approved Concept Development Plan (CDP). Phase 2 is the parcel immediately north of the existing Ace Hardware store and is proposed to include two buildings with a total of approximately 12,650 s.f. of space. Phase 3 is the parcel adjacent to Airport Road and is proposed to include an ABC store along with a Food Truck area. The ABC store (Phase 3A) includes 10,000 s.f. of retail/office space and 10,000 s.f. of warehouse space.

A Traffic Impact Analysis (TIA) for the overall development (named Southern Pines Retail) was prepared in February 2022. The TIA assumed the overall development would include a 53,271 s.f. Ace Hardware store, 45,300 s.f. of retail space, and a 4,800 s.f. fast-food restaurant with drive-through. This TIA was reviewed by NCDOT and required transportation improvements were identified for the overall development in the April 11, 2022 letter (see attached). These improvements are required based on the TIA that was prepared for the overall development.

A TIA Addendum was prepared in June 2022 as part of the PDP process for the Ace Hardware store (phase 1). The TIA Addendum was prepared to better identify and isolate traffic impacts associated with the Ace Hardware store to determine what improvements should be required of this phase of development. The TIA Addendum included less density for other parcels within this development to help identify impacts specifically of the Ace Hardware store, while still accounting for future development of other parcels. Since the TIA Addendum was completed specifically for the Ace

Hardware store approval (phase 1), the overall TIA for the development is the approved traffic study for the Concept Development Plan (CDP) with improvements required of the overall development.

Site Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the current development plan were estimated using methodology contained within the ITE *Trip Generation Manual*, 11th Edition. Table 1 provides a summary of the trip generation for the current development plan. The trip generation includes the already approved and constructed Ace Hardware store since it is part of the overall development and is needed to accurately calculate internal capture trips. Phase 1 is shown in blue, phase 2 uses in orange, and phase 3 uses in green in Table 1.

Table 1: Trip Generation Summary – Overall Ace Hardware Development

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Hardware Store (816)	58,182 s.f.	470	42	39	31	33
Liquor Store (899)	5,000 s.f.	726	13	13	47	47
General Office (710)	5,000 s.f.	86	11	2	2	12
Warehousing (150)	10,000 s.f.	54	19	6	8	20
Retail (<40 KSF) (822)	10,510 s.f.	674	18	12	40	41
Fast-Food Restaurant w/ Drive-Thru (934)	2,140 s.f.	1,000	49	46	37	34
Total Trips		3,010	152	118	165	187
<i>Internal Capture (12% AM & 16% PM)</i>			-19	-15	-26	-30
Total External Trips			133	103	139	157
<i>Pass-By Trips: Hardware Store (26% PM)</i>			--	--	-7	-7
<i>Pass-By Trips: Retail (29% PM)</i>			--	--	-10	-10
<i>Pass-By Trips: Fast-Food Restaurant w/ Drive-Thru (50% AM, 55% PM)</i>			-21	-21	-16	-16
Total Primary Trips			112	82	106	124

Internal capture trips were calculated for the overall development based on the NCHRP Report 684. In addition, pass-by trips were calculated for the appropriate land uses based on pass-by percentages

from ITE. After reductions for internal capture and pass-by trips, the proposed development plan will generate approximately 194 new weekday AM peak hour trips (112 entering and 82 exiting), and 230 new weekday PM peak hour trips (106 entering and 124 exiting).

Trip generation used in the original TIA report for the development was higher than the total trip generation for the current development plan. The original TIA report included trip generation for more retail density than is currently proposed with Phases 2 and 3. Table 2 provides a comparison of the trip generation for the current proposed development plan and the trip generation used in the TIA report.

**Table 2: Trip Generation Comparison
Current Proposed Development Plan vs. TIA**

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Ace Hardware Development Plan (Full Build Out)						
Total Primary Trips		3,010	112	82	106	124
TIA Development Plan (from February 2022 TIA)						
Total Primary Trips		6,260	177	130	125	131
DIFFERENCE		-3,250	-65	-48	-19	-7

As shown in Table 2, the current development plan will generate over 3,200 fewer daily trips, approximately 113 fewer AM peak hour trips, and approximately 26 fewer PM peak hour trips than was assumed in the original TIA report. All improvements required for the development (in the NCDOT TIA approval letter) were based on the higher trip generation in the TIA report. The overall impact of development trips will be less than assumed in the original TIA report.

Summary

The proposed plans for Phase 2 and Phase 3 of the Ace Hardware development will result in a lower trip generation in the overall development than was shown in the previous TIA report prepared for the overall development. Since the trip generation is lower for the overall development with the current proposed plans for Phase 2 and Phase 3, an additional traffic study is not necessary.



Improvements identified as part of the TIA review are required of the development and would be expected as part of completion of the overall development.

If you should have any questions or comments regarding this letter, please feel free to contact me at rstephenson@drmp.com or by phone at 919-872-5115.

Sincerely,

A handwritten signature in black ink, appearing to read "Rynal Stephenson".

Rynal Stephenson, P.E.
Chief Traffic Analysis Engineer
DRMP, Inc.

Corporate License #F-1524



Attachments: NCHRP Internal Capture Tables

TIA Trip Generation Table

NCDOT TIA Review Letter (April 11, 2022)

Concept Development Plan for Overall Development

Phases 2 and 3 Preliminary Development Plans

cc: DeAngelo Jones (NCDOT)
Bob Koontz, PLA, Koontz Jones Design
Dagoberto Juarez Pozos, PE (NCDOT)
Nicholas Lineberger, PE (NCDOT Congestion Management)

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Southern Pines Retail		Organization:	DRMP	
Project Location:	Southern Pines, NC		Performed By:	RS	
Scenario Description:			Date:	6/20/2024	
Analysis Year:	Buildout		Checked By:		
Analysis Period:	AM Street Peak Hour		Date:		

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	816/822/899	182 , 10,510, 50	sq. ft.	137	73	64
Restaurant	934	2,140	sq. ft.	95	49	46
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
				232	122	110

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office	1.10	0%	0%	1.10	0%	0%
Retail	1.10	0%	0%	1.10	0%	0%
Restaurant	1.10	0%	0%	1.10	0%	0%
Cinema/Entertainment	1.10	0%	0%	1.10	0%	0%
Residential	1.10	0%	0%	1.10	0%	0%
Hotel	1.10	0%	0%	1.10	0%	0%
All Other Land Uses ²	1.10	0%	0%	1.10	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		9	0	0	0
Restaurant	0	6		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	255	134	121
Internal Capture Percentage	12%	11%	12%
External Vehicle-Trips ⁵	204	108	96
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	13%
Restaurant	17%	12%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹ Land Use Codes (LUCs) from <i>Trip Generation Manual</i> , published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
³ Enter trips assuming no transit or non-motorized trips (as assumed in ITE <i>Trip Generation Manual</i>).
⁴ Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.
⁵ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.
⁶ Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool					
Project Name:	Southern Pines Retail			Organization:	DRMP
Project Location:	Southern Pines, NC			Performed By:	RS
Scenario Description:				Date:	6/20/2024
Analysis Year:	Buildout			Checked By:	
Analysis Period:	PM Street Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	816/822/899	182 , 10,510, 50	sq. ft.	239	118	121
Restaurant	934	2,140	sq. ft.	71	37	34
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
				310	155	155

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office	1.10	0%	0%	1.10	0%	0%
Retail	1.10	0%	0%	1.10	0%	0%
Restaurant	1.10	0%	0%	1.10	0%	0%
Cinema/Entertainment	1.10	0%	0%	1.10	0%	0%
Residential	1.10	0%	0%	1.10	0%	0%
Hotel	1.10	0%	0%	1.10	0%	0%
All Other Land Uses ²	1.10	0%	0%	1.10	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4000	4000		4000	
Retail					4000	
Restaurant					4000	
Cinema/Entertainment					4000	
Residential		4000	4000			
Hotel					4000	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		12	0	0	0
Restaurant	0	15		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	341	171	170
Internal Capture Percentage	16%	16%	16%
External Vehicle-Trips ⁵	261	131	130
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	12%	9%
Restaurant	29%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

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

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

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

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

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

⁶Person-Trips

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

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is expected to consist of a 53,271 sq. ft. hardware store, 45,300 sq. ft. of general retail, and a 4,800 sq. ft. fast-food restaurant with drive-thru. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Table 3 provides a summary of the trip generation potential for the site.

Table 3: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Hardware Store (816)	53,271 sq. ft.	490	37	35	30	30
Shopping Center (820)	45,300 sq. ft.	3,510	108	66	145	157
Fast-Food Restaurant w/ Drive-Thru (934)	4,800 sq. ft.	2,260	98	95	82	75
Total Trips		6,260	243	196	257	262
<i>Internal Capture (11% AM & 21% PM)*</i>			-24	-24	-55	-54
Total External Trips			219	172	202	208
<i>Pass-By Trips: Hardware Store (49% AM, 50% PM)</i>			--	--	-6	-6
<i>Pass-By Trips: Shopping Center (43% PM)</i>			--	--	-40	-40
<i>Pass-By Trips: Fast-Food Restaurant w/ Drive-Thru (36% PM)</i>			-42	-42	-31	-31
Total Primary Trips			177	130	125	131

*Utilizing methodology contained in the NCHRP Report 684.

It is estimated that the proposed development will generate approximately 6,260 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 439 trips (243 entering and 196 exiting) will occur during the



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

April 11, 2022

Nate Bouquin, P.E.
Ramey Kemp and Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609

SUBJECT: Traffic Impact Analysis
Southern Pines Retail, Moore County

Dear Mr. Bouquin,

Thank you for submitting the Traffic Impact Analysis for the subject development. The preliminary site plan and traffic impact analysis have been reviewed by District, Division, and Congestion Management staff in accordance with the Policy on Street and Driveway Access to North Carolina Highways. We have the following comments for the subject access permit.

Airport Road and Site Drive 1

- Construct the northbound approach with one (1) ingress lane and two (2) egress lanes, striped as exclusive right turn and left turn lanes as well as provide a minimum of 100 feet of internal protected stem.
- Construct an eastbound right-turn lane with 100 feet of storage and appropriate taper.
- Construct a westbound left turn lane with 150 feet of storage and appropriate taper.

Airport Road and NC 22 Roundabout

- Construct an exclusive eastbound right-turn slip lane with a minimum of 150 feet of storage and appropriate taper.

NC 22 and Olive Tree Lane

- Monitor intersection for future eastbound congestion movements and convert entrance to a right in-right out once warranted by NCDOT.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DISTRICT 2, DIVISION 8
902 NORTH SANDHILLS BLVD.
ABERDEEN, NC 28315

Telephone: (910) 944-7621
Fax: (910) 944-5623
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
902 NORTH SANDHILLS BLVD.
ABERDEEN, NC 28315

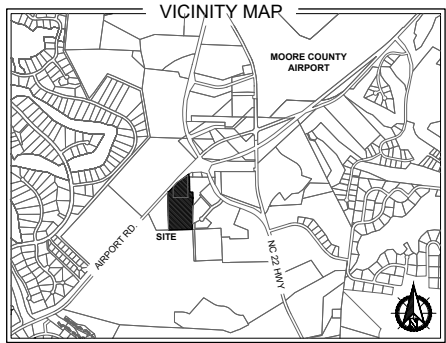
Please incorporate the above comments into your planning. When the above comments have been addressed, please submit site plans along with applicable permits to this office for review. If further information is needed, please advise.

Sincerely,

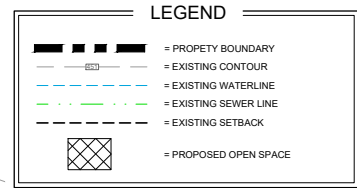
A handwritten signature in black ink, appearing to read 'Matthew Kitchen', written in a cursive style.

Matthew Kitchen, PE
District Engineer

CC: Patrick Norman, PE
John Grant, PE
David Willett
Josh Brooks, PE
File



* THIS PLAN IS FOR CONCEPTUAL PURPOSES ONLY AND SUBJECT TO CHANGE. THE PROPERTY OWNER MAY MODIFY THIS PLAN, THE ILLUSTRATED USES AND ANY PHASING.



PHASING PLAN NOTES:

1. DUE TO THE UNCERTAINTY OF ECONOMIC FACTORS THAT INFLUENCE LAND DEVELOPMENT, SOME FLEXIBILITY IN THE SEQUENCING OF PHASES IS NECESSARY AND IS TO BE BASED ON MARKET DEMANDS AND NECESSARY INFRASTRUCTURE IMPROVEMENTS.
2. RATHER THAN TYING THE PHASING TO SPECIFIC DATES AND SEQUENCING, PHASING IS TIED TO REQUIRED INFRASTRUCTURE IMPROVEMENTS INCLUDING ROADWAY, WATER LINE, AND SEWER LINE CONSTRUCTION ADEQUATE TO SERVE THE PHASE TO BE DEVELOPED. PHASES ARE NOT REQUIRED TO DEVELOP SEQUENTIALLY WITHIN THIS PLAN BUT COULD NOT DEVELOP UNTIL THE ADEQUATE INFRASTRUCTURE IS PROVIDED TO ACCOMMODATE THE PROPOSED PHASE. PHASES MAY ALSO BE DEVELOPED AND COMBINED WITH OTHER PHASES AND SUBPHASES.
3. PHASING AND REQUIREMENTS FOR EACH PHASE WILL BE REVIEWED AT SUCH TIME AS A PDP IS SUBMITTED FOR AN INDIVIDUAL PHASE.

OPEN SPACE NOTES:

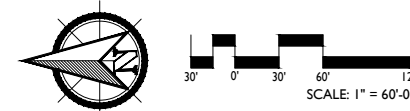
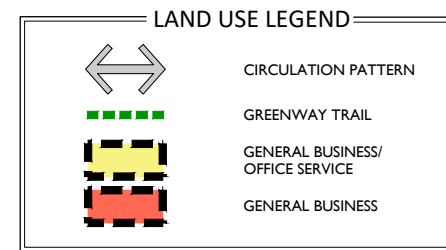
1. THE GENERAL LOCATION OF OPEN SPACES AND WATER BODIES IS SHOWN ON SHEET L-1.1. THESE LOCATIONS ARE CONCEPTUAL IN NATURE AND MAY VARY IN SIZE AND LOCATION DURING THE DETAILED SITE PLAN PROCESS.
2. A MINIMUM OF 20% OF TOTAL OPEN SPACE SHALL BE PROVIDED. A MINIMUM 10% OF THE PROVIDED OPEN SPACE SHALL BE USABLE OPEN SPACE AS DESCRIBED IN SECTION 3.5.14 OF THE UDO. A RUNNING TABULATION WILL BE PROVIDED DURING THE PDP PROCESS FOR EACH INDIVIDUAL PHASE.

TRANSPORTATION PLAN NOTES:

1. ALL STREETS AND PARKING AREAS WILL BE DESIGNED TO MEET THE TOWN OF SOUTHERN PINES ENGINEERING STANDARDS OR ADDITIONAL GEOTECHNICAL ENGINEERING RECOMMENDATIONS WILL BE PROVIDED AS AN ALTERNATIVE BASED ON THE SPECIFIC SOIL CONDITIONS ON THE PROPERTY
2. STORMWATER MANAGEMENT FOR THE TRANSPORTATION FACILITIES AND FUTURE DEVELOPMENT WILL BE PROVIDED USING BEST MANAGEMENT PRACTICES, IN REGIONAL STORMWATER DETENTION FACILITIES. FACILITIES WILL BE LOCATED IN THE GENERAL LOCATIONS SHOWN ON THE CONCEPTUAL DEVELOPMENT PLAN. AS ILLUSTRATED ON THIS SHEET, THE DRAINAGE FLOW ARROWS DESIGNATE THE GENERAL FLOW OF WATER BASED ON THE EXISTING TOPOGRAPHY. DRAINAGE WILL FLOW TOWARDS THE GENERAL AREA WHERE THE PROPOSED STORMWATER MANAGEMENT DEVICE IS SHOWN. THE LOCATION OF STORMWATER MANAGEMENT DEVICES ARE SUBJECT TO CHANGE THROUGHOUT THE CONTINUED DEVELOPMENT OF THE PROPERTY BASED ON DETAILED ENGINEERING PLANS. EACH INDIVIDUAL SITE MAY ALSO ELECT TO PROVIDE STORMWATER ON-SITE DEPENDING UPON THE SITE CONDITIONS AND ENGINEERING STANDARDS. STORMWATER MUST BE MAINTAINED ON THE OVERALL PROPERTY TO MEET THE TOWN OF SOUTHERN PINES AND ALL STATE AND FEDERAL STANDARDS.
3. NO ENDANGERED SPECIES ARE LOCATED ON THE PROPERTY.
4. TRAVEL DISTANCES & TIMES WERE OBTAINED FROM GOOGLE MAPS AND REFLECT TYPICAL DRIVING TIMES OBSERVED FROM 9-5 PM. TRAVEL TIMES MAY FLUCTUATE BASED ON TIME, WEATHER, CONSTRUCTION, TRAFFIC ACCIDENTS, AND INCREASES IN TRAFFIC DUE TO HOLIDAYS AND SPECIAL EVENTS.

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 ASSUMES 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 BY THE CONTRACTOR.



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

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-9487
W: www.koontzjonesdesign.com

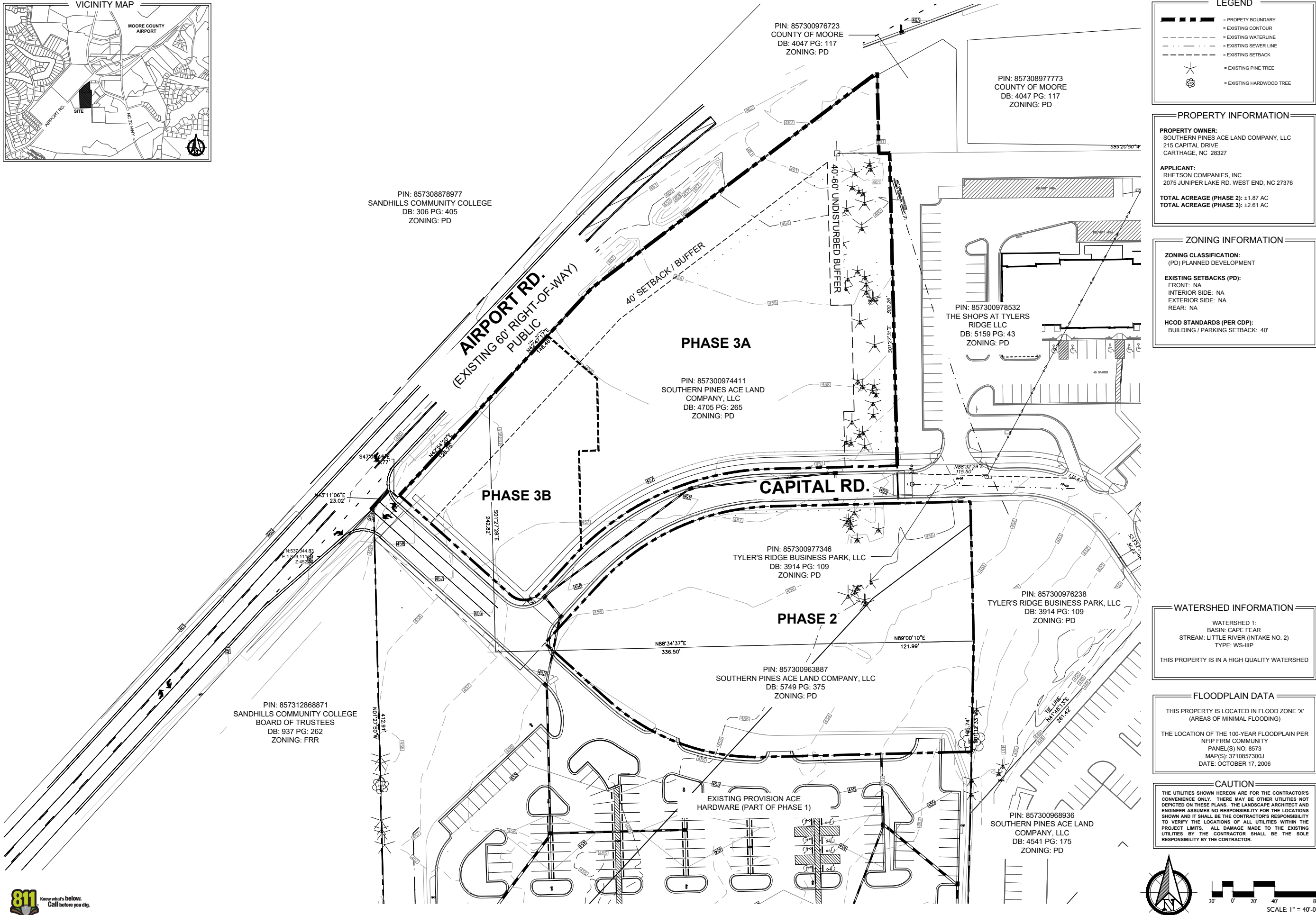
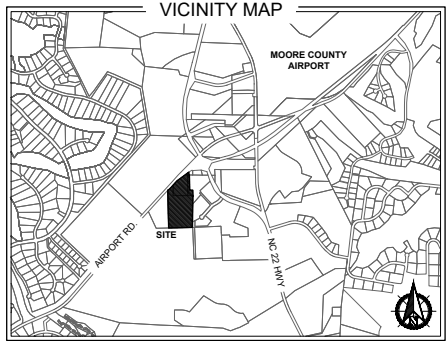
REVISIONS:

REVISIONS:

SOUTHERN PINES ACE HARDWARE
CONCEPTUAL DEVELOPMENT PLAN
SOUTHERN PINES, NORTH CAROLINA

CONCEPTUAL LAND USE PLAN / TRANSPORTATION PLAN

DATE: 04-05-2022
DESIGNED BY: JCK
DRAWN BY: PJS
CHECKED BY: REK
Q.C. BY: REK
PROJECT #: 60-0-
SHEET NUMBER:
L-1.1



LEGEND

- = PROPERTY BOUNDARY
- - - = EXISTING CONTOUR
- - - = EXISTING WATERLINE
- - - = EXISTING SEWER LINE
- - - = EXISTING SETBACK
- * = EXISTING PINE TREE
- ⊗ = EXISTING HARDWOOD TREE

PROPERTY INFORMATION

PROPERTY OWNER:
SOUTHERN PINES ACE LAND COMPANY, LLC
215 CAPITAL DRIVE
CARTHAGE, NC 28327

APPLICANT:
RHETSON COMPANIES, INC
2075 JUNIPER LAKE RD. WEST END, NC 27376

TOTAL ACREAGE (PHASE 2): ±1.87 AC
TOTAL ACREAGE (PHASE 3): ±2.61 AC

ZONING INFORMATION

ZONING CLASSIFICATION:
(PD) PLANNED DEVELOPMENT

EXISTING SETBACKS (PD):
FRONT: NA
INTERIOR SIDE: NA
EXTERIOR SIDE: NA
REAR: NA

HCOD STANDARDS (PER CDP):
BUILDING / PARKING SETBACK: 40'

WATERSHED INFORMATION

WATERSHED 1:
BASIN: CAPE FEAR
STREAM: LITTLE RIVER (INTAKE NO. 2)
TYPE: WS-IIIIP

THIS PROPERTY IS IN A HIGH QUALITY WATERSHED

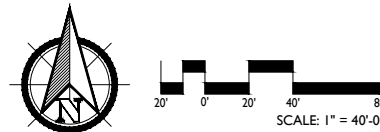
FLOODPLAIN DATA

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: 8573
MAP(S): 3710857300J
DATE: OCTOBER 17, 2006

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 ASSUMES 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 BY THE CONTRACTOR.



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

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-9487
W: www.koontzjonesdesign.com

REVISIONS:

REVISIONS:

ACE HARDWARE - PHASES 2 & 3
PRELIMINARY DEVELOPMENT PLAN
SOUTHERN PINES, NORTH CAROLINA
EXISTING CONDITIONS

DATE: 04-05-2024
DESIGNED BY: JPK
DRAWN BY: PJS
CHECKED BY: REK
Q.C. BY: REK
PROJECT # 24-0000000000
SHEET NUMBER: **L-1.0**

















21'-4"

AMENDMENT TO PURCHASE AND SALE AGREEMENT

This Amendment to Purchase and Sale Agreement is made as of December 14, 2021 by Tyler's Ridge Business Park, LLC, 35 Martin Drive, Whispering Pines, North Carolina 28327, ("Seller") and Southern Pines Ace Land Company LLC, 215 Capital Drive, Carthage, North Carolina 28327 ("Buyer") in order to amend the Purchase and Sale Agreement therebetween dated as of December 2, 2021.

1. Capital Drive. Insert the provision hereinafter set forth as Section 11.

11. **ACCESS:** Seller hereby agrees and covenants with Buyer that (a) Seller shall effectuate the amendment of the Declaration of Easements, Covenants, Conditions, and Restrictions recorded in Book 4541, Page 152, Moore County Registry (the "**Declaration**") pursuant to which (i) the Property shall constitute a "Lot" under the Declaration and shall thus benefit from, inter alia, all rights related to Capital Drive and (ii) the Frye Tract shall constitute a "Lot" under the Declaration and shall thus benefit from, inter alia, all rights related to Capital Drive (provided, however, that Buyer reserves the right to subdivide or reconfigure the Property and the Frye Tract pursuant to which any one or more tracts subdivided therefrom shall constitute a "Lot" under the Declaration and shall thus benefit from, inter alia, all rights related to Capital Drive), (b) the remainder of Capital Drive shall be transferred to Tyler's Ridge Property Owners Association, Inc. (the "**POA**") not later than December 31, 2021, (c) Buyer shall convey a thirty-six-foot-wide portion of the Property (or, at its option, a portion of the Property and a portion of the Frye Tract) to the POA, in a location consistent with Buyer's development plans for the Property and the Frye Tract, in order to extend Capital Drive to Airport Road (the "**Capital Drive Extension**"), (d) Buyer shall convey, and POA shall accept, conveyance of the Capital Drive Extension upon the completion thereof, and (e) the Capital Drive Extension shall, upon its conveyance to the POA, constitute a portion of Capital Drive for purposes of the Declaration. "**Capital Drive**" means the roadway designated as Capital Drive, including complete and incomplete portions thereof, as shown on the Plat. "**Frye Tract**" means the 9.59-acre tract shown on map recorded in Plat Cabinet 15, Slide 772, Moore County Registry.

2. Settlement Date. Strike "December 21, 2021" from Section 1(l) and insert "January ~~4~~21, 2022" in lieu thereof.
3. Capitalized Terms. All capitalized terms otherwise undefined herein shall be defined as set forth in the Agreement.
4. References. All references in the Agreement to "this Agreement" shall be deemed to refer to the Agreement as amended hereby.
5. No Other Changes. Except as explicitly amended by this Amendment, all of the terms and conditions of the Agreement shall remain in full force and effect.
6. Conflict. This Amendment shall, in the event of a conflict between this Amendment and the Agreement, control.

BUYER

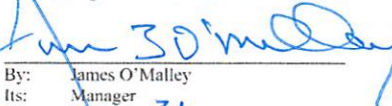
Southern Pines Ace Land Company LLC



By: Randall Saunders
Its: Manager
Date: December __, 2021

SELLER

Tyler's Ridge Business Park, LLC



By: James O'Malley
Its: Manager
Date: December 21, 2021

PURCHASE AND SALE AGREEMENT

For valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, Buyer offers to purchase and Seller upon acceptance agrees to sell and convey the Property on the terms and conditions of this Purchase and Sale Agreement and any addendum or modification made in accordance with its terms (collectively, the "Contract").

1. **TERMS AND DEFINITIONS:** The terms listed below shall have the respective meaning given them as set forth adjacent to each term.

(a) "Seller": Tyler's Ridge Business Park, LLC, 35 Martin Drive, Whispering Pines, North Carolina 28327

JBO (b) "Buyer": Southern Pine ACE Land, LLC 215 Capital Drive, Carthage, North Carolina 28327.

(c) "Property": 3.812 acres as shown on plat recorded in Plat Cabinet 19, Slide 193, Moore County Registry (the Property shall include all that real estate described thereon together with all appurtenances thereto including the improvements located thereon).

(d) "Purchase Price":

\$700,000.00

paid in U.S. Dollars upon the following terms:

BY EARNEST MONEY DEPOSIT made payable and delivered to Escrow Agent named in Paragraph 1(f) by personal check within five (5) days of the Effective Date of this Contract.

BALANCE of the Purchase Price in cash at Settlement (some or all of which may be paid with the proceeds of a new loan)

JBO Should Buyer fail to deliver the Earnest Money Deposit by its due date, or should any check or other funds paid by Buyer be dishonored, for any reason, by the institution upon which the payment is drawn, Buyer shall have one (1) banking day after written notice to deliver cash, official bank check, wire transfer or electronic transfer to the payee. In the event Buyer does not timely deliver the required funds, Seller shall have the right to terminate this Contract upon written notice to Buyer.

(e) "Earnest Money Deposit": The Earnest Money Deposit shall be deposited and held in escrow by Escrow Agent until Closing, at which time it will be credited to Buyer, or until this Contract is otherwise terminated. In the event: (1) this offer is not accepted; or (2) a condition of any resulting contract is not satisfied, then the Earnest Money Deposit shall be refunded to Buyer. In the event of breach of this Contract by Seller, the Earnest Money Deposit shall be refunded to Buyer upon Buyer's request, but such return shall not affect any other remedies available to Buyer for such breach. In the event of breach of this Contract by Buyer, the Earnest Money Deposit shall be paid to Seller. The payment of the Earnest Money Deposit to Seller (without regard to the amount thereof) together shall serve as liquidated damages ("Liquidated Damages") and as Seller's sole and exclusive remedy for such breach, but without limiting Seller's rights under Paragraphs 4(d) and 4(e) for damage to the Property. It is acknowledged by the parties that the amount of the Liquidated Damages is compensatory and not punitive, such amount being a reasonable estimation of the actual loss that Seller would incur as a result of a breach of this Contract by Buyer. The payment to Seller and/or retention by Seller of the Liquidated Damages shall not constitute a penalty or forfeiture but actual compensation for Seller's anticipated loss, both parties acknowledging the difficulty determining Seller's actual damages for such breach. If legal proceedings are brought by Buyer or Seller against the other to recover the Earnest Money Deposit, the prevailing party in the proceeding shall be entitled to recover from the non-prevailing party reasonable attorney fees and court costs incurred in connection with the proceeding.

(f) "Escrow Agent": Standard Title LLC, Raleigh, North Carolina. Buyer and Seller consent to disclosure by the Escrow Agent of any material facts pertaining to the Earnest Money Deposit to the parties to this transaction, their real estate agent(s) and Buyer's lender(s).

(g) "Effective Date": The date that: (1) the last one of Buyer and Seller has signed this offer or the final counteroffer, if any, and (2) such signing is communicated to the party making the offer or counteroffer, as the case may be.

(h) "Due Diligence": Buyer's opportunity to investigate the Property and the transaction contemplated by this Contract, including but not necessarily limited to the matters described in Paragraph 2 below, to decide whether Buyer, in Buyer's sole discretion, will proceed with or terminate the transaction.

(i) [reserved].

JBO (j) "Due Diligence Period": The period beginning on the Effective Date and extending through 5:00 p.m. on None, time being of the essence.

(k) "Settlement": The proper execution and delivery to the closing attorney of all documents necessary to complete the transaction contemplated by this Contract, including the deed, settlement statement, deed of trust and other loan or conveyance documents, and the closing attorney's receipt of all funds necessary to complete such transaction

(l) "Settlement Date": The parties agree that Settlement will take place on December 21, 2021 JBO RBS (the "Settlement Date"), unless otherwise agreed in writing, at a time and place designated by Buyer.

(m) "Closing": The completion of the legal process which results in the transfer of title to the Property from Seller to Buyer, which includes the following steps: (1) the Settlement (defined above); (2) the completion of a satisfactory title update to the Property following the Settlement; (3) the closing attorney's receipt of authorization to disburse all necessary funds; and (4) recordation in the appropriate county registry of the deed(s) and deed(s) of trust, if any, which shall take place as soon as reasonably possible for the closing attorney after Settlement. Upon Closing, the proceeds of sale shall be disbursed by the closing attorney in accordance with the settlement statement and the provisions of Chapter 45A of the North Carolina General Statutes. If the title update should reveal unexpected liens, encumbrances or other title defects, or if the closing attorney is not authorized to disburse all necessary funds, then the Closing shall be suspended and the Settlement deemed delayed under Paragraph 9 (Delay in Settlement/Closing).

(n) "Special Assessments": A charge against the Property by a governmental authority in addition to ad valorem taxes and recurring governmental service fees levied with such taxes, or by an owners' association in addition to any regular assessment (dues), either of which may be a lien against the Property. A Special Assessment may be either proposed or confirmed.

"Proposed Special Assessment": A Special Assessment that is under formal consideration but which has not been approved prior to Settlement. Whether payable in a lump sum or future installments.

"Confirmed Special Assessment": A Special Assessment that has been approved prior to Settlement whether payable in a lump sum or future installments.

2. BUYER'S DUE DILIGENCE PROCESS:

(a) **Loan:** Buyer, at Buyer's expense, shall be entitled to pursue qualification for and approval of the Loan if any.

(b) **Property Investigation:** Buyer or Buyer's agents or representatives, at Buyer's expense, shall be entitled to conduct all desired tests, surveys, appraisals, investigations, examinations and inspections of the Property as Buyer deems appropriate, including but not limited to the following:

- (i) **Soil And Environmental:** Reports to determine whether the soil is suitable for Buyer's intended use and whether there is any environmental contamination, law, rule or regulation that may prohibit, restrict or limit Buyer's intended use.
- (ii) **Septic/Sewer System:** Any applicable investigation(s) to determine: (1) the condition of an existing sewage system, (2) the costs and expenses to install a sewage system approved by an existing Improvement Permit, (3) the availability and expense to connect to a public or community sewer system, and/or (4) whether an Improvement Permit or written evaluation may be obtained from the County Health Department for a suitable ground absorption sewage system.
- (iii) **Water:** Any applicable investigation(s) to determine: (1) the condition of an existing private drinking water well, (2) the costs and expenses to install a private drinking water well approved by an existing Construction Permit, (3) the availability, costs and expenses to connect to a public or community water system, or a shared private well, and/or (4) whether a Construction Permit may be obtained from the County Health Department for a private drinking water well.
- (iv) **Review of Documents:** Review of the Declaration of Restrictive Covenants, Bylaws, Articles of Incorporation, Rules and Regulations, and other governing documents of any applicable owners' association and/or subdivision. If the Property is subject to regulation by an owners' association, it is recommended that Buyer review the completed Owners' Association And Addendum (Standard Form 2A12-T) provided by Seller prior to signing this offer. It is also recommended that the Buyer determine if the owners' association or its management company charges fees for providing information required by Buyer's lender or confirming restrictive covenant compliance.
- (v) **Appraisals:** An appraisal of the Property
- (vi) **Survey:** A survey to determine whether the property is suitable for Buyer's intended use and the location of easements, setbacks, property boundaries and other issues which may or may not constitute title defects.
- (vii) **Zoning and Governmental Regulation:** Investigation of current or proposed zoning or other governmental regulation that may affect Buyer's intended use of the Property, adjacent land uses, planned or proposed road construction, and school attendance zones.
- (viii) **Flood Hazard:** Investigation of potential flood hazards on the Property, and/or any requirement to purchase flood insurance in order to obtain the Loan.
- (ix) **Utilities and Access:** Availability, quality, and obligations for maintenance of utilities including electric, gas, communication services, storm water management, and means of access to the Property and amenities.
- (x) **Streets/Roads:** Investigation of the status of the street/road upon which the Property fronts as well as any other street/road used to access the Property, including: (1) whether any street(s)/road(s) are public or private, (2) whether any street(s)/road(s) designated as public are accepted for maintenance by the State of NC or any municipality, or (3) if private or not accepted for public maintenance, the consequences and responsibility for maintenance and the existence, terms and funding of any maintenance agreements.
- (xi) **Sale/Lease of Existing Property:** As noted in paragraph 3(b), this Contract is not conditioned upon the sale/lease or closing of other property owned by Buyer. Therefore, if Buyer must sell or lease other real property in order to qualify for

a new loan or to otherwise complete the purchase of the Property, Buyer should seek to close on Buyer's other property prior to the end of the Due Diligence Period or be reasonably satisfied that closing on Buyer's other property will take place prior to the Settlement Date of this Contract.

(c) **Buyer's Obligation to Repair Damage:** Buyer shall, at Buyer's expense, promptly repair any damage to the Property resulting from any activities of Buyer and Buyer's agents and contractors, but Buyer shall not be responsible for any damage caused by accepted practices applicable to any N.C. licensed professional performing reasonable appraisals, tests, surveys, examinations and inspections of the Property. This repair obligation shall survive any termination of this Contract.

(d) **Indemnity:** Buyer will indemnify and hold Seller harmless from all loss, damage, claims, suits or costs, which shall arise out of any contract, agreement, or injury to any person or property as a result of any activities of Buyer and Buyer's agents and contractors relating to the Property except for any loss, damage, claim, suit or cost arising out of pre-existing conditions of the Property and/or out of Seller's negligence or willful acts or omissions. This indemnity shall survive this Contract and any termination hereof.

(e) **Buyer's Right to Terminate:** Buyer shall have the right to terminate this Contract for any reason or no reason, by delivering to Seller written notice of termination (the "Termination Notice") during the Due Diligence Period (or any agreed-upon written extension of the Due Diligence Period), time being of the essence. If Buyer timely delivers the Termination Notice, this Contract shall be terminated and the Earnest Money Deposit shall be refunded to Buyer.

(f) **CLOSING SHALL CONSTITUTE ACCEPTANCE OF THE PROPERTY IN ITS THEN EXISTING CONDITION UNLESS PROVISION IS OTHERWISE MADE IN WRITING.**

3. BUYER REPRESENTATIONS:

(a) **Loan:** Buyer ☐ does ☐ does not intend to obtain a new loan in order to purchase the Property. If Buyer is obtaining a new loan, Buyer intends to obtain a loan as follows: ☐ Conventional ☒ Other: Line of Credit at First Citizens Bank for a term of 695,000.00 year(s), at an initial interest rate not to exceed _____ % per annum (the "Loan").

(b) [reserved].

(c) **Performance of Buyer's Financial Obligations:** To the best of Buyer's knowledge, there are no other circumstances or conditions existing as of the date of this offer that would prohibit Buyer from performing Buyer's financial obligations in accordance with this Contract, except as may be specifically set forth herein.

4. BUYER OBLIGATIONS:

(a) **Responsibility for Proposed Special Assessments:** Buyer shall take title subject to all Proposed Special Assessments.

(b) **Responsibility for Certain Costs:** Buyer shall be responsible for all costs with respect to:

- (i) any loan obtained by Buyer, including charges by an owners' association and/or management company as agent of an owners' association for providing information required by Buyer's lender;
- (ii) charges required by an owners' association declaration to be paid by Buyer for Buyer's future use and enjoyment of the Property, including, without limitation, working capital contributions, membership fees, or charges for Buyer's use of the common elements and/or services provided to Buyer, such as "move-in fees";
- (iii) determining restrictive covenant compliance;
- (iv) appraisal;
- (v) title search;
- (vi) title insurance;
- (vii) any fees charged by the closing attorney for the preparation of the Closing Disclosure, Seller Disclosure and any other settlement statement;
- (viii) recording the deed; and
- (ix) preparation and recording of all instruments required to secure the balance of the Purchase Price unpaid at Settlement.

(c) **Authorization to Disclose Information:** Buyer authorizes the Buyer's lender(s), the parties' real estate agent(s) and closing attorney: (1) to provide this Contract to any appraiser employed by Buyer or by Buyer's lender(s); and (2) to release and disclose any buyer's closing disclosure, settlement statement and/or disbursement summary, or any information therein, to the parties to this transaction, their real estate agent(s) and Buyer's lender(s).

5. SELLER REPRESENTATIONS:

(a) Ownership: Seller represents that Seller has owned the Property for at least one year.

(b) Assessments: To the best of Seller's knowledge there are not any Proposed Special Assessments.

Seller warrants that there are not any Confirmed Special Assessments.

(c) Owners' Association(s) and Dues: To best of Seller's knowledge, ownership of the Property subjects Buyer to regulation by one or more owners' association(s) and governing documents, which impose various mandatory covenants, conditions and restrictions upon the Property and Buyer's enjoyment thereof, including but not limited to obligations to pay regular assessments (dues) and Special Assessments.

(d) Sewage System Permit: (☐ Applicable ☒ Not Applicable) Seller warrants that the sewage system described in the Improvement Permit attached hereto has been installed, which representation survives Closing, but makes no further representations as to the system.

(e) Private Drinking Water Well Permit: (☐ Applicable ☒ Not Applicable) Seller warrants that a private drinking water well has been installed, which representation survives Closing, but makes no further representations as to the well. (If well installed after July 1, 2008, attach Improvement Permit hereto).

6. SELLER OBLIGATIONS:

(a) Evidence of Title, Payoff Statement(s) and Non Foreign Status:

(i) Seller agrees to use best efforts to provide to the closing attorney as soon as reasonably possible after the Effective Date, copies of all title information in possession of or available to Seller, including but not limited to: title insurance policies, attorney's opinions on title, surveys, covenants, deeds, notes and deeds of trust, leases, and easements relating to the Property.

(ii) Seller shall provide to the closing attorney all information needed to obtain a written payoff statement from any lender(s) regarding any security interest in the Property as soon as reasonably possible after the Effective Date, and Seller designates the closing attorney as Seller's agent with express authority to request and obtain on Seller's behalf payoff statements and/or short-pay statements from any such lender(s).

(iii) If Seller is not a foreign person as defined by the Foreign Investment in Real Property Tax Act, Seller shall also provide to the closing attorney a non-foreign status affidavit (pursuant to the Foreign Investment in Real Property Tax Act). In the event Seller shall not provide a non-foreign status affidavit, Seller acknowledges that there may be withholding as provided by the Internal Revenue Code.

(b) Authorization to Disclose Information: Seller authorizes: (1) any attorney presently or previously representing Seller to release and disclose any title insurance policy in such attorney's file to Buyer and both Buyer's and Seller's agents and attorneys; (2) the Property's title insurer or its agent to release and disclose all materials in the Property's title insurer's (or title insurer's agent's) file to Buyer and both Buyer's and Seller's agents and attorneys, and (3) the closing attorney to release and disclose any seller's closing disclosure, settlement statement and/or disbursement summary, or any information therein, to the parties to this transaction, their real estate agent(s) and Buyer's lender(s).

(c) Access to Property: Seller shall provide reasonable access to the Property through the earlier of Closing or possession by Buyer, including, but not limited to, allowing the Buyer and/or Buyer's agents or representatives an opportunity to (i) conduct Due Diligence, (ii) verify the satisfactory completion of negotiated repairs/improvements, and (iii) conduct a final walk-through inspection of the Property. Seller's obligation includes providing existing utilities operating at Seller's cost including any connections and de-winterizing. To the extent applicable, Seller shall also be responsible for timely clearing that portion of the Property required by the County to perform tests, inspections and/or evaluations to determine the suitability of the Property for a sewage system and/or private drinking water well.

(d) Removal of Seller's Property: Seller shall remove from the Property, by the date possession is delivered, (i) all personal property which is not a part of the purchase and (ii) unless otherwise agreed, all garbage and debris.

(e) Affidavit And Indemnification Agreement: Seller shall furnish at Settlement an affidavit(s) and indemnification agreement(s) in form satisfactory to Buyer and Buyer's title insurer, if any, executed by Seller and any person or entity who has performed or furnished labor, services, materials or rental equipment to the Property within 120 days prior to the date of Settlement and who may be entitled to claim a lien against the Property as described in N.C.G.S. §44A-8 verifying that each such person or entity has been paid in full and agreeing to indemnify Buyer, Buyer's lender(s) and Buyer's title insurer against all loss from any cause or claim arising therefrom.

(f) Designation of Lien Agent, Payment and Satisfaction of Liens: If required by N.C.G.S. §44A-11.1, Seller shall have designated a Lien Agent, and Seller shall deliver to Buyer as soon as reasonably possible a copy of the appointment of Lien Agent.

All deeds of trust, deferred ad valorem taxes, liens and other charges against the Property, not assumed by Buyer, must be paid and satisfied by Seller prior to or at Settlement such that cancellation may be promptly obtained following Closing. Seller shall remain obligated to obtain any such cancellations following Closing.

(g) **Good Title, Legal Access:** Seller shall execute and deliver a general warranty deed for the Property in recordable form no later than Settlement, which shall convey fee simple marketable and insurable title, without exception for mechanics' liens, and free of any other liens, encumbrances or defects, including those which would be revealed by a current and accurate survey of the Property, except: ad valorem taxes for the current year (prorated through the date of Settlement); utility easements and unviolated covenants, conditions or restrictions that do not materially affect the value of the Property; and such other liens, encumbrances or defects as may be assumed or specifically approved by Buyer in writing. The Property must have legal access to a public right of way.

(h) **Deed, Taxes, and Fees:** Seller shall pay for preparation of a deed and all other documents necessary to perform Seller's obligations under this Contract, and for state and county excise taxes, and any deferred, discounted or rollback taxes, and local conveyance fees required by law.

(i) [reserved].

(j) **Owners' Association Fees/Charges:** Seller shall pay: (i) any fees required for confirming Seller's account payment information on owners' association dues or assessments for payment or proration and (ii) any fees imposed by an owners' association and/or a management company as agent of the owners' association in connection with the transaction contemplated by this Contract other than those fees required to be paid by Buyer under paragraph 4(b) above.

(k) **Payment of Confirmed Special Assessments:** Seller shall pay, in full at Settlement, all Confirmed Special Assessments, whether payable in a lump sum or future installments, provided that the amount thereof can be reasonably determined or estimated. The payment of such estimated amount shall be the final payment between the Parties.

(l) **Late Listing Penalties:** All property tax late listing penalties, if any, shall be paid by Seller.

(m) [reserved].

(n) **Seller's Failure to Comply or Breach:** If Seller fails to materially comply with any of Seller's obligations under this Paragraph 6 or Seller materially breaches this Contract, and Buyer elects to terminate this Contract as a result of such failure or breach, then the Earnest Money Deposit shall be refunded to Buyer and Seller shall reimburse to Buyer the reasonable costs actually incurred by Buyer in connection with Buyer's Due Diligence without affecting any other remedies. If legal proceedings are brought by Buyer against the Seller to recover the Earnest Money Deposit and/or the reasonable costs actually incurred by Buyer in connection with Buyer's Due Diligence, the prevailing party in the proceeding shall be entitled to recover from the non-prevailing party reasonable attorney fees and court costs incurred in connection with the proceeding.

7. PRORATIONS AND ADJUSTMENTS: Unless otherwise agreed, the following items shall be prorated, with Seller responsible for the prorated amounts through the date of Settlement and either adjusted between the parties or paid at Settlement:

(a) **Taxes on Real Property:** Ad valorem taxes and recurring governmental service fees levied with such taxes on real property shall be prorated on a calendar year basis;

(b) **Rents:** Rents, if any, for the Property;

(c) **Dues:** Owners' association regular assessments (dues) and other like charges.

8. RISK OF LOSS/CONDITION OF PROPERTY AT CLOSING: The risk of loss or damage by fire or other casualty prior to Closing shall be upon Seller. Seller is advised not to cancel existing insurance on the Property until after confirming recordation of the deed. Buyer's obligation to complete the transaction contemplated by this Contract shall be contingent upon the Property being in substantially the same or better condition at Closing as on the date of this offer, reasonable wear and tear excepted. If the Property is not in substantially the same or better condition at Closing as on the date of this offer, reasonable wear and tear excepted, Buyer may terminate this Contract by written notice delivered to Seller and the Earnest Money Deposit shall be refunded to Buyer. If the Property is not in such condition and Buyer does not elect to terminate this Contract, Buyer shall be entitled to receive, in addition to the Property, the proceeds of any insurance claim filed by Seller on account of any damage or destruction to the Property.

9. DELAY IN SETTLEMENT/CLOSING: Absent agreement to the contrary in this Contract or any subsequent modification thereto, if a party is unable to complete Settlement by the Settlement Date but intends to complete the transaction and is acting in good faith and with reasonable diligence to proceed to Settlement ("Delaying Party"), and if the other party is ready, willing and able to complete Settlement on the Settlement Date ("Non-Delaying Party") then the Delaying Party shall give as much notice as possible to the Non-Delaying Party and closing attorney and shall be entitled to a delay in Settlement. If the parties fail to complete Settlement and Closing within fourteen (14) days of the Settlement Date (including any amended Settlement Date agreed to in writing by the

parties) or to otherwise extend the Settlement Date by written agreement, then the Delaying Party shall be in breach and the Non-Delaying Party may terminate this Contract and shall be entitled to enforce any remedies available to such party under this Contract for the breach.

10. **POSSESSION:** Unless otherwise provided herein possession, including all means of access to the Property (keys, codes including security codes, gate openers, electronic devices, etc.) shall be delivered at Closing as defined in Paragraph 1(m). No alterations, excavations, tree or vegetation removal or other such activities may be done before possession is delivered

11. **ACCESS EASEMENTS:** [REDACTED]

12. **ASSIGNMENTS:** This Contract may not be assigned without the written consent of all parties except in connection with a tax-deferred exchange, but if assigned by agreement, then this Contract shall be binding on the assignee and assignee's heirs and successors.

13. **TAX-DEFERRED EXCHANGE:** In the event Buyer or Seller desires to effect a tax-deferred exchange in connection with the conveyance of the Property, Buyer and Seller agree to cooperate in effecting such exchange; provided, however, that the exchanging party shall be responsible for all additional costs associated with such exchange, and provided further, that a non-exchanging party shall not assume any additional liability with respect to such tax-deferred exchange. Buyer and Seller shall execute such additional documents, including assignment of this Contract in connection therewith, at no cost to the non-exchanging party, as shall be required to give effect to this provision.

14. **PARTIES:** This Contract shall be binding upon and shall inure to the benefit of Buyer and Seller and their respective heirs, successors and assigns. As used herein, words in the singular include the plural and the masculine includes the feminine and neuter genders, as appropriate.

15. **SURVIVAL:** If any provision herein contained which by its nature and effect is required to be observed, kept or performed after the Closing, it shall survive the Closing and remain binding upon and for the benefit of the parties hereto until fully observed, kept or performed.

16. **ENTIRE AGREEMENT:** This Contract contains the entire agreement of the parties and there are no representations, inducements or other provisions other than those expressed herein. All changes, additions or deletions hereto must be in writing and signed by all parties.

17. **NOTICES:** All notices, requests and other communications hereunder shall be in writing and shall be deemed to have been duly given and received (a) when personally delivered or (b) one (1) business day after proper prepaid deposit for next-day delivery to a national overnight courier service providing evidence of delivery, postage prepaid, addressed to the party to whom or which notice is to be given at the address hereinabove set forth therefor. The rejection or other refusal to accept or the inability to deliver because of changed address of which no notice was given shall be deemed to be receipt of the notice, request or communication sent. The addresses hereinabove set forth may be changed as to any party upon at least ten (10) days prior notice thereof to the other party.

18. **EXECUTION:** This Contract may be signed in multiple originals or counterparts, all of which together constitute one and the same instrument.

19. **COMPUTATION OF DAYS/TIME OF DAY:** Unless otherwise provided, for purposes of this Contract, the term "days" shall mean consecutive calendar days, including Saturdays, Sundays, and holidays, whether federal, state, local or religious. For the purposes of calculating days, the count of "days" shall begin on the day following the day upon which any act or notice as provided in this Contract was required to be performed or made. Any reference to a date or time of day shall refer to the date and/or time of day in the State of North Carolina.

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This offer shall become a binding contract on the Effective Date. Unless specifically provided otherwise, Buyer's failure to timely deliver any fee, deposit or other payment provided for herein shall not prevent this offer from becoming a binding contract, provided that any such failure shall give Seller certain rights to terminate the contract as described herein or as otherwise permitted by law.

BUYER

 Southern Pine Tree Land Company LLC



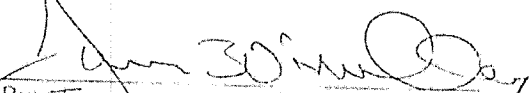
By: 

Its: 

Date: 12/2/2021

SELLER

Tyler's Ridge Business Park, LLC



By: James B O'Malley

Its: Sales Manager

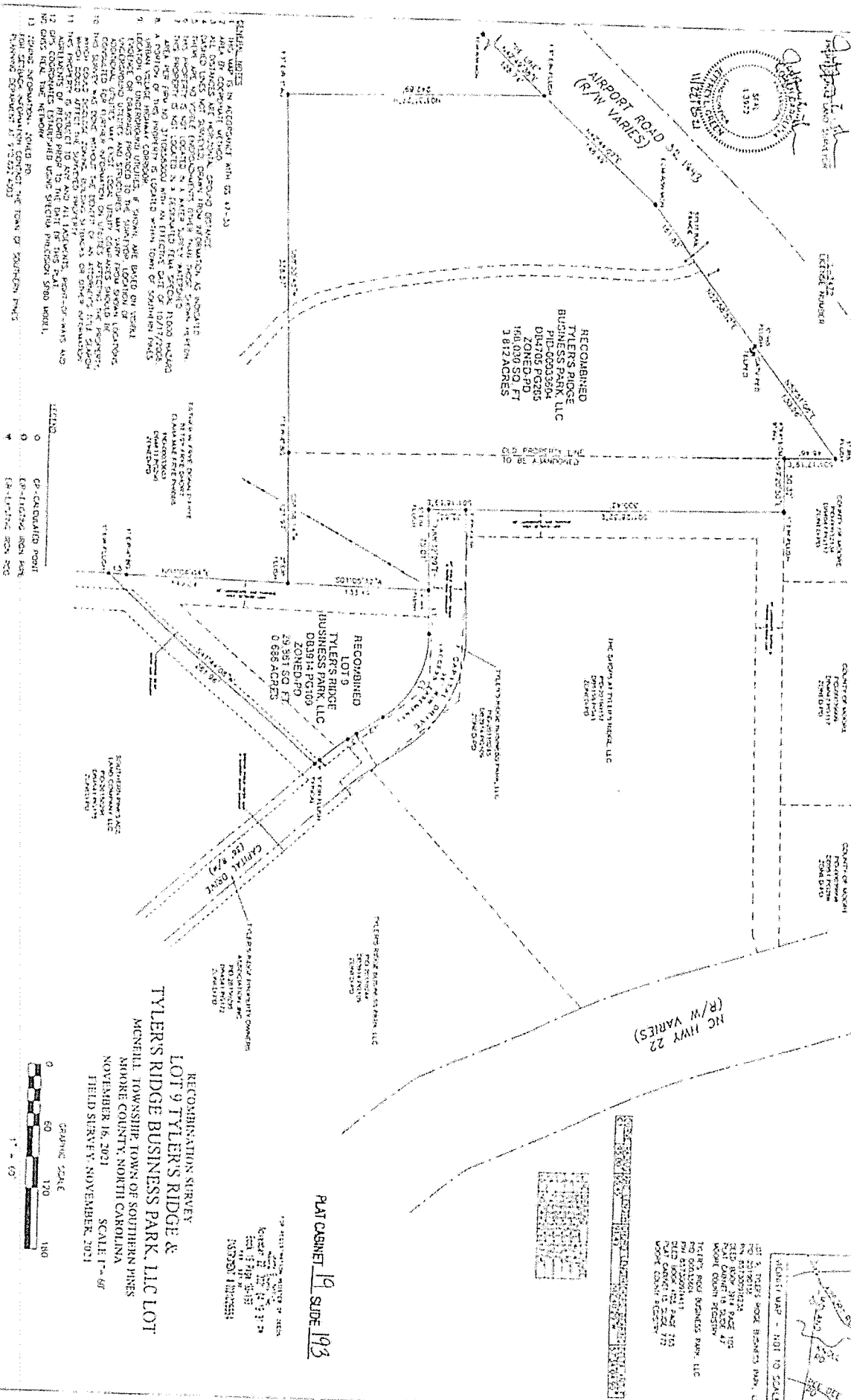
Date: 12/2/2021

1. General Delivery, Special Office of Moore County, North Carolina
 I certify that the use of this check for distribution is approved
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Director of Education
 Moore County

11-22-31
 Date

193



Agenda Item

To: Planning Board

Via: BJ Grieve, Planning Director

From: Alaina Mallette, Senior Planner

Subject: Request to rezone several parcels located on SW Broad Street from General Business (GB) to General Business Conditional Zoning District (GB-CD); Applicant: RCPESP, LLC

Date: December 19, 2024

I. SUMMARY OF APPLICATION REQUEST

Rachel Jurgens, on behalf of B & R Holding Company, and Scott Bertrand, on behalf of RCPESP, LLC, have submitted a request to rezone five (5) properties from GB to GB Conditional Zoning District to develop a mixed-use food truck campus to include a cafeteria, a bar, mobile food services, catering, a multi-purpose facility, temporary/special event uses and several accessory uses with off-street parking and open space.

The subject parcels totaling 2.92 acres are identified as PIN 858100061104 (PARID 20180500) and PIN 858100061061 (PARID 00048220) owned by B & R Holding Company, LLC; and PIN 858109051976 (PARID 00055107), PIN 8581090050947 (PARID 00055108) and PIN 858109051859 (PARID 00055109) owned by 155 Hall SP, LLC.

II. PROJECT INFORMATION

	A. Physical Addresses	B. Property Owner	C. Applicant
	1. 801 SW Broad St and 901 SW Broad St (PARID 20180500) 2. No Address (PARID 00048220)	B & R HOLDING COMPANY LLC B & R HOLDING COMPANY LLC	Scott Bertrand RCPESP, LLC 901 SW Broad St Southern Pines, NC 28387
Collectively, "Broad Street"	3. 155 Hall Avenue (PARID 00047570)	155 HALL SP LLC	
	4. No Address (PARID 00055109)	155 HALL SP LLC	
	5. No Address (PARID 00055108)	155 HALL SP LLC	
Collectively, "Hall Avenue"			D. Authorized Agents
			Rachel Jurgens B & R Holdings Company, LLC Scott Bertrand RCPESP, LLC

E. Existing Zoning and Improvements

The following table provides zoning information and existing improvements for the properties, as classified above in section II.A and II.B.

Table 1. Existing Zoning and Improvements Summary

	Broad Street Properties	Hall Avenue Properties
Zoning	General Business	General Business
Entitlements	CU-02-20 AR-03-20	N/A, non-conforming sites that were designed and built legally, to Planning staff's knowledge
Conditions on prior approvals	1) The sidewalk proposed in the Town of Southern Pines Existing Park Inventory and Service Area Map be built by the developer to Town Standard. The amount of sidewalk required to be constructed will be that which is equivalent to the frontage on SW Broad Street that is shown on the Park Inventory and Service Area Map. However, the sidewalk may be located on or adjacent to the proposed development in a manner deemed most appropriate by the applicant and Town of Southern Pines staff. 2) A deviation from the standards in UDO§ 4.3.6 Perimeter Landscaping for Vehicle Use Areas, specifically the requirement for large trees every thirty (30) linear feet along the portion of the property line shared with 155 Hall Ave (also identified by PARID 00055107 and Moore County PIN 858109051976) directly in front of the existing sign for Thyme & Place Cafe.	N/A
Improvements	• Drive-up/through café • Food truck campus, including a commercial building called "Beer Garden" and outdoor seating • Asphalted parking with marked spaces • Stormwater pond • Water and sewer main lines on SW Broad St.	• Multi-unit commercial building • Unpermitted walk-in cooler • Gravel parking, unmarked spaces • Water main line on Hall Ave.
Comments	The proposed conditional zoning district would supersede the existing conditional use permit. Awaiting signed shared parking agreement between all property owners	Awaiting signed shared parking agreement between all property owners

F. 2040 Comprehensive Plan Designation for General Framework, Conservation and Development, and Character Districts

General Framework Map: Area to Transform, Community Activity Center

These areas should re-imagine employment, shopping, and entertainment opportunities by creating new energized activity areas. These areas require deliberate planning for the entire area rather than piecemeal development. These communities' centers should include mixed land uses and have a discernible center including main street, park, square, or plaza with businesses fronting on these centers. All buildings should front on the corridor and street with wide sidewalks. Public gathering spaces are an important component of these centers.

Conservation and Development Map: Mixed-Use Area

These areas are meant to serve economic and entertainment needs within the community. Small blocks with a mix of land uses and active public spaces (i.e., gathering places) between buildings is the vision for these areas. General Business is not a zoning category that is envisioned in this area, rather Central Business or Neighborhood Business.

Character District Map: Complete Community

Similar description to the previous two sections, plus walk-bike-auto-oriented transportation; allowing multi-modal means to access adjacent properties. The design and scale of complete communities encourage active living via a complete and connected network of streets, sidewalks, parks, and greenways. Non-residential development should be neighborhood commercial, office, institutional, and stacked or block-length mixed-use buildings (with designs similar to those shown on pages 79-81 of the 2040 Comprehensive Plan). Signage is meant to include wall signs, murals, blade signs, ground signs, and entrance signs, but not monument signs. These parcels are located in the Focus Area C for US 1-South of Morganton area, called "Pinedene." In this area, emphasis on pedestrian connections, walkways, and crosswalks should be a significant design feature. Many streetscape-level improvements are recommended to be done in partnership with the Town and with adjacent landowners. Parking should be a mixture of street, public lots, and on-site.

Pinedene: Design Guidebook for the Southern Pines Complete Community Focus Area C

Renovation and reuse. Public realm improvements should include sidewalks, street trees, water fountains and other design elements that enhance gathering spaces, and provide bicycle parking. Traffic calming measures should include sidewalks, crosswalks, protected bicycle infrastructure, and travel lane narrowing.

Redevelopment: Public realm improvements should include mixing uses with street-oriented design, public seating along ROW, access within the block (i.e., not main thoroughfares), and balance between shaded areas and open recreational space. Traffic calming measures should include inner block paths that are inaccessible by car (but accessible by delivery trucks or emergency vehicles) and protected bike lanes to connect Pinedene with downtown.

Figure 1. Vision for Pinedene from Guidebook



G. Applicant Proposed Conditions

Condition 1. This conditional zoning district shall supersede the Conditional Use Permit (i.e., Moore County Register of Deeds Book 5334 Pages 278 to 280)

Condition 2. Permitted land uses shall be limited to the following:

- Cafeteria or limited service restaurant (LBCS 2520),
- Bar or drinking place (LBCS 2540),
- Mobile food services (LBCS 2550),
- Food truck campus (LBCS 2551),
- Caterer (LBCS 2560),
- Multipurpose facility open to the general public (i.e., “Banquet Hall,” LBCS 5371), and
- Temporary uses (LBCS 9920) and Special events (LBCS 9910), which do not require additional permitting:
 - Vendor markets, such as those with up to thirty (30) vendors using 10x10, 12x12 tents to sell items; and
 - Charity Events, such as fundraisers that include up to thirty (30) related vendors and 10x10, 12x12 tents ; and
 - Themed events hosted either by Red’s or someone wanting to use some or most of the Red’s premises (this would include larger dining tents that will follow tent permitting requirements).
- Temporary uses (LBCS 9920) and Special events (LBCS 9910) other than those listed above shall require Special Event permits.

The following accessory uses and structures shall also be permitted:

- One stage outdoor stage for up to 400 square feet, and
- One concrete slab patio for up to 825 square feet to be used as outdoor seating, and
- No more than one shed for storage purposes; and

- No more than one drive-through coffee bar; etc.

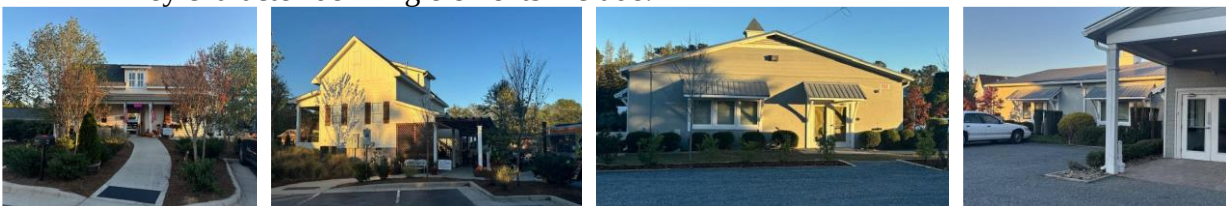
Condition 3. Cross Use of Properties.

- Allowing the cross use of 155 Hall Ave as an ancillary property to 801/901 SW Broad is a primary goal of this application. Cross Use includes, but is not limited to shared restrooms, parking, and reciprocal access. When not being privately rented, Suite A is intended as an ancillary/alternative site to Red's Corner seating areas.
- Pedestrian access:
 - Morganton and SW Broad frontages: the existing sidewalk systems recently installed allow sufficient access to the site from these streets. Once accessed, pedestrians self direct to various points of interest on site. For example, someone headed to a restroom may take a different path than heading to the food trucks.
 - Hall Ave frontage: access from Hall Ave will see minimal foot traffic as Hall Ave is dead end road and not a main thoroughfare.
 - Access between the properties is clearly defined with marked walkways or open area where vehicular traffic is excluded.

Condition 4. Noise. 155 Hall Ave: There shall be no change in permitted noise levels. The outdoor stage shall be permitted to have live outdoor music performances with amplification, subject to the local noise code, until 11PM.

Condition 5. Hours of Operation. The hours of operation shall be 6:00 AM to 11:00 PM.

Condition 6. Architecture. Renovations of the exterior architecture of the existing buildings shall be designed in the same character or complement the existing architecture as was submitted in architectural compliance permit file #AR-03-20. Some key character-defining elements include:



Condition 7. Landscaping. Current landscaping and buffering shall be retained except for sod installed in and around the highlighted area in Section 1d (Pocket Park). The perimeter vehicle use area landscaping shall continue to be waived between the property lines of 901 SW Broad Street and 155 Hall Avenue. A vegetative barrier/hedge shall be added between the gravel commonly known as the food truck parking and the sodded area to prevent illegal parking.

Condition 8. The 20 x 30 tent shall be permitted to remain, permanently. A pavilion-type structure of similar size and without walls will be permitted in the event Red's replaces the tent.

Condition 9. Site Access. Site access shall remain at the current locations and no parking shall be permitted in the access easement between 901 SW Broad Street and 155 Hall Avenue.

Condition 10. Parking. Total Combined Parking Spaces shall be 66. The 37 parking spaces at 155 Hall Ave may remain gravel and unmarked. 901 SW Broad shall provide all 29 existing parking spaces.

Condition 11. Bicycle Parking. Bicycle racks shall be provided with a minimum of six spaces.

Condition 12. Signage. Temporary “Coming Soon” sign facing Red’s Corner interior of the two properties to notify Red’s customers and shall be permitted for 90 days and shall follow UDO standards for dimensions. Any additional street fronting or building signs shall follow UDO standards.

Condition 13. Traffic Patterns. 901 SW Broad: Traffic Patterns will coincide with the existing traffic patterns. 155 Hall Ave: Site access shall remain at the current locations.

Condition 14. Fats, Oils, Grease, Odors. No fats, oils, grease, or odors shall be generated from the business’ operations. Prepared food may be provided by Red’s Corner food trucks or caterers.

Condition 15. Lighting. Existing lighting at the property shall remain in place. Lights may be added to increase safety and security on site but shall follow standards in the UDO.

Condition 16. Utilities & Trash. Existing dumpsters shall remain on site.

Condition 17. Outdoor Storage shall be prohibited.

Condition 18. Fencing. No new fencing shall be permitted.

Figure 2. Zoning Map



Figure 3. Vertical Aerial Imagery of Site Dated December 30, 2022



III. STAFF REVIEW

1. Application Review Dates

Application Submitted: **November 12, 2024**

Application Incomplete: **November 19, 2024**

Application Complete: **November 21, 2024**

Planning Board Public Hearing Notice

Publication: **December 4, 2024** and **December 11, 2024**

Mail: **December 5, 2024**

Signage: **December 5, 2024**

Internet: **December 3, 2024**

Planning Board Regular Meeting: **December 19, 2024**

2. Staff Consistency Evaluation Based on Criteria for the Rezoning of Subject Parcel for Zoning Map Amendment Review per UDO § 2.17.9

When reviewing an application for zoning, the hearing bodies (Planning Board and Town Council) shall consider and be guided by the following criteria, as set forth in UDO §2.17.9 and outlined below. 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.

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

See “2040 Comprehensive Plan Designation for General Framework, Conservation and Development, and Character Districts” above for more information. Generally speaking, the Pinedene area of town, including Red’s Corner, is meant to be a high-density, mixed use, walkable/bikeable area with plazas and wide sidewalks as well as buildings fronting on the edge of rights of way. Red’s Corner is known as an energized activity area; its success was the catalyst for this proposed expansion. Since its special use permit approval, the campus has become a popular place to go in town for gathering. The proposed stage, improved open space, bicycle parking, and event venue space are aligned with the 2040 Comprehensive Plan’s vision for a vibrant Pinedene area.

There are some inconsistencies with the 2040 Comprehensive Plan and the Pinedene Guidebook’s visions for this Community Activity Center, but some may be improvements that require partnerships with adjacent landowners and the Town of Southern Pines. The first area of inconsistency is interconnectivity with adjacent parcels, which is not a part of the conditions or vision within the proposed conditional zoning district. Crosswalks across Old U.S. 1 and SW Broad Street are not proposed, either, to safely allow pedestrians to cross the street if parking on the opposite side of Old U.S. 1.

Secondly, the campus is horse-shoed by Morganton Road, Old U.S. 1/SW Broad Street, and Hall Avenue, all of which could have improved sidewalks and street trees. Figures 2, 3, and 4 show the streetview of Red's Corner from each point on the horseshoe. There are technical limitations to planting street trees, such as site visibility triangles and points on ingress/egress, however, alternative designs could improve pedestrian sidewalks and street trees along the perimeter of the campus.

Figure 4. View from Old U.S. 1



Figure 5. View from Morganton Road



Figure 6. View from Hall Avenue

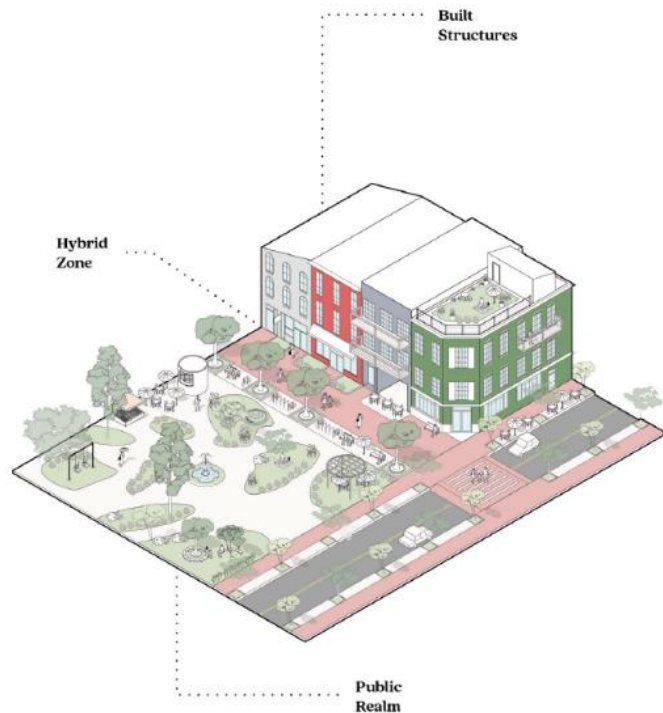


Thirdly, General Business zoning is not considered appropriate for Mixed Use Areas, however, the Unified Development Ordinance only permits Food Truck Campuses within General Business, subject to conditional zoning. This discrepancy is acceptable considering that the site is currently a food truck campus and conditional zoning allows the Applicant to propose conditions for rezoning that allow the development to grow and to be more consistent with the Comprehensive Plan's goals and vision.

Lastly, the Pinedene guidebooks calls for “eyes on the street” design. This concept calls for high-density, mixed use areas that have building-forward design and parking on the rear side of buildings (see Figure 5), which permits residents and businesses to monitor the street, presumably, making them safer, especially at night. Red's Corner, despite being a business, is effectively a public realm in that it has gathering spaces internal to the site. However, the gathering spaces are separated from the actual public realm by a parking lot and café drive-through, and the rights-of-way have insufficient sidewalks, tree canopy, and gathering spaces (i.e., the hybrid zone in Figure 5 below). Parking should be in the rear of buildings and available via shared municipal parking.

In summary, the proposed conditional zoning district is consistent with the 2040 Comprehensive Plan's vision of an energized Community Activity Center, but it falls short of providing public realm and hybrid zone amenities and landscaping that would make the site more pedestrian and bicycle-friendly. However, the scope of ideal improvements is something that is recommended to be done through public-private partnership, which does not appear to have been considered in this application.

Figure 7. Design vision for Pinedene with “Eyes on the Street”



(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.*

Planning estimates, that if an act is performing on the stage while there is a maximum capacity event at the “Paddock” event venue, caterers prepping meals in 155 Hall Avenue, and food truck/bar clients at Red’s, there could be a maximum demand of approximately 145 parking spaces. Approximately 7,800 square feet of outdoor seating (formal and informal) for a restaurant (i.e., five food trucks) would require 78 spaces. A caterer/limited service restaurant like the old Thyme and Place space would require 3 spaces (i.e., one per 600 square feet). An event venue with 250 seating capacity would require 64 parking spaces. It is understood that all spaces may not be used to their maximum capacity, but on high-demand days, Planning staff foresee potential traffic and parking problems considering that they are only proposing 66 parking spaces between 155 Hall Avenue and 901 SW Broad Street.

Planning staff does not expect the Applicant to create 79 additional parking spaces, but believes that a shared parking agreement and an overflow parking plan between property owners at 155 Hall Avenue, 901 SW Broad Street, Bank of America, and any other adjacent properties that follows required standards in UDO Section 4.5.10 would be appropriate to address parking concerns that have already arisen under the current special use permitted food truck campus. Furthermore, at a minimum, a crosswalk across Old U.S. 1 between the Bank of America parking lot and Red’s Corner would provide safer crossing for people unable to secure on-site parking.

Regarding stormwater runoff onto adjacent properties and the streets, the Town Engineer needs a letter, certified by an engineer, that states that the pre-post calculations will be the same with the added impervious surface. At the December 3, 2024, Technical Review Committee meeting, the Town Engineer stated that the pond may be under-designed and underperforming, so improvements may be likely. If stormwater pond improvements are required, then the development would need to go through site plan review. However, if not, then a site plan review may not be needed and the Applicant would proceed to building permit review unless exterior modifications are made to any of the buildings.

At the December 3, 2024, Technical Review Committee meeting, the Fire Marshall stated that a walk-in cooler was added to 155 Hall Avenue without proper permitting and is not shown on the conditional zoning plans. A notice of violation was issued by the Fire Department, and the cooler should not be currently operating. The cooler will need to be properly permitted (e.g., electrical, building, etc.) and

the concrete slab approximately 10' by 10' needs to be added to impervious calculations for the stormwater pond.

In previous meetings with the Applicant, Planning and Engineering staff communicated that the Applicant should address the 2020 traffic design analysis and whether or not the current traffic generation is within the original parameters of that study. Staff also recommended that the Applicant propose wayfinding signage and “illegal parking” signage to discourage parking in unmarked spots.

(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.*

As presently zoned (i.e., CU-02-20), the site is entitled to operate at a food truck campus on properties identified within the Special Use Permit. However, the campus cannot expand without either an amendment to the original special use permit or a conditional zoning district, as is being proposed. The success of Red's Corner food truck campus and its desired expansion into adjacent properties have warranted the need for this rezoning request and Town review. Considering this and existing parking and traffic concerns, the site is no longer suitable as currently zoned and appropriate mitigation should be taken to address site issues.

(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 three main health, safety, or welfare concerns that have been identified by Planning staff at this time, based on the application materials, and routine analysis of the subject parcels and surrounding areas, are as follows:

1. **Illegal Parking.** Need for shared parking agreement(s) between properties and property owners as well as parking plans for high-demand days that would address illegal and unsafe parking.
2. **Pedestrian Safety.** Need for additional sidewalks along each street frontage as well as Hall Avenue. Need for a crosswalk across Old U.S. 1.
3. **Potential Stormwater Runoff.** Engineered calculations on current stormwater runoff and runoff with proposed site improvements.
4. **Un-Permitted Walk-In Cooler.** Need for the cooler to follow appropriate Town permitting reviews prior to occupancy.

(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.

See comments under **Consistency**.

(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 rezoning is for five parcels, totaling 2.92 acres. The parcel divisions are atypical and create issues with perimeter vehicle use area landscaping, which has to be between vehicle use areas and property lines. The high-intensity of the land use and its relatively small size and location as a corner lot between two arterial streets creates traffic and parking concerns.

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

(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 range 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.*

The rezoning request is for a conditional zoning district; therefore, Applicant representations may be taken into consideration while reviewing and making final recommendations and decisions.

3. Outside Agency Comments

A request for comments was emailed to agencies on December 3, 2024. Agencies notified include Town of Southern Pines Streets, Public Works, Utilities, Fire, Recreation and Parks, and Engineering departments, the Regional Land Use Advisory Commission (RLUAC), United States Fish and Wildlife Services (US FWS), the Moore County Airport, and the North Carolina Department of Transportation (NCDOT). No comments or comments with “no comment” have been received as of the writing of this staff report.

The expansion of Red’s Corner has been discussed by the Technical Review Committee or members of this committee on April 22, 2024, September 26, 2024, November 5, 2024, and December 3, 2024. All comments have been reflected in section

III.2 of this staff report. Any additional agency or public comment received prior to the public hearing will be shared during staff's presentation.

4. Staff Comments and Recommendation

Approval of a conditional zoning district approves a specific use with reasonable conditions that mitigate the negative impacts of the proposed development and ensure compatibility with the surrounding area. Only conditions approved by the Town Council and consented to by the petitioner in writing may be incorporated into the conditional zoning district. If the applicant ever wishes to change an approved condition, they must follow the same rezoning procedure required to amend the official zoning map unless considered a minor change per UDO §2.17.11(K).

Planning staff recommend that the hearing bodies approve the conditions on the General Business Conditional Zoning District as submitted in the application and to please give additional consideration to:

1. Requiring a parking plan for events with high parking demands that includes a shared parking agreement between the property owners at 155 Hall Avenue, 901 SW Broad Street, Bank of America, and any other adjacent properties that follows required standards in UDO Section 4.5.10;
2. Requiring planting of additional street trees along Morganton Road;
3. Requiring a crosswalk across Old U.S. 1;
4. Requiring a letter, certified by an engineer, that states that the pre-development and post-development stormwater runoff calculations will be the same with the proposed impervious surface additions;
5. Requiring a traffic generation letter regarding proposed use in comparison with the 2020 traffic design analysis;
6. Requiring the addition of the walk-in cooler at 155 Hall Avenue to the plans (rather than "car port"), building permit approval, and a certificate of occupancy prior to its use; and
7. Discussion of potential future public-private partnerships to improve the public realm and hybrid zone surrounding the development, such as sidewalks along Morganton, Old U.S. 1/SW Broad Street, and Hall Avenue as well as pedestrian connectivity with public parking within Pinedene.

IV. ATTACHMENTS

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

1. Draft Planning Board Resolution to Adopt a Written Recommendation
2. Conditional Zoning District Application
3. Proposed Site Layouts
4. Narrative for Proposed Amendment and Offered Conditions provided by Applicant
5. Supplemental Materials Provided by the Applicant and on File for the Property

Additional documents related to this application including (but not limited to) 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 inspection during normal business hours.

V. 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, town staff have prepared the following draft motions for the Planning Board's consideration, possible modification as necessary, and adoption.

*** * ***

I move that after reviewing the proposed map amendments to the Town of Southern Pines Zoning Map and after considering the criteria for approval of map amendments found in UDO §2.17.9:

- 1. The proposed amendments are consistent with the 2040 Comprehensive Plan for the reasons set forth in Attachment 1 of staff report Z-06-24;**
2. The proposed amendments are consistent with the 2040 Comprehensive Plan for the reasons set forth in Attachment 1 of staff report Z-06-24 as revised by the Planning Board;
3. The proposed amendments are inconsistent with the 2040 Comprehensive Plan for the reasons set forth in Attachment 1 of staff report Z-06-24 as revised by the Planning Board;

And, therefore, I move to:

- 1. Recommend approval of Z-06-24 to the Town Council with the eighteen conditions on the General Business Conditional Zoning District as submitted by the Applicant with additional information submitted before the Town Council public hearing regarding the seven additional issues identified in the December 19, 2024, staff report.**
2. Recommend denial of Z-06-24 to the Town Council

Note that the effect of Town Council approval of a conditional zoning district and all conditions that have been attached to the approval are binding on the property as an amendment to the Zoning Map. All subsequent Development and use of the property shall be in accordance with the standards for the approved Conditional Zoning district; the approved petition and all conditions attached to the approval. Only those uses and structures indicated in the approved petition shall be allowed on the subject property. Any Development in the district shall comply with all provisions of and conditions to the approved petition. Any uses and structures on the subject property also shall

comply with all standards and requirements for Development in the underlying general zoning district. Lastly, minor changes in the detail of the approved petition or Site Plan that do not involve a change in uses permitted or the density of overall Development permitted and that will not alter the basic relationship of the proposed Development to surrounding properties or the standards.



**PLANNING BOARD
RESOLUTION TO ADOPT A WRITTEN RECOMMENDATION
FOR ZONING MAP AMENDMENT APPLICATION
FOR A CONDITIONAL ZONING DISTRICT
Z-06-24**

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 December 19, 2024, to listen to public comments, ask questions of the Town’s planning staff, and consider zoning map amendment application #Z-06-24.

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 with the Applicant’s eighteen proposed conditions with additional information requested for six remaining issues for the five subject parcels—located at 155 Hall Avenue and 901 SW Broad Street identified as Parcel Identification Numbers 20180500, 00048220, 00047570, 00055109, and 00055108—totaling 2.92 acres. The six remaining issues for which the Applicant should provide additional information for the record include:

1. Requiring a parking plan prior to rezoning approval that includes a shared parking agreement between the property owners at 155 Hall Avenue, 901 SW Broad Street, Bank of America, and any other adjacent properties that follows required standards in UDO Section 4.5.10 for events with high parking demands;
2. Requiring planting of additional street trees along Morganton Road in areas devoid of vegetation prior to rezoning approval;
3. Requiring a crosswalk across Old U.S. 1 prior to rezoning approval;

4. Requiring a letter, certified by an engineer, that states that the pre-development and post-development stormwater runoff calculations will be the same with the proposed impervious surface additions prior to rezoning approval;
5. Requiring a traffic generation letter that states whether additional proposed uses are within the study parameters of the 2020 traffic design analysis, which should be reviewed by the Town Engineer prior to rezoning approval; and
6. Requiring the addition of the walk-in cooler at 155 Hall Avenue to be added to site layout plans (rather than “car port”) and all permitting to be approved prior to issuance of rezoning approval.

Additionally, the proposed General Business conditional zoning district for the expansion of Red’s Corner should not preclude potential future public-private partnerships that improve the public realm and hybrid zone surrounding the development as described in the Pinedene Design Guidebook for the Southern Pines Complete Community Focus Area C, such as sidewalks along Morganton, Old U.S. 1/SW Broad Street, and Hall Avenue as well as pedestrian connectivity with public parking within Pinedene. This may be addressed in conversations during the public hearing before the Town Council or in another planning process.

The application with the Applicant’s proposed conditions for a General Business Conditional Zoning District is consistent with Policy 9.3 (i.e., continuing to support local business and entrepreneurship in the community) and Policy 9.4 (i.e., promoting micro-retail businesses in the community). The application and Applicant’s proposed conditions are also consistent with the intent of the Areas to Transform and Community Activity Centers designations on the General Framework Map, Mixed-Use Areas on the Conservation and Development Map, and Complete Communities character district. With the Applicant’s proposed conditions and the above issues addressed prior to final decision, the Planning Board finds that reasonably foreseeable adverse impacts on neighboring lands or on general health, safety, and welfare would be appropriately addressed.

The Planning Board recommends the Town Council adopt this zoning amendment (i.e., #Z-06-24), which rezones the properties from General Business with a Special Use Permit to General Business Conditional Zoning District with the following conditions to which the applicant has consented:

Condition 1. This conditional zoning district shall supersede the Conditional Use Permit (i.e., Moore County Register of Deeds Book 5334 Pages 278 to 280)

Condition 2. Permitted land uses shall be limited to the following:

- Cafeteria or limited service restaurant (LBCS 2520),
- Bar or drinking place (LBCS 2540),
- Mobile food services (LBCS 2550),
- Food truck campus (LBCS 2551),
- Caterer (LBCS 2560),
- Multipurpose facility open to the general public (i.e., “Banquet Hall,” LBCS 5371), and
- Temporary uses (LBCS 9920) and Special events (LBCS 9910), which do not require additional permitting:

- Vendor markets, such as those with up to thirty (30) vendors using 10x10, 12x12 tents to sell items; and
- Charity Events, such as fundraisers that include up to thirty (30) related vendors and 10x10, 12x12 tents ; and
- Themed events hosted either by Red's or someone wanting to use some or most of the Red's premises (this would include larger dining tents that will follow tent permitting requirements).
- Temporary uses (LBCS 9920) and Special events (LBCS 9910) other than those listed above shall require Special Event permits.

The following accessory uses and structures shall also be permitted:

- One stage outdoor stage for up to 400 square feet, and
- One concrete slab patio for up to 825 square feet to be used as outdoor seating, and
- No more than one shed for storage purposes; and
- No more than one drive-through coffee bar; etc.

Condition 3. Cross Use of Properties.

- Allowing the cross use of 155 Hall Ave as an ancillary property to 801/901 SW Broad is a primary goal of this application. Cross Use includes, but is not limited to shared restrooms, parking, and reciprocal access. When not being privately rented, Suite A is intended as an ancillary/alternative site to Red's Corner seating areas.
- Pedestrian access:
 - Morganton and SW Broad frontages: the existing sidewalk systems recently installed allow sufficient access to the site from these streets. Once accessed, pedestrians self direct to various points of interest on site. For example, someone headed to a restroom may take a different path than heading to the food trucks.
 - Hall Ave frontage: access from Hall Ave will see minimal foot traffic as Hall Ave is dead end road and not a main thoroughfare.
 - Access between the properties is clearly defined with marked walkways or open area where vehicular traffic is excluded.

Condition 4. Noise. 155 Hall Ave: There shall be no change in permitted noise levels. The outdoor stage shall be permitted to have live outdoor music performances with amplification, subject to the local noise code, until 11PM.

Condition 5. Hours of Operation. The hours of operation shall be 6:00 AM to 11:00 PM.

Condition 6. Architecture. Renovations of the exterior architecture of the existing buildings shall be designed in the same character or complement the existing architecture as was submitted in architectural compliance permit file #AR-03-20. Some key character-defining elements include:



Condition 7. Landscaping. Current landscaping and buffering shall be retained except for sod installed in and around the highlighted area in Section 1d (Pocket Park). The perimeter vehicle use area landscaping shall continue to be waived between the property lines of 901 SW Broad Street and 155 Hall Avenue. A vegetative barrier/hedge shall be added between the gravel commonly known as the food truck parking and the sodded area to prevent illegal parking.

Condition 8. The 20 x 30 tent shall be permitted to remain, permanently. A pavilion-type structure of similar size and without walls will be permitted in the event Red's replaces the tent.

Condition 9. Site Access. Site access shall remain at the current locations and no parking shall be permitted in the access easement between 901 SW Broad Street and 155 Hall Avenue.

Condition 10. Parking. Total Combined Parking Spaces shall be 66. The 37 parking spaces at 155 Hall Ave may remain gravel and unmarked. 901 SW Broad shall provide all 29 existing parking spaces.

Condition 11. Bicycle Parking. Bicycle racks shall be provided with a minimum of six spaces.

Condition 12. Signage. Temporary "Coming Soon" sign facing Red's Corner interior of the two properties to notify Red's customers and shall be permitted for 90 days and shall follow UDO standards for dimensions. Any additional street fronting or building signs shall follow UDO standards.

Condition 13. Traffic Patterns. 901 SW Broad: Traffic Patterns will coincide with the existing traffic patterns. 155 Hall Ave: Site access shall remain at the current locations.

Condition 14. Fats, Oils, Grease, Odors. No fats, oils, grease, or odors shall be generated from the business' operations. Prepared food may be provided by Red's Corner food trucks or caterers.

Condition 15. Lighting. Existing lighting at the property shall remain in place. Lights may be added to increase safety and security on site but shall follow standards in the UDO.

Condition 16. Utilities & Trash. Existing dumpsters shall remain on site.

Condition 17. Outdoor Storage shall be prohibited.

Condition 18. Fencing. No new fencing shall be permitted.

ADOPTED this the 19th day of December, 2024.

Diane T. Westbrook, Chairwoman

ATTEST:

Cindy Williams
Secretary to the Planning Board



Conditional Zoning District Application

Fee: \$1,500.00

Date Received: _____

Case No.: Z-____-____

Project Information:

Street Address: Red's Corner Expansion: 801/901 SW Broad Street adding 155 Hall Avenue

PIN: 858100061104 / 858100061061 (Red's) 20180500 / 00048220 (Red's)
858109051976/ 8581090050947/858109051859 Parcel ID: 00055107/00055108/00055109 (155 Hall Ave)

Site Size: 2.92 AC 1.86 AC = 1.76 + 0.1 AC (Red's)
1.057 AC (155 Hall Ave) Current Zoning: CZ (Food truck campus) & GB

Applicant:

Name(s): RCPESP, LLC c/o Scott Bertrand

Email: scott.m.bertrand@gmail.com

Phone: 910-420-0048

Mailing Address: 901 SW Broad Street, Southern Pines, NC 28387

Authorized Agent, if different from Applicant:

Name(s): Rachel Jurgens for B&R Holdings Company, LLC

Email: _____

Phone: _____

Mailing Address: _____

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

Name(s): B&R Holdings Company, LLC (Red's); 155 Hall SP, LLC

Email: jurg1102@gmail.com; donkinney99@gmail.com

Phone: 910-603-5641; 910-585-5265

Mailing Address: 205 E Illinois Ave, Southern Pines, NC 28374; 50 Gingham Lane, Pinehurst, 28374

5/1/24

APPOINTMENT OF AGENT

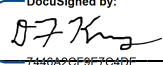
The undersigned owner(s), 155 Hall SP, LLC, hereby appoint(s) Scott Bertrand as the exclusive agent for the purpose of making an application to the Town of Southern Pines for an amendment to the zoning of the property described in the attached application. The owner(s) hereby agree(s) that this agent 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 Planning Board and Town Council for a rezoning of the subject property to a Conditional Zoning District; and
4. to act on behalf of the owner(s) without limitations with regard to any and all things directly or indirectly connected with, or arising out of, any application for an amendment to the zoning of the subject property under the Town of Southern Pines Unified Development Ordinance.

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

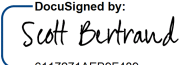
Signed this 14th day of October, 2024.

155 Hall SP, LLC

DocuSigned by:

7440A20F9E704DE...

Property Owner

Property Owner

DocuSigned by:

0117271AE09F409...

Agent

5/1/24

APPOINTMENT OF AGENT

The undersigned owner(s), B&R Holdings Company, LLC, hereby appoint(s) myself
Robert B. Blandford
as the exclusive agent for the purpose of making an application to the Town of Southern Pines for an amendment to the zoning of the property 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 Planning Board and Town Council for a rezoning of the subject property to a Conditional Zoning District; and
4. to act on behalf of the owner(s) without limitations with regard to any and all things directly or indirectly connected with, or arising out of, any application for an amendment to the zoning of the subject property under the Town of Southern Pines Unified Development Ordinance.

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

Signed this 12 day of November 2024

B&R Holdings Company, LLC

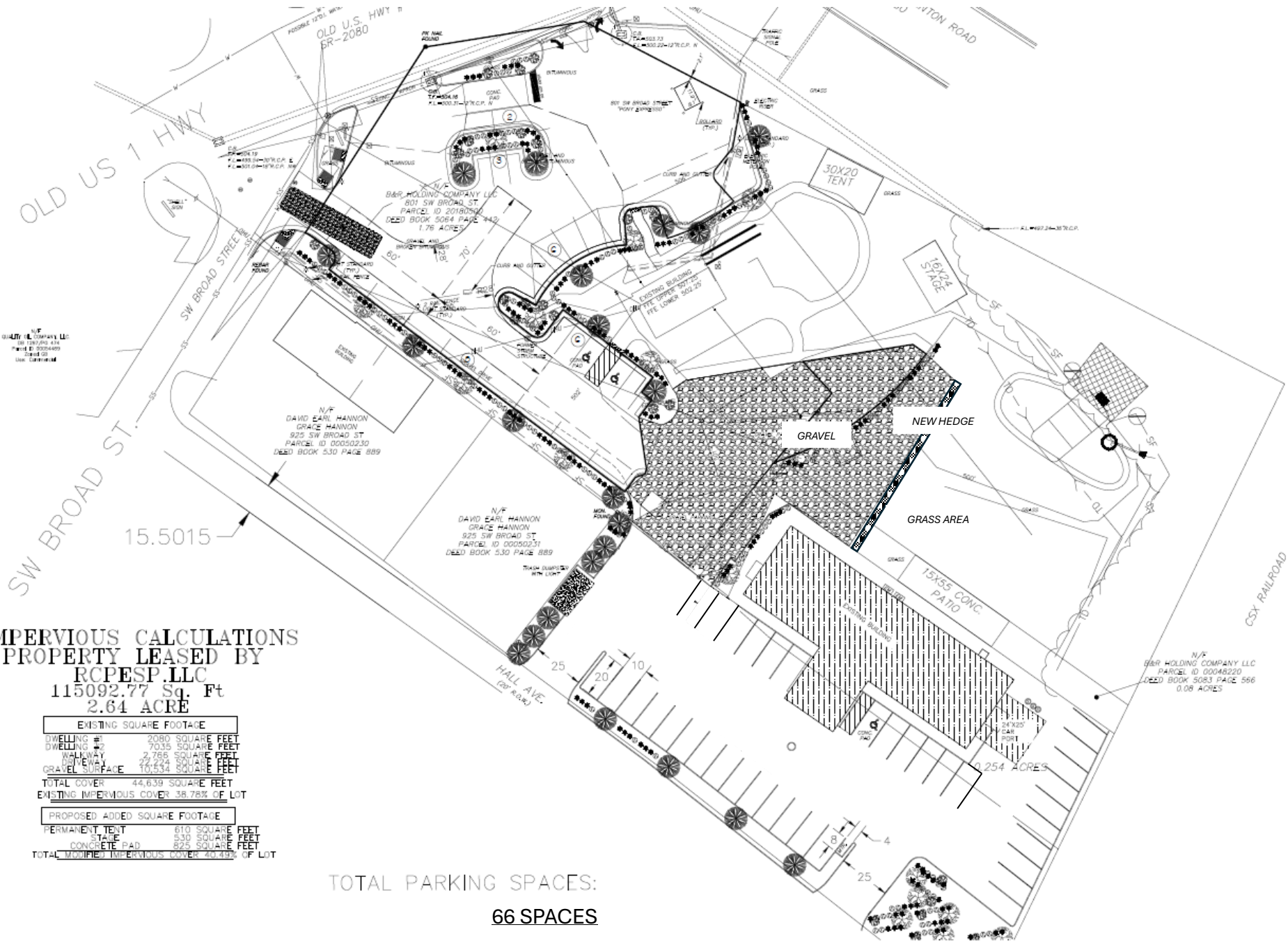
*I will remain
agent for Land*

Robert B. Blandford
Property Owner

Property Owner

Agent

5/1/24

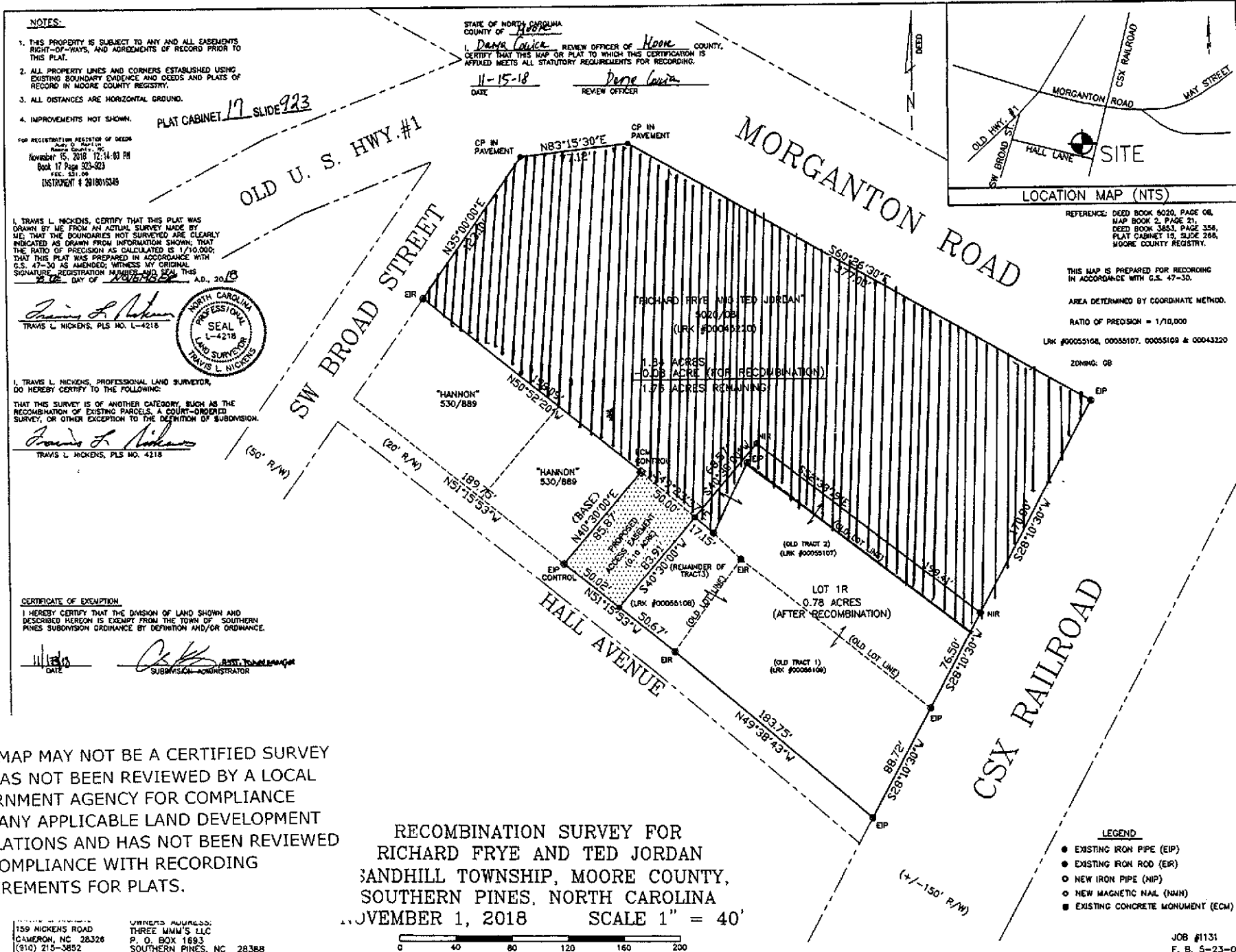


IMPERVIOUS CALCULATIONS
PROPERTY LEASED BY
RCPEP LLC
115092.77 Sq. Ft
2.64 ACRE

EXISTING SQUARE FOOTAGE	
DWELLING #1	2080 SQUARE FEET
DWELLING #2	7035 SQUARE FEET
WALKWAY	2,785 SQUARE FEET
DRIVEWAY	24,424 SQUARE FEET
GRAVEL SURFACE	10,534 SQUARE FEET
TOTAL COVER	44,639 SQUARE FEET
EXISTING IMPERVIOUS COVER 38.78% OF LOT	
PROPOSED ADDED SQUARE FOOTAGE	
PERMANENT TENT	610 SQUARE FEET
STAGE	530 SQUARE FEET
CONCRETE PAD	825 SQUARE FEET
TOTAL MODIFIED IMPERVIOUS COVER	40.43% OF LOT

TOTAL PARKING SPACES:
66 SPACES

17 / 923



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



901 SW Broad Street
Southern Pines, NC 28387
Tel: 910-246-0205

Improvements Aerial:



APPLICATION SUMMARY:

Applicant RCPESP, LLC (“Red’s Corner” or “Red’s”) will accomplish a few items with this application:

1. Annex the adjacent property, 155 Hall Ave, into the existing Food Truck Campus zoning with minimal language edits.
2. Physical improvements include a 15’ x 55’ patio and 16’ x 24’ stage.
3. Define events that are permitted.



NARRATIVE:

Red’s Corner has leased all of 155 Hall Avenue and will include the property’s amenities with Red’s existing operations. 155 Hall consists of Suite A (former Pollywog’s Play Space; daycare) and Suite B (former Thyme and Place Café; full-service restaurant):

- **Suite A** (“The Paddock at Red’s” or “The Paddock”) will operate as a rentable event space and otherwise a dining room/drinking establishment, further described below.
- **Suite B** operates as a food preparation commissary or cafeteria/limited-service restaurant.

With exclusive use for Red’s, 155 Hall Ave provides additional parking, multimodal access, and restrooms to the Campus. Further, offering an indoor gathering space provides a significant benefit to the public as well as the numerous small businesses that Red’s supports. Meaning, Red’s is currently a seasonal outdoor business and low attendance during weather extremes negatively impacts everyone’s business at Red’s. When it’s not nice outside, The Paddock offers a comfortable place for visitors to enjoy their food.

Along with assimilating 155 Hall into the Food Truck Campus, Red’s will construct the patio and stage which will enhance the area behind the food trucks. This area shown below is being treated as a quasi-Pocket Park further described on pg. 91 of the 2040 Comprehensive Plan. Along with new sod, a vegetative barrier will be installed to exclude vehicle parking.



NARRATIVE – INTENSITY:

Red's is at its busiest on fair weather Saturdays from 6-8PM. During those times, the 29 existing spots will likely be filled and turned over at least once. Annexing the 37 additional parking at 155 Hall on a long-term basis is a significant benefit to the public and all those involved with Red's business. Attached is the Emergency Access Management plan submitted to the Fire Department ensuring Red's manages the emergency access points. Effective management will result in the campus staying clear so Fire and Rescue personnel and equipment can service the site.

When considering a rare scenario where Red's and The Paddock are busy at the same time, peak activity may coincide with the 2 hours mentioned above for dinner service on a Saturday with perfect weather. For those few hours, Red's visitors will need to rely more on carpooling, public, and multimodal transportation. Motorcycle and bicycle parking, plus additional access points and circulation from Hall Avenue will provide lasting support for this rare occurrence.

Building the stage and related intensity: live music is a celebrated occurrence throughout Southern Pines. Providing a proper stage will shelter artists and their equipment from the elements. Red's will hire local and regional acts that customers can enjoy as part of Red's normal offerings. Live music will mostly occur on evenings and weekends.

On the vast majority of days, the assimilation of 155 Hall will reduce the Campus's intensity. In addition to normal Monday to Saturday operations, the daycare would occasionally host birthday parties on those days. The site will be less intense in the absence of the drop-offs, parties and parking of the employees and parents at the daycare.

Due to the nature of an outdoor business, Red's has lower attendance on hot, cold and rainy days. Opening The Paddock during those days will have similar intensity at best. For private rentals at The Paddock, we expect a similar intensity as the daycare. When both were open, Red's Corner and the daycare had busy days at the same time and the daycare was welcome to park at Red's. Occasionally, we would cone off a few spots for their events, but we don't find that necessary now as we can directly interact with people renting 155 Hall. The patio at 901 SW Broad can be rented or provide seating alternatives to Red's customers, but is subject to the same foul weather concerns.

ENCLOSURES:

- Seating chart – 155 Hall Ave
- Emergency Access Management

1. CONSISTENCY:

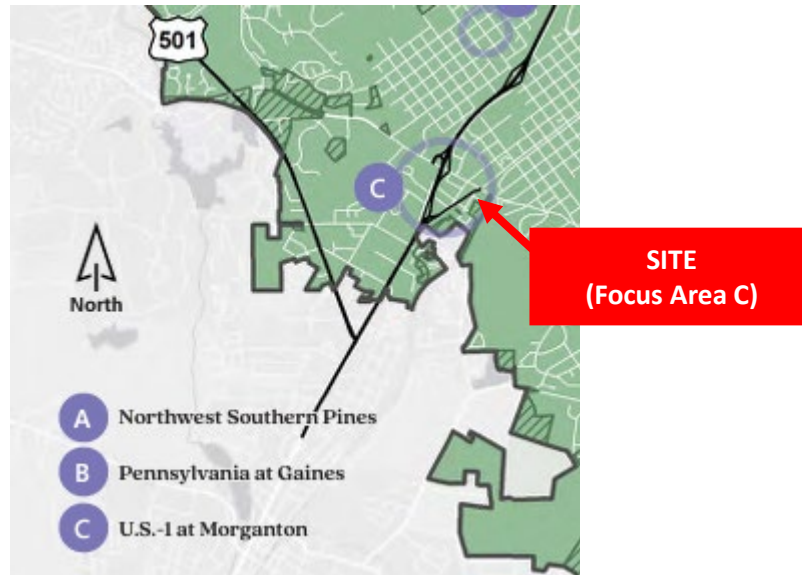
When reviewing Southern Pines 2040 Comprehensive Plan, expanding compatible uses along with creating “highly sociable places for the community” is a shared vision of the Town and applicant. In support, the items captioned below are the Plan’s Guiding Principles, the site being within Focus Area C, the Town’s primary goal of Sociable Places, incorporating Pocket Parks.

a. Guiding Principles:

Page 33 of 2040 Comprehensive Plan (Page 17 of PDF)

Land Use: *“Promote sense of place, social interaction, community-building.”*

b. Focus Area C: US 1-South of Morganton



Page 97 of Comprehensive Plan (Page 49 of PDF)

“As the southern entrance into the heart of the town, the area presents an opportunity for transformational change to create a new identity in this space, better utilize the land within for an expanded range of compatible uses, and offer a new experience for residents, workers, and visitors.”

c. Sociable Places:

Page 153 of Comprehensive Plan (Page 77 of PDF)

“One primary goal for the 2040 Comprehensive Plan is to create “highly sociable places” for the community.”

d. Quasi Pocket Park:

Page 91 of Comprehensive Plan (Page 46 of PDF)

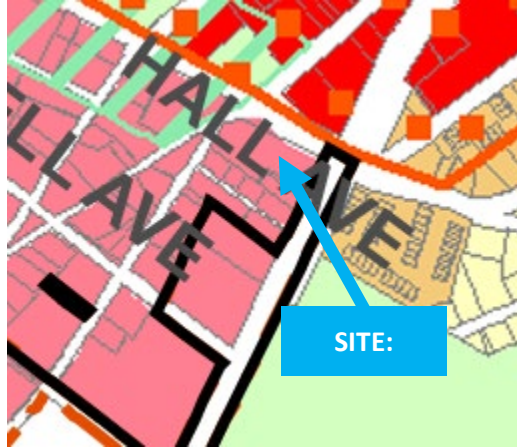
The green/open space mostly emulates a desirable pocket park which *“may include small event space, play areas for children, spaces for relaxing or meeting friends, or places to take lunch breaks.”*

2. ADVERSE IMPACTS ON NEIGHBORING LANDS:

The intended use of 155 Hall conforms with its existing GB zoning designation. As it relates to 901 SW Broad, these neighboring properties can now work together to provide space and parking for Red’s Corner customers. No other impact from the minimal physical improvements of the small stage and patio. For example, neither can be viewed from neighboring lands.

3. SUITABILITY AS PRESENTLY ZONED:

Zoning: Map:



Zoning Classification: 155 Hall Ave

GB, General Business

CZ, Food Truck Campus: 901 SW Broad & 155 Hall

- 901 SW Broad: Red's Corner, the property, and its Food Truck Campus designation remains the same, subject to conditions set forth in this application.
- 155 Hall: When applying the Food Truck Campus zoning to 155 Hall Avenue and its intended uses summarized below, 155 Hall Ave doesn't deviate from its current General Business designation. Allowing cross-use of these adjacent properties is consistent with Red's Corner's current use as Food Truck Campus and 155 Hall Avenue's existing GB zoning.

For example, Suite A will be used as a banquet hall, bar or drinking place, and caterer. Suite B as a cafeteria or limited service restaurant.

Zoning Table showing intended uses at 155 Hall as permitted uses under GB:

Land Use	LBSC Code	Description	RE	RR	RS-1	RS-2	RS-3	RM-1	RM-2	CB/DTO	GB	NB	OS	I	FRR
Cafeteria or limited service restaurant	2520	Provide services to patrons who order or select items and pay before eating; may be consumed on Premises, taken out, or delivered								Z	Z				
Bar or drinking place	2540	Bars, taverns, nightclubs primarily serving alcoholic beverages; may provide limited food and entertainment								Z	Z				
Caterer	2560	Provide single event-based food services, including banquet halls with catering for wedding receptions, etc.								Z	Z	Z		Z	

4. PUBLIC POLICY:

Allowing cross-use of these adjacent properties will provide more consistent service to the community, regardless of weather conditions. During weather extremes, the public struggles to enjoy the outdoor amenities of Red's Corner. Allowing for customer-friendly uses at 155 Hall Ave will encourage the public to socialize and support the various small business food trucks and caterers with less seasonal variability.

5. SIZE OF TRACT:

±2.92 AC. Calculated by combining the land commonly known as Red's Corner (1.86 AC) and the 1.057 AC associated with 155 Hall Ave.

6. OTHER FACTORS:

- The existing water/sewage infrastructure is sufficient for the intended use.
- The existing stormwater improvements are sufficient for combining these sites.

7. APPLICANT REPRESENTATIONS: Conditions offered by the Applicant

a. This conditional zoning district shall supersede the Conditional Use Permit (i.e., Moore County Register of Deeds Book 5334 Pages 278 to 280).

b. Permitted land uses shall be limited to the following:

- Cafeteria or limited service restaurant (LBCS 2520),
- Bar or drinking place (LBCS 2540),
- Mobile food services (LBCS 2550),
- Food truck campus (LBCS 2551),
- Caterer (LBCS 2560),
- Multipurpose facility open to the general public (i.e., "Banquet Hall," LBCS 5371), and
- Temporary uses (LBCS 9920) and Special events (LBCS 9910), which do not require additional permitting:
 1. Vendor markets, such as those with up to thirty (30) vendors using 10x10, 12x12 tents to sell items; and
 2. Charity Events, such as fundraisers that include up to thirty (30) related vendors and 10x10, 12x12 tents ; and
 3. Themed events hosted either by Red's or someone wanting to use some or most of the Red's premises (this would include larger dining tents that will follow tent permitting requirements).
- Temporary uses (LBCS 9920) and Special events (LBCS 9910) other than those listed above shall require Special Event permits.

The following accessory uses and structures shall also be permitted:

- i. One stage outdoor stage for up to 400 square feet, and
- ii. One concrete slab patio for up to 825 square feet to be used as outdoor seating, and
- iii. No more than one shed for storage purposes; and
- iv. No more than one drive-through coffee bar; etc.

c. Cross Use of Properties:

Allowing the cross use of 155 Hall Ave as an ancillary property to 801/901 SW Broad is a primary goal of this application. Cross Use includes, but is not limited to shared

restrooms, parking, and reciprocal access. When not being privately rented, Suite A is intended as an ancillary/alternative site to Red's Corner seating areas.

Pedestrian access:

- Morganton and SW Broad frontages: the existing sidewalk systems recently installed allow sufficient access to the site from these streets. Once accessed, pedestrians self direct to various points of interest on site. For example, someone headed to a restroom may take a different path than heading to the food trucks.
- Hall Ave frontage: access from Hall Ave will see minimal foot traffic as Hall Ave is dead end road and not a main thoroughfare.
- Access between the properties is clearly defined with marked walkways or open area where vehicular traffic is excluded.

d. Noise:

- 155 Hall Ave: There shall be no change in permitted noise levels.
- The outdoor stage shall be permitted to have live outdoor music performances with amplification, subject to the local noise code, until 11PM.

e. Hours of Operation:

The hours of operation shall be 6:00 AM to 11:00 PM.

f. Architecture:

Renovations of the exterior architecture of the existing buildings shall be designed in the same character or complement the existing architecture as was submitted in architectural compliance permit file #AR-03-20. Some key character-defining elements include:



- g. Landscaping: Current landscaping and buffering shall be retained except for sod installed in and around the highlighted area in Section 1d (Pocket Park). The perimeter vehicle use area landscaping shall continue to be waived between the property lines of 901 SW Broad Street and 155 Hall Avenue. A vegetative barrier/hedge shall be added between the gravel commonly known as the food truck parking and the sodded area to prevent illegal parking.
- h. The 20 x 30 tent shall be permitted to remain, permanently. A pavilion-type structure of similar size and without walls will be permitted in the event Red's replaces the tent.
- i. Site Access: Site access shall remain at the current locations and no parking shall be permitted in the access easement between 901 SW Broad Street and 155 Hall Avenue.
- j. Parking:
 - Total Combined Parking Spaces: 66
 - The 37 parking spaces at 155 Hall Ave may remain gravel and unmarked.
 - 901 SW Broad shall provide all 29 existing parking spaces.
- k. Bicycle Parking:

Bicycle racks shall be provided with a minimum of six spaces.
- l. Signage:
 - Temporary "Coming Soon" sign facing Red's Corner interior of the two properties to notify Red's customers and shall be permitted for 90 days and shall follow UDO standards for dimensions.
 - Any additional street fronting or building signs shall follow UDO standards.
- m. Traffic Patterns:
 - 901 SW Broad: Traffic Patterns will coincide with the existing traffic patterns.
 - 155 Hall Ave: Site access shall remain at the current locations.
- n. Fats, Oils, Grease, Odors:

No fats, oils, grease, or odors shall be generated from the business' operations.
Prepared food may be provided by Red's Corner food trucks or caterers.
- o. Lighting:

Existing lighting at the property shall remain in place. Lights may be added to increase safety and security on site but shall follow standards in the UDO.
- p. Utilities & Trash:

Existing dumpsters shall remain on site.
- q. Outdoor Storage:

Outdoor Storage shall be prohibited.
- r. Fencing:

No new fencing shall be permitted.



Southern Pines Fire Department

500 W. Pennsylvania Ave.
Southern Pines, N.C. 28387
910-692-2720



Fire Inspection Inspection Result

Inspection Status

Completed with fail

Inspected by

Stephen D Russell

Completed at

11/08/2024 11:44:00

"ORDER TO COMPLY: Whoever fails to comply with any order by the Fire Marshal or his authorized representative may be charged with a misdemeanor as provided by G.S. 143-139 and G.S. 160A-175, Each day's continuing violation of the code is a separate and distinct offense as provided by G.S. 160D-1127. Civil penalties may also be assessed. Town of Southern Pines Code of Ordinances: § 95.038 INSPECTIONS FOR FIRE/LIFE SAFETY PURPOSES"

Address	Suite	City	State	Zip
155 HALL AVE	#MEET AND GREEK FOOD	SOUTHERN PINES	NC	28387
		Business Name	Building Type	
		Meet and Greek Food Truck Commisary	Unknown	

Access/Exterior:

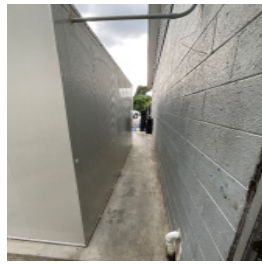
✗ Fail

ITEM: Permits Required

REMARK:

PERMITS ARE NEEDED FOR THE FOOTING, THE ELECTRICAL AND THE INSTALLATION OF THE FREEZER/COOLER.

CODE: NCFC2018 - 105.1.1 - Permits required. - A property owner or owner's authorized agent who intends to conduct an operation or business, or install or modify systems and equipment that are regulated by this code, or to cause any such work to be performed, shall first make application to the fire code official and obtain the required permit.

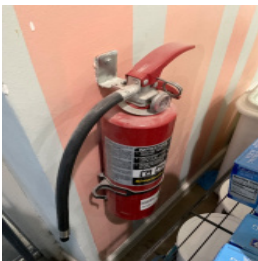


Fire Protection Systems:

✗ Fail

ITEM: Have fire extinguishers been inspected within the last 12 months by a certified company

CODE: NCFC2018 - 906.2 - General requirements. - Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10. Exceptions: 1. The distance of travel to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies. 2. Thirty-day inspections shall not be required for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met: 2.1. Electronic monitoring shall confirm that extinguishers are positioned, charged and unobstructed. 2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal. 2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment. 2.4. Electronic monitoring devices and supervisory circuits shall be tested every 3 years when extinguisher maintenance is performed. 2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to verify that hydrostatic tests are conducted at the frequency required by NFPA 10. 3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.



✓ Pass

ITEM: Has the cooking fire suppression system been serviced within the past 6 months by a certified company with report on site



✗ Fail

ITEM: Hood cleaning records

REMARK:

THE REPORTS FOR THE HOOD CLEANING AND THE HOOD SUPPRESSION SERVICE ARE NEEDED FOR REVIEW.

CODE: NCFC2018 - 609.3.3.3 - Records. - Records for inspections shall state the individual and company performing the inspection, a description of the inspection and when the inspection took place. Records for cleanings shall state the individual and company performing the cleaning and when the cleaning took place. Such records shall be completed after each inspection or cleaning and maintained.

✗ Fail

ITEM: Has the cooking hood been cleaned and filters in place in accordance with the NC Fire Code

CODE: NCFC2018 - 609.3.3 - Cleaning. - Hoods, grease-removal devices, fans, ducts and other appurtenances shall be cleaned at intervals as required by Sections 609.3.3.1 through 609.3.3.3.



Re-Inspection scheduled to be conducted on or after 11/18/2024.
Next inspection scheduled to be conducted on or after 04/16/2025.

Inspection Signatures

Inspector Signature

A handwritten signature in black ink, appearing to read 'SD Russell', written in a cursive style.

Stephen D Russell

--

Assistant Fire Marshal

--

russell@southernpines.net

From: [Stephen Russell](#)
To: [Ken Skipper](#)
Subject: FW: 155 Hall Ave.
Date: Thursday, October 31, 2024 5:07:06 PM
Attachments: [Permit - John Bullock.pdf](#)
[Emergency Access Management for Red's Corner.pdf](#)
[Seating Plan - 155 Hall Avenue - Paddock at Red's Corner.pdf](#)

From: Scott Bertrand <scott.m.bertrand@gmail.com>
Sent: Thursday, October 31, 2024 4:07 PM
To: Stephen Russell <Russell@southernpines.net>
Cc: Mike Ratkowski <mikeratkowski77@gmail.com>
Subject: Re: 155 Hall Ave.

Good afternoon, Mr. Russell,

To have at your fingertips, attached are all three items on the list below.

1. Emergency Access Management
2. Tent permit (issued 10/29)
3. Seating Chart

Please advise on when we will receive the Occupancy Placard.

Thank you,

Scott Bertrand
910-420-0048

On Tue, Oct 22, 2024 at 12:52 PM Scott Bertrand <scott.m.bertrand@gmail.com> wrote:

Mr. Russell,

Per our earlier conversation, here are the updates for the two action items you had for us.

1. We need something in writing stating that you will manage the ***existing*** parking at both properties. That the access to both buildings stay open so we are able to get fire apparatus to those buildings.
 - Please see attached
2. A building permit needs to be applied for the current tent. This will satisfy until the zoning permit can be settled.
 - Permit application submitted through SmartGove this afternoon.

3. A seating chart of the building as you plan to use it. ***I already have this chart. I have the one you sent earlier.***

- OK, sounds good.

Scott Bertrand
910-420-0048

On Thu, Oct 3, 2024 at 1:55 PM Stephen Russell <Russell@southernpines.net> wrote:

Mr. Bertrand,

Good afternoon. Thank you for meeting me this morning. As we discussed, I have spoken with Fire Marshal Skipper and it seems we are all on the same page. He has asked for you to do the following and we can get back on track and get you an Occupancy number for your space.

1. We need something in writing stating that you will manage the **existing** parking at both properties. That the access to both buildings stay open so we are able to get fire apparatus to those buildings.
2. A building permit needs to be applied for the current tent. This will satisfy until the zoning permit can be settled.
3. A seating chart of the building as you plan to use it. ***I already have this chart. I have the one you sent earlier.***

Once we have received the other two items I can then send/bring you an Occupancy Placard that you can use to move things along in the process. If you have any questions please do not hesitate to contact us at any time.

In service,
Stephen D. Russell
Assistant Fire Marshal
Southern Pines Fire and Rescue
O: 910-692-2720
russell@southernpines.net



PARKING AGREEMENT

Agreement to Lease and Share Parking Spaces (the “Agreement”), dated **4/11/2024**, **RCPESP, LLC**, a North Carolina Limited Liability Company (the “Company”), with its principal office located at 901 SW Broad Street, Southern Pines, NC 28387, and shared parking between adjacent and simultaneously-leased properties.

Whereas, the Company leases property at 901 SW Broad Street owned by B&R Holdings Company, LLC and 155 Hall Avenue owned by 155 Hall SP, LLC (the “Properties”), which, as of April 30, 2024, includes exclusive use of all facilities and parking areas; and

Whereas, the Company desires to share parking between the Properties with

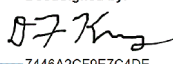
Now, therefore, for and in consideration of the covenants contained in this Agreement, the receipt and sufficiency of which is hereby acknowledged, the Company hereby allows the Company to share all available parking areas within the Properties pursuant to the following terms and conditions.

- I. **Use:** Parking
- II. **Payment:** This is an inter-company transaction without monetary consideration.
- III. **Term:** The term of this agreement shall commence as of the date set forth above and shall continue so long as the Company occupies the Properties.
- IV. **Hours:** The Company has 24-hour, 365-day access without restriction for Company business, customers and visitors. The hours of operation on the Properties are from 6AM to 11PM, with occasional exceptions for earlier baking or extended cleanings.

Agreed and Approved:

Landlords

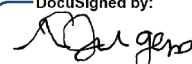
155 Hall SP, LLC

DocuSigned by:
By: 
7446A2CF9E7C4DE...
Don Kinney, Owner

12/13/2024

Dated: _____

B&R Holdings Company, LLC

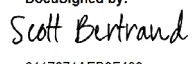
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By: 
6A6F413D17AE466...
Rachel J. Dargatzis

12/13/2024

Dated: _____

Tenant

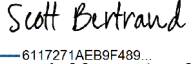
RCPESP, LLC

DocuSigned by:
By: 
6117271AEB9F489...
Scott Bertrand, Member

shared with
12/13/2024

Dated: _____

RCPESP, LLC

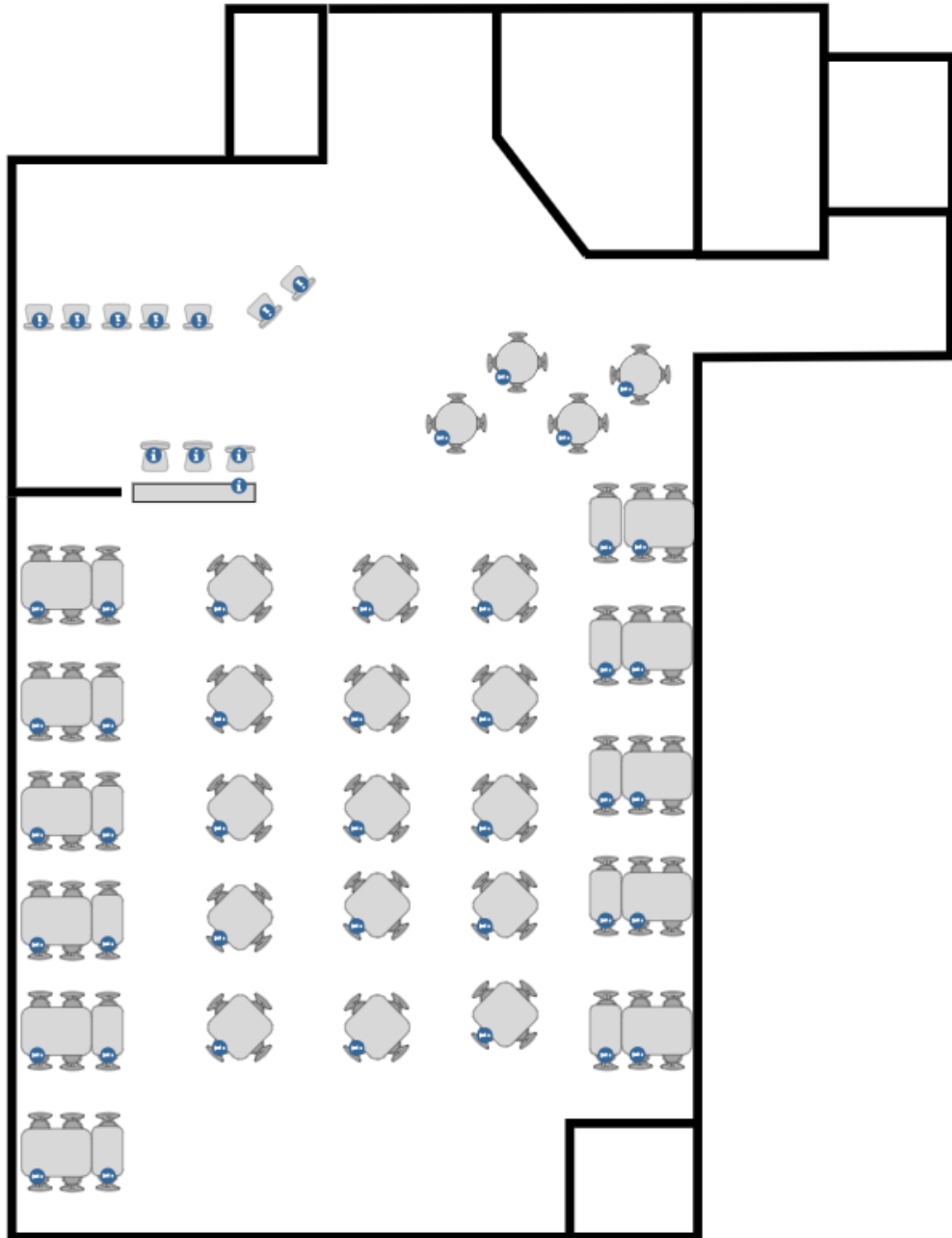
DocuSigned by:
By: 
6117271AEB9F489...
Scott Bertrand, Managing Member

12/13/2024

Dated: _____

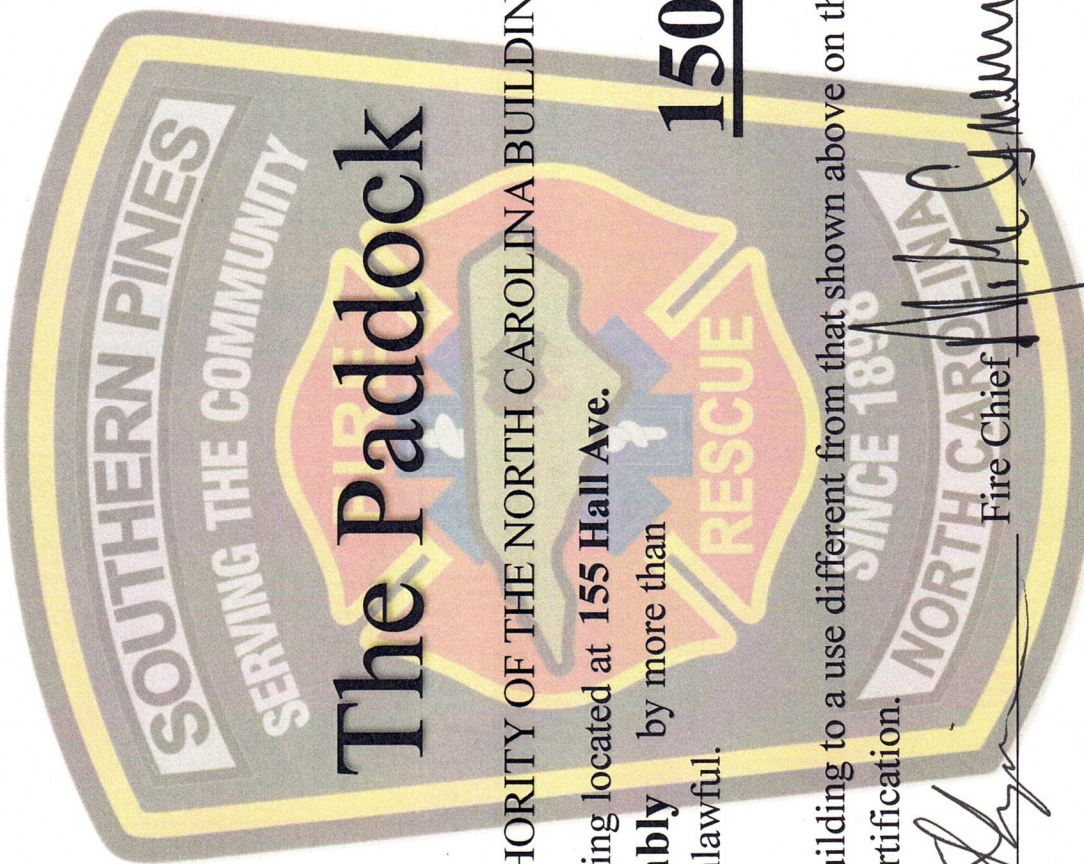
SEATING PLAN

The Paddock at Red's Corner
155 Hall Avenue, Southern Pines, NC



Contact Info:
Scott Bertrand
910-420-0048
Red's Corner / RCPESP, LLC

MAXIMUM OCCUPANCY LOAD



The Paddock

150

BY THE AUTHORITY OF THE NORTH CAROLINA BUILDING CODE:

The occupancy of this building located at **155 Hall Ave.**
and used for **A-2 Assembly** by more than
persons is dangerous and unlawful.

The change of use of this building to a use different from that shown above on the date shown below
will require occupancy recertification.

Fire Marshal

Fire Chief

Date: 11/01/2024

THIS NOTICE MUST BE KEPT POSTED AND VISIBLE AT ALL TIMES



901 SW Broad Street
Southern Pines, NC 28387
Tel: 910-246-0205

10/22/2024

Mr. Stephen Russell
Assistant Fire Marshal
Southern Pines Fire and Rescue

CC: Mike Ratkowski, Red's Corner

RE: Emergency Access Management for Red's Corner

Mr. Russell,

Red's Corner (RCPESP, LLC) has recently leased all of 155 Hall Avenue. Per your request, this note confirms we will manage the emergency access points and throughways to/from both 901 SW Broad Street and 155 Hall Avenue. Effective management will result in both properties staying open so Fire and Rescue personnel and equipment can service our sites.

Sincerely,
RED'S CORNER

Scott Bertrand
Managing Member / General Manager
RCPESP, LLC
(910) 420-0048
scott.m.bertrand@gmail.com