Planning Commission

North Augusta
South Carolina's Riverfront

Minutes for the Planning Commission Meeting, Wednesday, May 15, 2024, Regular Meeting

Municipal Center – 6:00 p.m., 100 Georgia Avenue, Third Floor – Council Chambers

The Planning Commission meeting will be streamed for public viewing online at:

- "City of North Augusta – Public Information" on www.Facebook.com
- "City of North Augusta Public Information" on www.YouTube.com

Members of the Planning Commission

Dr. Christine Crawford
Chair

Bob Bigger, *Vice Chair*
Jesse Elliott
Lisa Christie
Chelsea Waddell
Rett Harbeson
Erin Slade

CITIZEN ASSISTANCE: Individuals requiring special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development 48 hours prior to the meeting at 803-441-4221.

1. **Call to Order** 6:00pm

2. **Roll Call** All members were in attendance except Vice Chair, Bob Bigger.

3. **Approval of Minutes** – April 17, 2024 Regular Meeting

   Rett Harbeson made the first motion to approve the minutes. Jesse Elliott made the second motion. It was approved unanimously.

4. **Confirmation of Agenda** There were no changes made to the agenda.

5. **MSP23-009 Parker's Kitchen-Edgefield Road** – Major Site Plan – A request by Drayton Parker Companies, LLC for approval of a convenience store with gasoline sales located on a ±3.42-acre portion located at the corner of Edgefield Road and Ascauga Lake Road. The subject property is TPN 011-07-02-001 zoned GC, General Commercial and within the HC, Highway Corridor Overlay District.

City Planner, LaStacia Reese stated that the applicant was previously granted a variance for their front setbacks to be 195ft. Ms. Reese stated that there were no outstanding comments from staff. She stated that Staff recommends the approval of the Site Plans with the conditions of ZV23-007 to be applied to the project.

Applicants Daniel Ben-Yisrael, Real Estate Manager for Dayton Parker Companies and Keith Stevens of EMC engineering, both approached the podium. Mr. Ben-Yisrael spoke briefly about the history of the company. He continued by stating that the project as a whole will take 14 acres. He stated the convenience store is approximately 5100 sq. ft and will offer a full-service kitchen that will serve Southern Comfort Food. He stated that he is hoping to begin construction on July 8, 2024.

Keith Stevens stated that he is in the final stages of permitting.

There were no public comments made.

There were no comments from the Board Members of Planning Commission.

a. Consideration of the Major Site Plan application by the Planning Commission

Jesse Elliott made the first motion to approve MSP23-009 with the conditions of variance ZV23-007 to be applied to the project and all outstanding comments be addressed to the satisfaction of the City Staff. Rett Harbeson and Chelsea Waddell both seconded the motion. It was approved unanimously.

6. **ANX24-001 Jackson's Cove-Lamback Way** – A request by IV-CO, LLC to annex ±3.65 acres, located at Lamback Way, TPN 012-11-14-001. The property is requested to be zoned R-14, Large Lot, Single-Family Residential.

Ms. Reese stated that the applicant wants to annex a property that will be subdivided into 4 lots of single-family detached dwellings and also have the lots rezoned.

Burt Ellis of 527 Georgia Ave, approached the podium. He stated that he would like to build homes on the property to contribute to the growth of North Augusta's Community. He stated that the resident behind the property has been using the property for an easement and that the company will give the resident a Deeded Easement, instead of a Prescriptive Easement.

Jesse Elliot asked if there was only one resident in the area.

Mr. Ellis stated that there is a mobile home on one side of the property and a resident behind the property, but there are no other homes in the area.

Frank Mitchell of 1216 Lamback Way, expressed his concerns about accessing his property and the ability to maneuver his large truck on the easement.

Mr. Ellis stated that a 30ft easement is shown on the plat and will be on record once the plat is approved and recorded. He continued by stating that the 30ft easement is wider than the road that the resident is currently using.

(Mr. Ellis stood next to Mr. Mitchell with the projector pointer and showed him the proposed easement. They discussed the easement amongst themselves.)

Mr. Ellis approached the podium. He reiterated that the Deeded Easement will be 30 ft, instead of the 10-15ft Prescriptive Easement that is currently in place.

Rett Harbeson asked if Mr. Ellis would pave the easement or would it be Mr. Mitchell responsibility.

Mr. Ellis stated that easements aren't usually paved but If Mr. Mitchell wanted to pave the road, he would be allowed too. He continued by stating that his company is planning to clean up the open area so that Mr. Mitchell will be able to start using the easement immediately but they will not pave the road.

Mr. Mitchell questioned the location of a street light near his property.

Mr. Ellis used the projector pointer to show the location of the street light and stated that the light will remain in place. He also offered to meet Mr. Mitchell at the property to confirm measurements.

a. Consideration of the annexation by the Planning Commission

Chelsea Waddell made the first motion to approve ANX24-001 with the condition that the property owner behind the property receives a Deeded Easement to his property. Rett Harbeson made the second motion. It was approved unanimously.

7. **RZM24-003 Jackson's Cove-Lamback Way** – A request by IV-CO, LLC to rezone approximately 3.65 acres located at Lamback Way, TPN 012-11-14-001 from P, Public Use, to R-14, Large Lot, Single-Family Residential.

Ms. Reese stated the applicant is wanting to rezone the property from Public Use to R-14. She stated that the applicant is planning to build 4 lots of single-family detached homes.

Burt Ellis of 527 Georgia Ave, approached the podium. He stated that he would like to have the property rezoned from Public Use to R-14.

There were no public comments made.

There were no comments from the Board Members of Planning Commission.

a. Consideration of the rezoning application by the Planning Commission

Rett Harbeson made the first motion to recommend approval for the rezoning of Jackson's Cove Lamback Way RZM24-003. Jesse Elliott made the second motion. It was approved unanimously.

8. **RZT24-001** – A request from the North Augusta Planning Department to update changes in Table 5.1 Use Matrix for residential uses in the DTMU1 and DTMU2 districts.

Ms. Reese stated that there is a Text Amendment in Table 5.1 of the North Augusta Development Code to correct the error and draft the residential uses from DTMU1 to DTMU2.

Rett Harbeson asked if the uses were labeled under the incorrect zoning district.

Ms. Reese concurred.

Tommy Paradise approached the podium, He stated that he noticed the error while working on a project. He stated that if the error is to remain in place then apartment complexes will be allowed on Georgia Ave, which does not seem to be in the best interest of the City of North Augusta.

Jesse Elliott made the first motion to approve RZT24-001 article 5 Use and Conditions and update changes as listed. Chelsea Waddell made the second motion. It was approved unanimously.

9. **Staff Report**

a. April Performance Report

10. **Adjourn** 6:31pm

Department of Planning and Development

Project Staff Report
RZM24-004 Take 5 Oil Change
Prepared by: Kuleigh Baker
Meeting Date: June 19, 2024

SECTION 1: PROJECT SUMMARY

Project Name	Take 5 Oil Change
Applicant	WSM Ventures, LLC
Address/Location	10139 Atomic Road
Parcel Number	007-16-04-002
Existing Zoning	R-10, Medium Lot, Single-Family Residential
Traffic Impact Tier	1
Proposed Use	Automobile service and repair
Proposed Zoning	GC, General Commercial
Future Land Use	Residential Single Family

SECTION 2: PLANNING COMMISSION CONSIDERATION

Section 18.11 of the North Augusta Development Code (NADC) provides uniform procedures for processing changes to the Official Zoning Map.

The Planning Commission must use the criteria established in NADC Section 18.11.5 to evaluate each application. These criteria are further analyzed in Section 6 of this report, but are as follows per NADC Section 18.11.5.1-10:

1. The size of the tract(s) in question.
2. Whether the proposal conforms with and furthers the goals of the Comprehensive Plan, other adopted plans, and the goals, objectives, and policies of this Chapter. Specifically, the Planning Commission shall consider the goals stated in §1.3.
3. The relationship of the uses envisioned under the proposed zoning and the uses currently present in adjacent tracts. Specifically, the Planning Commission shall consider the following questions:

a. Is the proposed rezoning compatible with the surrounding area?

b. Will there be any adverse effects on the capacity or safety of the portion of street network influenced by the proposed rezoning?
c. Will there be any adverse effects on existing or planned public utility services in the area?
d. Will the proposed rezoning cause parking problems?
e. Will the proposed rezoning generate environmental impacts such as excessive storm water runoff; water, air, or noise pollution; excessive nighttime lighting; or other nuisances?

4. Any recent change of character in the area due to installation of public facilities, other zone changes, new growth trends, deterioration and development.
5. The zoning districts and existing land uses of the surrounding properties.
6. If the subject property is suitable for the uses to which it has been restricted under the existing zoning classification.
7. If the rezoning is compatible with the adjacent neighborhood, especially residential neighborhood stability and character.
8. The length of time the subject property has remained vacant as zoned, if applicable.
9. If there is an adequate supply of land available in the subject area and the surrounding community to accommodate the zoning and community needs including, but not limited to, affordable housing and economic development.
10. If the existing zoning was in error at the time of adoption.

As referenced in item (2) above, NADC Section 1.3 states the following:

1.3. Comprehensive Development Code

The Development Code as established in this Chapter has been made in accordance with a comprehensive plan for the purpose of promoting health, safety, and the general welfare of the community. It is intended to consolidate in one place and in logical order, without unnecessary duplication, the city's regulations pertaining to land use and development. It is designed to make it possible for all of those concerned with land use and development to have access to all relevant city legislation in one convenient Chapter that is capable of being published and distributed as a separate and comprehensive segment of the Code of Ordinances, City of North Augusta, South Carolina, hereinafter referred to as the City Code, as a whole. The specific objectives of this Chapter are:

1.3.1 To protect the health, safety and general welfare; and

1.3.2 To promote new development forms that complete neighborhoods that:

a. Are designed at a human scale by controlling massing and design that respects the architectural vernacular of North Augusta;

b. Foster communication among neighbors and connectivity to the larger community by allowing compact development patterns, interconnected street systems, short blocks;
c. Include or reinforce central places, such as North Augusta's traditional downtown and neighborhood commercial centers, civic gathering places, and open space;
d. Encourage walking and biking by the layout of blocks and streets;
e. Accommodate vehicular travel without allowing parking lots and streets to dominate the built environment;
f. Provide a mix of housing types, including housing affordable to all households and housing arrangements that foster neighborliness;
g. Provide a variety of spaces, including outdoor and passive outdoor uses, which become part of the public realm;
h. Design streets as outdoor rooms, with attention to pedestrian and bicyclist safety as well as to the safety of motorists;
i. Includes neighborhood design that responds to the natural, cultural and historic context;
j. Protect and preserve places and areas of historical, cultural, or architectural importance and significance; and
k. Are the result of a planning process that is inclusive and involves opportunities for negotiation between the designer and the City.

Planning Commission Action Requested:

The Planning Commission may recommend approval or denial of this request according to NADC § 18.11.4. The Planning Commission's recommendation is then forwarded to the City Council for their consideration per NADC § 18.11.4.1.

SECTION 3: PUBLIC NOTICE

Per NADC Article 18, a notice of the rezoning request and scheduled date of the Planning Commission public hearing was originally mailed to property owners within 200 feet of the subject property on May 24, 2024. The property was posted with the required public notice on May 29, 2024. A public notice of the rezoning request and scheduled date of the Planning Commission public hearing was published in *The Augusta Chronicle* and on the City's website at www.northaugustasc.gov on May 29, 2024.

SECTION 4: SITE HISTORY

The subject parcel is currently vacant. There was previously a package store on the adjacent corner lot that was demolished in 2013.

SECTION 5: EXISTING SITE CONDITIONS

	Existing Land Use	Future Land Use	Zoning
Subject Parcel	Vacant	Residential Single Family	R-10, Medium Lot, Single-Family Residential
North	Single-Family Residential	Residential Single Family	GC, General Commercial
South	Single-Family Residential	Residential Single Family	R-10, Medium Lot, Single-Family Residential
East	Vacant/Commercial	Mixed Use	GC, General Commercial/TC, Thoroughfare Commercial
West	Single-Family Residential	Residential Single Family	R-10, Medium Lot, Single-Family Residential/R-7, Small Lot, Single-Family Residential

Access – The property currently has road frontage along Atomic Road.

Topography – The subject property as previously graded and is relatively flat.

Utilities – Water and sanitary sewer are available.

Floodplain – The property is not located in a federally designated floodway.

Drainage Basin – The parcel is located in the Waterworks Basin. The Waterworks Basin is a large basin that incorporates stormwater from extensively developed residential neighborhoods and commercial businesses along Knox Avenue, Martintown Road, and Buena Vista Avenue. The basin enters the river through the River Golf Club. Basin sampling is good to fair; however, stream integrity in the basin is floor due to excessive flows. The City is working with developers to ensure new development creates solutions to solve existing deficiencies in detention.

SECTION 6: STAFF EVALUATION AND ANALYSIS

Staff provides the following information for context related to the Commission's deliberation. Descriptions and commentary added by staff will be *italicized*.

1. **The size of the tract in question (§18.11.5**).

   The total acreage of the requested rezoning is approximately 0.25 acres.

2. **Whether the proposal conforms with and furthers the goals of the Comprehensive Plan, other adopted plans, and the goals, objectives, and policies of the Development Code, §1.2 (§18.11.5.2).**

   The Comprehensive Plan Future Land Use Map shows this parcel as Residential Single Family; however, it is adjacent to areas indicated as Mixed Use on the map. The vision for Marintown Road listed in the Comprehensive Plan is to create new, mixed-use development along major corridors in place of failing or aging commercial areas while improving connectivity between mixed-use centers and surrounding neighborhoods with new side streets. The proposed development is relatively close to the Bluegrass Place Planned Development and will likely service residences in the area. Infill development supports Goal 5.2, Ensure the Financial Sustainability of North Augusta by encouraging compact growth to ensure North Augusta's tax base can support City services. Developing the City in areas already served by the City will maintain service costs.

3. **The relationship of the uses envisioned under the new zoning and the uses currently present in adjacent tracts. In particular, the Planning Commission shall consider whether as stated in NADC §18.11.5.3.**

   a. **The proposed rezoning is compatible with the surrounding area;**

      The surrounding area is an area of transition between the Martintown Road commercial corridor and the existing residential neighborhood known as Breckenridge Heights and Green Forest Acres.

   b. **There will be any adverse effects on the capacity or safety of the portion of street network influenced by the rezoning;**

      Any negative effects on traffic flow will be mitigated prior to construction. Staff recognizes that there is potential to expand public transportation opportunities by improving an existing bus stop for the Best Friends Express with shelters, lighting, and trash receptacles at this intersection. Pedestrian connections

between new development and existing bus stops should be included with the site plan.

c. There will be any adverse effects on existing or planned public utility services in the area;

Any infrastructure improvements must be provided by the developer.

d. Parking problems; or

Parking will be required to meet City standards at the time of site plan approval. Any waivers or variances must be addressed by the Board of Zoning Appeals, as applicable. Due to the nature of the quick service oil change business, parking is primarily expected to serve employees.

e. Environmental impacts that the new use will generate such as excessive storm water runoff, water, air, or noise pollution, excessive nighttime lighting or other nuisances.

Noise and lighting will be subject to the standards of the Development Code and Municipal Code, as applicable. There is an opportunity to plant street trees in existing rights of way where none currently exist in this area. Expansion of the tree canopy is possible on the vacant lot with the addition of parking lot landscaping and general site landscaping.

4. Any recent change of character in the area due to the installation of public facilities, other zone changes, new growth trends, deterioration, and development (§18.11.5.4).

There have not been any recent changes to the character of the surrounding area. The area is prime for development as a major travel corridor between Aiken and Augusta along Atomic Road and towards the Hwy 1 interchange at the terminus of East Martintown Road.

5. The zoning districts and existing land uses of the surrounding properties (§18.11.5.5).

Surrounding properties are zoned GC, General Commercial and R-10, Medium Lot, Single-Family Residential.

6. Whether the subject property is suitable for the uses to which it has been restricted under the existing zoning classification (§18.11.5.6).

Should the property be rezoned, it requires a Special Exception to be granted by the Board of Zoning Appeals for the automobile service use.

7. **Whether the rezoning is compatible with the adjacent neighborhood, especially residential neighborhood stability and character (§18.11.5.7).**

   While the proposed use is compatible with existing commercial uses along Martintown Road, the side and rear of the property abut an established neighborhood.

8. **The length of time the subject property has remained vacant as zoned, if applicable (§18.11.5.8).**

   The current site is undeveloped and has been R-10, Medium Lot, Single-Family Residential since the adoption of the Official Zoning Map with the 2008 North Augusta Development Code. The property retained this zoning with the adoption of the 2023 North Augusta Development Code.

9. **Whether there is an adequate supply of land available in the subject area and the surrounding community to accommodate the zoning and community needs including, but not limited to, affordable housing and economic development (§18.11.5.9).**

   There is an opportunity to develop affordable housing North of Metz Drive and along Barton Road. While rezoning from R-10, Medium Lot, Single-Family Residential to GC, General Commercial takes one lot from this stock, residential uses are allowed in the GC, General Commercial zoning district.

10. **Whether the existing zoning was in error at the time of adoption (§18.11.5.10).**

    The subject parcel is in an area of transition between commercial and residential uses. It appears that the lot was intended to be used as a single-family residence in the Breckenridge Heights neighborhood and does not appear to have been an error at the time of adoption.

SECTION 7: RECOMMENDATION

The Department has determined the application is complete. Staff recommends that TPN 007-16-04-002 be rezoned from R-10, Medium Lot Single-Family Residential to GC, General Commercial.

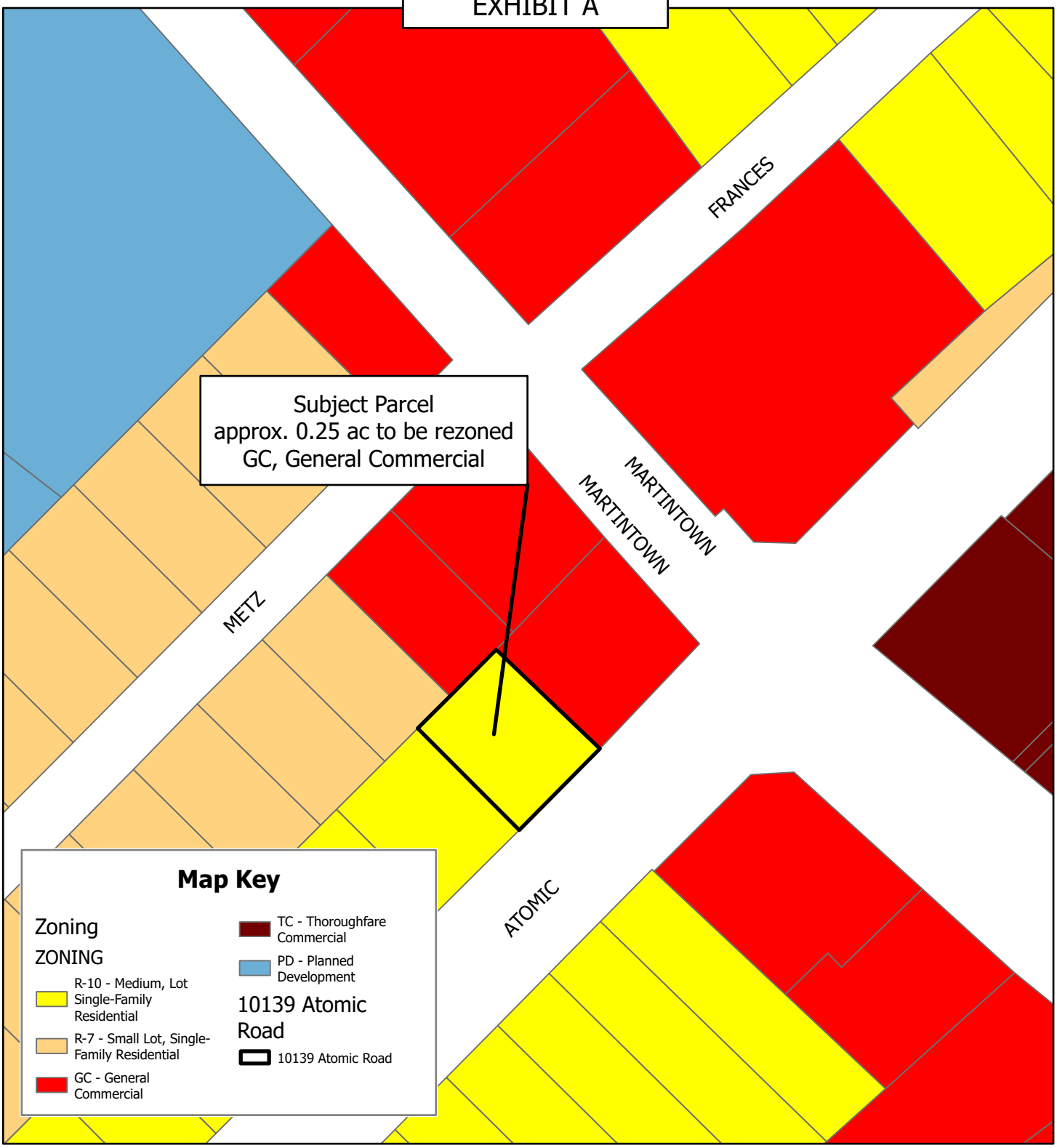
The Planning Commission may recommend approval or denial of this request according to NADC § 17.4.

SECTION 8: ATTACHMENTS

1. Aerial
2. Topography
3. Current Zoning
4. Proposed Zoning
5. Public Hearing Notice
6. Application Documents

cc WSM Ventures, LLC, via email

EXHIBIT A



North Augusta
South Carolina's Riverfront

0 25 50 100 150 200 Feet

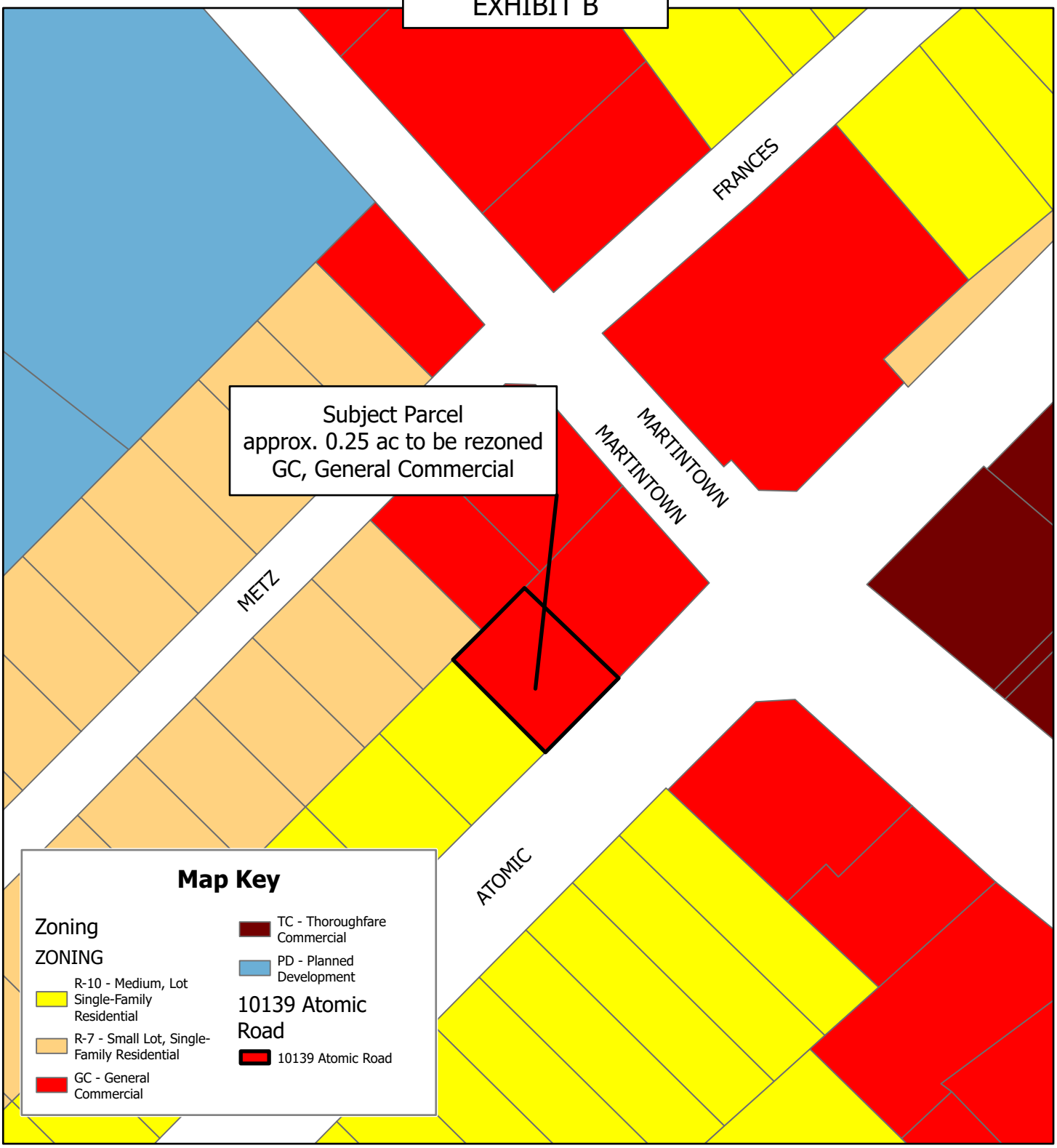
5/23/2024

N

Exhibit A
Application Number RZM24-004
Tax Parcel Number
007-16-04-002
A request to rezone approx. 0.25 ac
from R-10, Medium Lot, Single-Family Residential to GC, General Commercial

Path: H:\kbaker\ArcGIS\Rezonings\RZM24-004 Take 5 Oil\RZM24-004 Take 5 Oil.aprx

EXHIBIT B



North Augusta
South Carolina's Riverfront

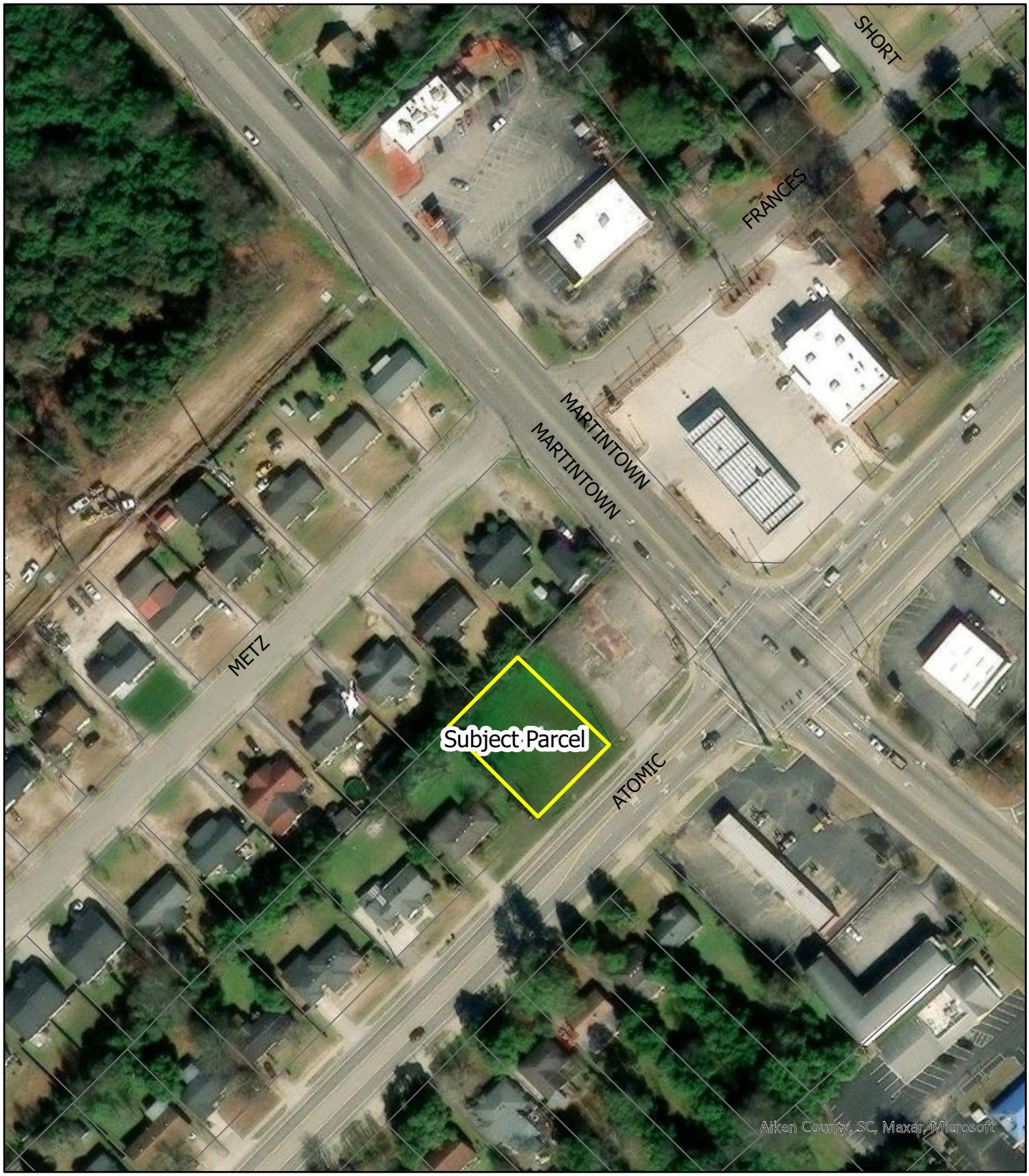
0 25 50 100 150 200
Feet

5/23/2024

N

Exhibit B
Application Number RZM24-004
Tax Parcel Number
007-16-04-002
A request to rezone approx. 0.25 ac
from R-10, Medium Lot, Single-Family Residential to GC, General Commercial

Path: H:\kbaker\ArcGIS\Rezonings\RZM24-004 Take 5 Oil\RZM24-004 Take 5 Oil.aprx



North Augusta
South Carolina's Riverfront

Aerial Map
Application Number RZM24-004
Tax Parcel Number
007-16-04-002

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Feet

5/16/2024 1:54 PM

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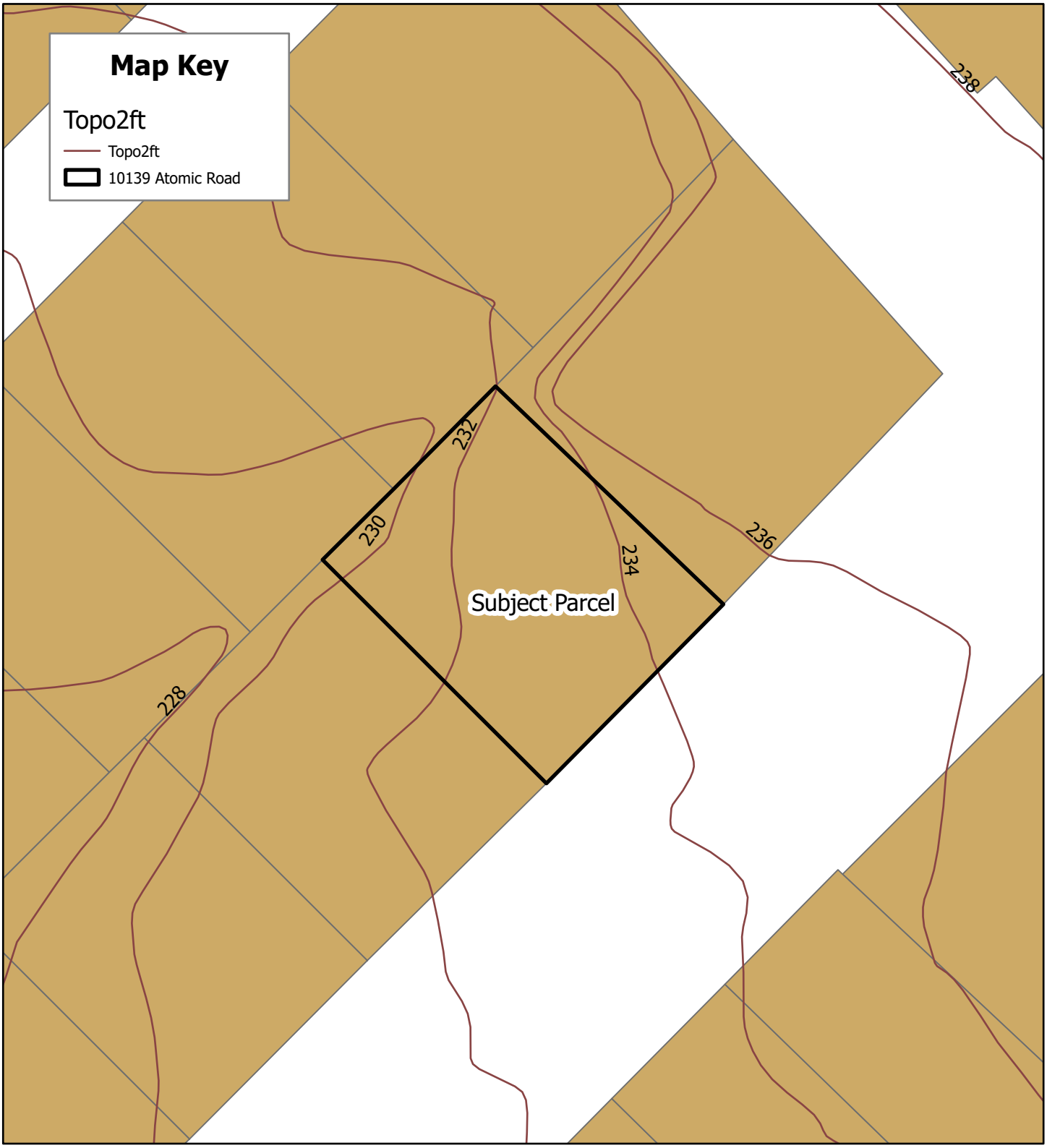

North Augusta
South Carolina's Riverfront

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Feet

5/16/2024 1:54 PM

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Topography Map
Application Number RZM24-004
Tax Parcel Number
007-16-04-002

Path: H:\kbaker\ArcGIS\Rezonings\RZM24-004 Take 5 Oil\RZM24-004 Take 5 Oil.aprx

City of
North Augusta, South Carolina

Planning Commission

Public Hearing Notice

The North Augusta Planning Commission will hold its regular monthly meeting at 6:00 PM on Wednesday, June 19, 2024, in the Council Chambers located on the 3rd floor of the North Augusta Municipal Center, 100 Georgia Avenue, to receive public input on the following applications:

RZT24-002 – A request by the City of North Augusta to amend Table 5.1, Use Matrix of the North Augusta Development Code to permit private non-profit organizations to operate in the Public Use zoning district as a Special Exception.

RZM24-004 – A request by WSM Ventures, LLC to rezone approximately 0.25 acres located at 10139 Atomic Road, TPN 007-16-04-002, from R-10, Medium Lot Single-Family Residential to GC, General Commercial.

PD23-003 – A request by CSRA Development Company, LLC for approval of a Planned Development General Development Plan affecting ±70.82 acres located between Compassion Way and Old Plantation Road near I-20, Tax Map Parcel Number 001-19-02-005 zoned PD, Planned Development and a portion of Tax Parcel Number 002-08-01-002 zoned R-14, Large Lot, Single-Family Residential. The proposed project is a mixed-use development consisting of townhomes and commercial uses.

Documents related to the application will be available for public inspection after June 12, 2024 in the office of the Department of Planning and Development on the 2nd floor of the Municipal Center, 100 Georgia Avenue, North Augusta, South Carolina and online at www.northaugustasc.gov. All members of the public interested in expressing a view on this case are encouraged to attend or provide written comments to planning@northaugustasc.gov.

CITIZEN ASSISTANCE:

Individuals needing special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development at 803-441-4221 at least 48 hours prior to the meeting.

Application for Development Approval

Please type or print all information

North Augusta
South Carolina's Riverfront

Staff Use	
Application Number _____	**Date Received** _____
Review Fee _____	**Date Paid** _____

1. **Project Name** Take 5 Oil Change

   Project Address/Location 10139 Atomic Rd

   Total Project Acreage .25 acres **Current Zoning** R-10

   Tax Parcel Number(s) 007-16-04-003

2. **Applicant/Owner Name** David Berry/WSM Ventures, LLC **Applicant Phone** 864-415-3613

   Mailing Address 812 East Main St

   City Spartanburg **ST** SC **Zip** 29302 **Email** david@take5ventures.com

3. **Is there a Designated Agent for this project?** X **Yes** _____ **No**
   If Yes, attach a notarized Designation of Agent form. (required if Applicant is not property owner)

4. **Engineer/Architect/Surveyor** Tilden Hilderbrand **License No.** S.C. 12286

   Firm Name Haas and Hilderbrand **Firm Phone** 803-649-1316

   Firm Mailing Address 133 Greenville St

   City Aiken **ST** SC **Zip** 29801 **Email** tilden@hassandhilderbrand.com

   Signature _____ **Date** 5/15/24

5. Is there any recorded restricted covenant or other private agreement that is contrary to, conflicts with or prohibits the use or activity on the property that is the subject of the application.
   (Check One) _____ **Yes** X **No**

6. In accordance with Section 5.1.2.3 of the North Augusta Development Code, I hereby request the City of North Augusta review the attached project plans. The documents required by the City of North Augusta, as outlined in Appendix B of the North Augusta Development Code, are attached for the City's review for completeness. The applicant acknowledges that all required documents must be correct and complete to initiate the compliance review process.

7. _____ 5/16/24
   Applicant or Designated Agent Signature **Date**

   David Berry
   Print Applicant or Agent Name

Designation of Agent

Please type or print all information

North Augusta
South Carolina's Riverfront

This form is required if the property owner is not the applicant.

Staff Use Only	
Application Number _____	Date Received _____

1. Project Name _WSM Ventures_

2. Project Address/Location 532 E Martintown Rd and 10139 Atomic Rd

3. Project Parcel Number(s) 007-16-04-002 and 007-16-04-003_

4. Property Owner Name Brigham Limited Partnership_ Owner Phone _____

   Mailing Address _3450 Wheeler Rd, Suite 206

   City __Augusta___ ST _GA_ Zip _30909__ Email _leewbrigham@gmail.com

5. Designated Agent __WSM Ventures, LLC C/O David Berry_____

   Relationship to Owner __Contract Purchaser

   Firm Name _WSM Ventures_ Phone 864-415-3613

6. Agent's Mailing Address 812 East Main St

   __ City Spartanburg ST SC Zip 29302 Email _david@take5ventures.com

7. Agent's Signature David Berry Date 5/9/2024

8. I hereby designate the above-named person (Line 3) to serve as my agent and represent me in the referenced application.

   _____ 5/13/2024
   Owner Signature Date

9. Sworn and subscribed to before me on this 13th day of May, 2024.

   _____
   Notary Public

   10/17/27
   Commission Expiration Date

RICHMOND COUNTY, GEORGIA NOTARY PUBLIC Lee Phillips

1/2013

PROJECT SUMMARY

WSM Ventures, LLC

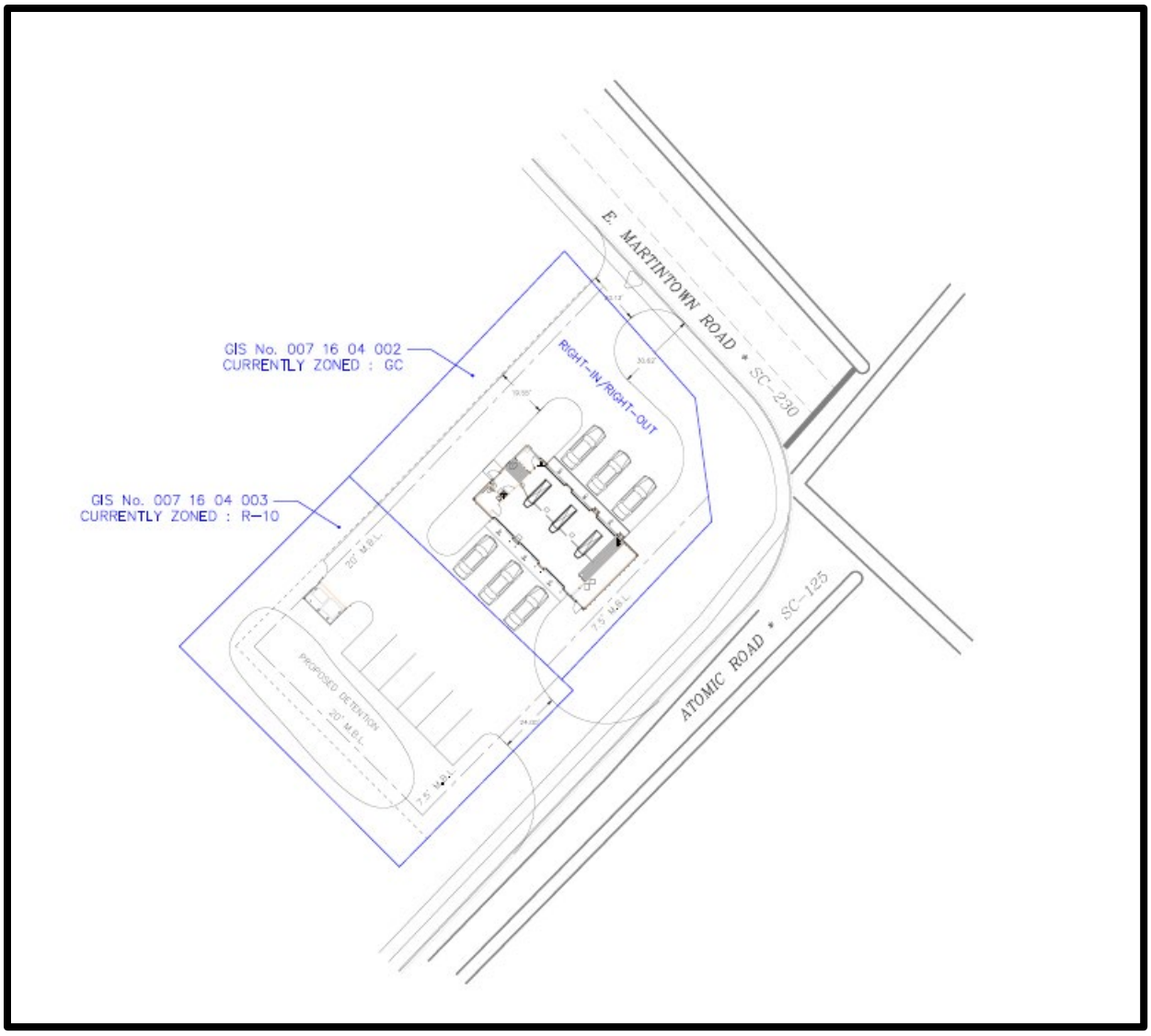
Proposed Project: Take 5 Oil Change

Tax Parcel(s) 007-16-04-003

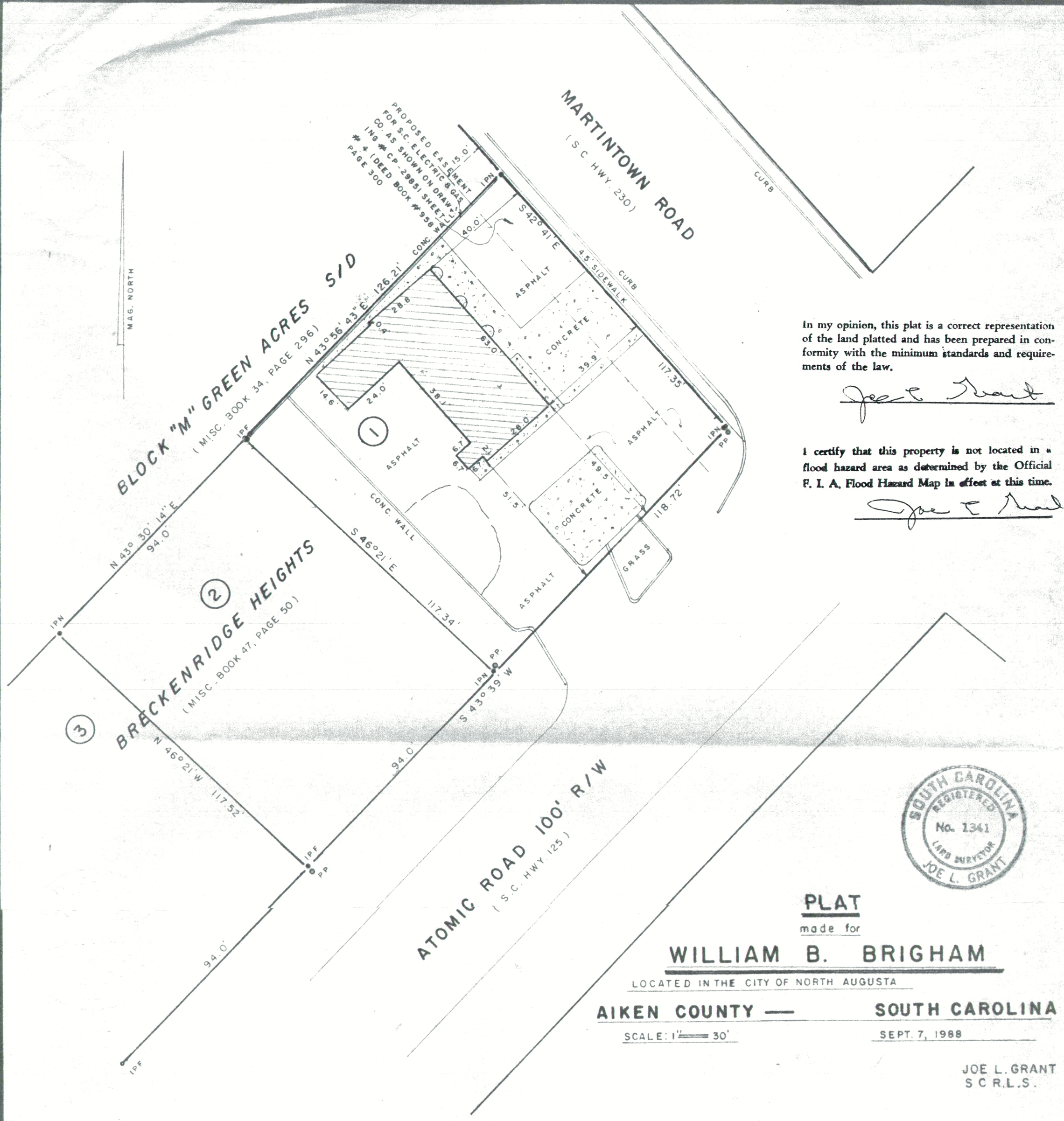
10139 Atomic Rd

WSM Ventures is seeking approval to rezone the proposed parcel from its current R-10 (Single Family Medium Lot Residential) zoning to GC (General Commercial) for the development of a Take 5 Oil Change across this parcel and the adjacent parcel 007-16-04-002 that is under contract for purchase. The rezoning would be contingent upon also obtaining approval from the Board of Zoning Appeals for a Special Exception to allow Motor Vehicle Repair and Service use on the property. The applicant plans to submit for BZA by the July 8 application due date.

Preliminary Site Layout



Building Example



In my opinion, this plat is a correct representation of the land platted and has been prepared in conformity with the minimum standards and requirements of the law.

Joe L Grant

I certify that this property is not located in a flood hazard area as determined by the Official F. I. A. Flood Hazard Map in effect at this time.

Joe L Grant

SOUTH CAROLINA REGISTERED No. 1341 LAND SURVEYOR JOE L. GRANT

PLAT

made for

WILLIAM B. BRIGHAM

LOCATED IN THE CITY OF NORTH AUGUSTA

AIKEN COUNTY — SOUTH CAROLINA

SCALE: 1" = 30'

SEPT. 7, 1988

JOE L. GRANT
S C R.L.S.

Building Example

Department of Planning and Development

North Augusta
South Carolina's Riverfront

Project Staff Report
RZT24-002 Article 5.1: Uses & Use Conditions
Prepared by: Tommy Paradise
Meeting Date: June 19, 2024

SECTION 1

Project Name	Update to Table 5.1
Applicant	City of North Augusta
Proposed Text Amendment	A request from the City of North Augusta to amend Table 5.1 Use Matrix of the North Augusta Development Code to allow private non-profit clubs in the Public (P) zoning district.

SECTION 2: GENERAL DESCRIPTION

The North Augusta Development Code (NADC) currently prohibits private non-profit clubs and organizations the ability to operate in the Public Use, P, zoning district. The Planning Department has received a request from the City Administrator for a text amendment to allow these uses through the Special Exception process. The proposed change will update the NADC to match current city operations and to better serve community needs. It would enable non-profits that provide non-governmental service to use these spaces in the City of North Augusta.

SECTION 3: PLANNING COMMISSION CONSIDERATION

The Planning Commission is being asked to review the request for a text amendment based on the following provisions of the North Augusta Development Code:

17.4.1 Authority Under This Article. The Planning Commission (Commission) shall have all the powers and duties as assigned by §6-29-340 of the South Carolina Local Government Comprehensive Planning Enabling Act (Title 6) to be carried out in accordance with these regulations as detailed in Article 19 and in the adopted Rules of Procedure for the Commission. In addition, the Commission shall have any other power or duty as assigned by the City Council in conformity with Title 6.

6-29-340 South Carolina Code of Laws. Functions, powers, and duties of local planning commissions.
(B) In the discharge of its responsibilities, the local planning commission has the power and duty to:

(2) prepare and recommend for adoption to the appropriate governing authority or authorities as a means for implementing the plans and programs in its area:

(a) zoning ordinances to include zoning district maps and appropriate revisions thereof, as provided in this chapter;

18.11 Rezoning and Text Amendments

This section applies to any application for an amendment to the text of this Chapter or for an amendment to the Official Zoning Map, also known as a "rezoning." Such amendments must be submitted to the Planning Commission for review and recommendation to City Council, who may then vote to amend the Chapter or Official Zoning Map. Appropriate application forms for text amendment or rezoning shall be provided by the Director of Planning or his designee. A pre-application conference is recommended before the application is submitted to discuss the procedures and requirements for the amendment request and identify the submittal requirements.

18.11.2 Text Amendment.

Any person, property owner, board, commission, department, or the City Council may apply for a change in the zoning ordinance text. Such amendment may be initiated by filing an application per the requirements of the City's Administrative Manual with the Department. The application shall be signed by the applicant and shall include the language of the proposed amendment to the text of this Chapter and the justification for the proposed change.

18.11.3 Application Review.

The Department shall complete a review of the application and determine if the application is complete. If the application is incomplete, it will be returned to the applicant. If the application is complete, the Planning Director shall review the request and create a written recommendation for Planning Commission and Council consideration. The Director may forward the request to the Technical Review Committee for additional review and information.

8.11.4 Decision. The Director shall transmit the application for zoning amendment or rezoning to the Planning Commission at its next regularly scheduled monthly meeting, provided the complete application is submitted at least 30 calendar days prior to the meeting. The Planning Commission shall approve or deny the zoning amendment in accordance with the procedures for a legislative hearing as provided in the City's Administrative Manual and the S.C. Code §6-29-760.

1. The Planning Commission shall submit its recommendation to City Council within 30 calendar days after the initial hearing date (S.C. Code §6-29760(A). A majority vote is required for the Planning Commission to approve, approve with conditions (if applicable), or deny a rezoning or text amendment application.

2. The City Council shall consider the recommendation of the Planning Commission and staff on each proposed rezoning and text amendment within 30 days of receipt of the Planning Commission recommendation. The A City Council must consider, but is not bound by, the Planning Commission recommendation in making a final decision and may call for additional information or public hearing(s).

3. No challenge to the adequacy of notice or to the validity of a rezoning or text amendment may be made 60 days after the decision of the City Council if there has been substantial compliance with the notice requirements of this section, with the established procedures of the City Council and Planning Commission, and with S.C. Code §6-29

The Planning Commission is being asked to review the proposed text changes and provide a recommendation of approval or denial, which will be forwarded to the City Council. Section 18.11 does not require additional standards for analysis to address in this staff report.

SECTION 4: PUBLIC NOTICE

A public notice of the text amendment request and scheduled date of the Planning Commission public hearing was published in the *Augusta Chronicle* and on the City's website www.northaugustasc.gov on May 29, 2024.

SECTION 5: HISTORY

The North Augusta Development Code that was adopted by City Council December 17, 2007, effective January 1, 2008 was repealed and replaced by the North Augusta Development Code adopted by City Council on December 18, 2023. The 2023 Development Code is consistent with the Comprehensive Plan Update of 2022. Public comments were solicited through formal public hearing and informal communication throughout the multiyear development of the code

The North Augusta Planning Commission recommended approval of a draft Development Code and referred to City council on June 6, 2023. City Council, in accordance with Section 6-29-760 of the South Carolina Code of Laws held a public hearing on September 11, 2023. Based on information from the public hearing the Development Code draft was referred back to the Planning Commission for further recommendations.

At the October 18, 2023 Planning Commission meeting the Commission heard public input and reviewed issues that were heard in Council's public hearing. At the November 15, 2023 meeting of the Planning Commission, the Commission recommended a revised draft for adoption by City Council. City Council adopted this draft at their December 18, 2023 meeting.

SECTION 6: SUMMARY OF CHANGES AND PROPOSED AMENDMENTS

The City Administrator has requested a text amendment to Article 5.1, to permit public non-profit clubs and organizations to be located in the Public Use, P, zoning district as a Special Exception. This use is currently prohibited in this district. The Special Exception requirement will require approval by the Board of Zoning Appeals after a public hearing.

The Public Use District is intended to provide suitable locations for land and structures in the City of North Augusta used exclusively by the City, Aiken County, the State of South Carolina, the United States, or other governmental jurisdictions and their instrumentalities. As such, it shall be used in accordance with such regulations as may be prescribed by the government or instrumentality thereof using the property. This district is also applicable to land owned by public utilities and public service providers of water, sewer, electricity, natural gas, telephone, cable and

internet and improved or utilized for the delivery of the public service (power generating or transforming stations, transmission and distribution lines and facilities, switching stations, etc.). Property owned by public utilities and utilized primarily for office, customer service, or retail sales is not appropriate for the Public Use district. If Public Use zoned property is sold to a private individual or individuals, such property shall be rezoned to a classification that is compatible with the surrounding area.

Applicant Request:

Applicant requests a text amendment to Article 5.1, to permit public non-profit clubs and organizations to be located in the Public Use, P, zoning district as a Special Exception. This use is currently prohibited in this district.

In the attached use matrix, the revisions show changes as follows:

Underlined Text is text that has been modified or added to the code
~~Strike Through Text~~ is text that is proposed to be removed.

Staff Recommends:

Staff recommends that Table 5.1 be amended a text amendment to permit public non-profit clubs and organizations to be located in the Public Use, P, zoning district as a Special Exception.

SECTION 7: ATTACHMENTS

1. Public Notice
2. Application Documents
3. Draft Revised Development Code Article 5, applicable pages

City of
North Augusta, South Carolina

Planning Commission

Public Hearing Notice

The North Augusta Planning Commission will hold its regular monthly meeting at 6:00 PM on Wednesday, June 19, 2024, in the Council Chambers located on the 3rd floor of the North Augusta Municipal Center, 100 Georgia Avenue, to receive public input on the following applications:

RZT24-002 – A request by the City of North Augusta to amend Table 5.1, Use Matrix of the North Augusta Development Code to permit private non-profit organizations to operate in the Public Use zoning district as a Special Exception.

RZM24-004 – A request by WSM Ventures, LLC to rezone approximately 0.25 acres located at 10139 Atomic Road, TPN 007-16-04-002, from R-10, Medium Lot Single-Family Residential to GC, General Commercial.

PD23-003 – A request by CSRA Development Company, LLC for approval of a Planned Development General Development Plan affecting ±70.82 acres located between Compassion Way and Old Plantation Road near I-20, Tax Map Parcel Number 001-19-02-005 zoned PD, Planned Development and a portion of Tax Parcel Number 002-08-01-002 zoned R-14, Large Lot, Single-Family Residential. The proposed project is a mixed-use development consisting of townhomes and commercial uses.

Documents related to the application will be available for public inspection after June 12, 2024 in the office of the Department of Planning and Development on the 2nd floor of the Municipal Center, 100 Georgia Avenue, North Augusta, South Carolina and online at www.northaugustasc.gov. All members of the public interested in expressing a view on this case are encouraged to attend or provide written comments to planning@northaugustasc.gov.

CITIZEN ASSISTANCE:

Individuals needing special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development at 803-441-4221 at least 48 hours prior to the meeting.

Application for Development Approval

Please type or print all information

North Augusta
South Carolina's Riverfront

Staff Use

Application Number RZT24-002 **Date Received** 4-24-24

Review Fee — **Date Paid** —

1. **Project Name** Amend Table 5.1 Use Table for Public Use district

   Project Address/Location 100 Georgia Ave.

   Total Project Acreage _____ **Current Zoning** _____

   Tax Parcel Number(s) _____

2. **Applicant/Owner Name** Tommy Paradise **Applicant Phone** 803-441-4221

   Mailing Address 100 Georgia Ave.

   City North Augusta **ST** SC **Zip** 29841 **Email** tparadise@northaugustasc.gov

3. **Is there a Designated Agent for this project?** _____ **Yes** _____ **No**
   If Yes, attach a notarized Designation of Agent form. (required if Applicant is not property owner)

4. **Engineer/Architect/Surveyor** _____ **License No.** _____

   Firm Name _____ **Firm Phone** _____

   Firm Mailing Address _____

   City _____ **ST** ____ **Zip** _____ **Email** _____

   Signature _____ **Date** _____

5. Is there any recorded restricted covenant or other private agreement that is contrary to, conflicts with or prohibits the use or activity on the property that is the subject of the application?
   (Check one.) _____ yes _____ no

6. In accordance with Section 5.1.2.3 of the North Augusta Development Code, I hereby request the City of North Augusta review the attached project plans. The documents required by the City of North Augusta, as outlined in Appendix B of the North Augusta Development Code, are attached for the City's review for completeness. The applicant acknowledges that all required documents must be correct and complete to initiate the compliance review process.

7. _____ 4-24-24
   Applicant or Designated Agent Signature **Date**

   Tommy Paradise
   Print Applicant or Agent Name

Paradise, Tommy

From: Clifford, Jim
Sent: Wednesday, April 24, 2024 2:34 PM
To: Paradise, Tommy
Cc: J.D. McCauley
Subject: Special Exception Process

Tommy,

After reviewing our current development code, I realized that we need to update our regulations to match current city operations and to better serve our community's needs. Specifically, I propose allowing private non-profit clubs and organizations the ability to operate on parcels zoned P (public use) through the special exception process.

This change would bring parcels zoned P into line with the other residential, commercial, and mixed-use districts regarding the process and ability for private non-profit clubs and organizations to operate. It would enable non-profits that provide non-governmental services to use these spaces in the City of North Augusta.

Please begin the development code amendment process to allow the criteria and processes for granting these special exceptions. hanks!

V/R

Jim Clifford
City Administrator

City of North Augusta
100 Georgia Avenue
North Augusta, SC 29861-6400
jclifford@northaugustasc.gov
803.441.4202 - Office

Table 5.1. Use Matrix

P = Permitted Use
C = Conditional Use
S = Special Exception
A = Permitted only as Accessory use
A/C = Accessory use with Conditions
Dashes (--) = Not Permitted

	RESIDENTIAL				COMMERCIAL				Mixed Use			IND.	SPECIAL		
USES	Single-Family Large Lot R-14	Single-Family Medium Lot R-10	Small Lot Single-Family R-7	Mixed Residential R-5	Office Commercial OC	Neighborhood Commercial NC	General Commercial GC	Thoroughfare Commercial TC	Corridor Preservation Mixed -Use CPMU	Downtown Mixed-Use 1 DT1	Downtown Mixed-Use 2 DT2	Industrial IND	Critical Areas CR	Public Use P	Manufactured Home R-MH
Junk, Salvage, Scrap, or Wrecking Yard	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Recycling Processing Facility (5.5.30)	--	--	--	--	--	--	--	S	--	--	--	P	--	P	--
Refrigerated/Cold Storage	--	--	--	--	--	--	--	A	--	--	--	P	--	--	--
Warehouse and Distribution, General	--	--	--	--	--	--	--	P	--	--	--	P	--	--	--
Assembly, Recreation, and Entertainment Uses															
Adult Use	--	--	--	--	--	--	--	--	--	--	--	C	--	--	--
Entertainment Establishment, Indoor	--	--	--	--	--	--	C/S	C/S	C/S	C/S	C/S	--	--	--	--
Entertainment Establishment, Outdoor (5.5.8)	--	--	--	--	--	--	--	--	--	--	--	P	--	--	--
Golf Course or Driving Range	--	--	--	--	--	--	P	P	--	--	--	--	--	P	--
Place of Assembly, Large (5.5.25)	--	--	--	--	A	--	C	C	C	C	--	C	--	--	--
Place of Assembly, Small (5.5.25)	P	P	P	P	P	P	P	P	P	P	--	P	A	--	P
Private Non-profit Clubs and Organizations	S	S	S	S	S	S	S	S	S	S	S	--	--	S	--
Recreation, Indoor (5.5.26)	--	--	--	--	A/C	A/C	P	P	P	P	P	--	--	P	--
Recreation, Outdoor (5.5.27)	--	--	--	--	--	--	C	C	--	--	--	--	--	C	--
Riding Academy/Stable, Commercial (5.5.31)	--	--	--	--	--	--	--	C	--	--	--	P	C	--	--
Sports Stadium, Arena, or Coliseum (5.5.33)	--	--	--	--	--	--	P	P	--	--	--	--	--	--	--
Swimming Pool	P	P	P	P	A	--	A	P	--	A	--	--	--	--	P
Zoo, Botanical Garden, or Arboretum	--	--	--	--	--	--	P	P	--	--		P	--	--	--
Public, Institutional, Professional, and Community Uses															
Armory or Military Reserve	--	--	--	--	--	--	--	P	--	--	--	P	--	P	--
Cemetery	P	P	P	P	P	P	P	P	P	P	--	P	--	--	P
Child/Adult Care Center	--	--	--	--	A/C	C	C	C	--	C	--	A/C	--	--	--
College or University	--	--	--	--	P	P	P	P	P	P	P	--	--	P	--
Community Food Services	--	--	--	--	--	--	--	P	P	--	--	--	--	--	--
Crematorium and Embalming	--	--	--	--	P	--	S	S	P	--	--	P	--	--	--
Fire, Public Safety and Emergency Services	--	--	--	--	--	--	--	--	--	--	--	--	--	P	
Funeral Home	--	--	--	--	P	P	P	P	P	P	--	--	--	--	--
Government Offices or other Governmental Civic Uses or Facilities	--	--	--	--	--	--	--	--	--	--	--	--	--	P	--
Hospital or Sanitarium	--	--	--	--	P	--	P	P	P	--	--	--	--	--	--
Library	--	--	--	--	A	P	P	P	P	P	P	--	--	P	--

Department of Planning and Development

Project Staff Report
PD23-003 Moore's Bluff
Prepared by: Kuleigh Baker
Meeting Date: June 19, 2024

SECTION 1: PROJECT SUMMARY

Project Name	Moore's Bluff
Applicant	CSRA Development Company, LLC
Address/Location	between Compassion Way and Old Plantation Road near I-20
Parcel Numbers	001-19-02-005 zoned PD, Planned Development and a portion of 002-08-01-002 zoned R-14, Large Lot, Single-Family Residential

SECTION 2: PLANNING COMMISSION CONSIDERATION

The Planning Commission is being asked to review a request for approval of a Planned Development General Development Plan for the proposed Moore's Bluff Planned Development based on NADC Section 5.7.

NADC 5.7 General Development Plans

5.7.3.4 The Department shall report its findings to the Planning Commission as to:

a. Type of PD proposed, physical characteristics of the land, relation of the proposed development to surrounding areas and existing and probable future development.

b. Relation to major roads, utilities and other facilities and services.

c. Adequacy of evidence of unified control and suitability of any proposed agreements, contracts, deed restrictions, sureties, dedications, contributions, guarantees, or other instruments, or the need for such instruments, or for amendments in those proposed.

d. Compliance of the general development plan with the provisions of this Chapter, the suitability of plans proposed, and the desirability of conditions on the approval, waivers, or amendments, if any, with reasons therefore.

e. Desirable specific modifications in regulations or the Comprehensive Plan as applicable in the particular case based on determinations that such modifications are necessary or justified in the particular case. Any recommended modifications shall be supported by demonstration that the public purpose of the Comprehensive Plan, PD District or other regulations would be met to at least an equivalent degree.

5.7.3.5 Based on such findings, the Department shall recommend approval of the PD general development plan as proposed, approval conditioned on specific stated modifications, or denial with reasons therefore.

5.7.3.6 The Planning Commission shall have thirty (30) days from the Planning Commission meeting at which the PD general development plan application is considered to submit its report and recommendation on the application to the City Council.

5.7.3.7 The City Council shall consider the application within thirty (30) days from receipt of the Planning Commission's recommendation. Approval by the City Council shall be in the form of an ordinance approving the PD general development plan.

a. The City Council may approve the application as recommended by the Planning Commission, may approve the application with specific modifications or other applicable regulations, or may deny the application.

b. If amendment of the Comprehensive Plan or this Chapter is required, the City Council shall receive the recommendation of the Planning Commission within thirty (30) days but shall not take any action on the ordinance approving the PD general development plan until it has acted on the amendment of the Comprehensive Plan or this Chapter or both as necessary.

5.7.4 Approval Criteria-- In making its report, the Planning Commission should consider the following factors:

a. The relationship of the request to the Comprehensive Plan;

b. Whether the request violates or supports the Comprehensive Plan;

c. Whether the permitted uses would be appropriate in the area concerned; and

d. Whether adequate public facilities such as roads, water and sewer facilities, drainage facilities, and schools and other public services exist or can be provided to serve the needs of the development.

SECTION 3: PUBLIC NOTICE

Per NADC Table 5-1, a notice of the Planned Development General Development Plan request and scheduled date of the Planning Commission public hearing was mailed to property owners within 200 feet of the subject property on May 24, 2024. The property was posted with the required public notice on May 29, 2024. A public notice of the rezoning request and scheduled date of the Planning Commission public hearing was published in *The Augusta Chronicle* and on the City's website at www.northaugustasc.gov on May 29, 2024.

SECTION 4: SITE HISTORY

The subject parcels are currently vacant. Moore's Bluff is a planned mixed-use development. Proposed uses include townhomes and commercial uses.

The Planning Commission reviewed a Concept Plan for the Moore's Bluff Planned Development on May 18, 2022. The minutes from that meeting are attached for reference.

SECTION 5: EXISTING SITE CONDITIONS

	Existing Land Use	Future Land Use	Zoning
Subject Parcel	Vacant	Mixed Use	PD, Planned Development
North	Apartments/I-20	Mixed Use	R-5, Mixed Residential
South	Residential	Residential Single-Family	R-14, Large Lot, Single-Family Residential/Outside City Limits
East	Commercial	Mixed Use	GC, General Commercial
West	Residential	Residential Single-Family	Outside City Limits

Access – The subject site currently has access from Compassion Way (FKA Frontage Road). Additional access is proposed through an existing residential parcel on Old Plantation Road.

Topography – Topography across the site is variable. Higher elevations are located near Old Plantation Road and lower elevations fall towards Compassion Way at the West side of the site. Topography is steep in areas and generally drains to the wetlands located through the site. The property has streams and ponds on site that must be delineated.

Utilities – Water and wastewater lines currently run adjacent to the subject parcels. Wastewater is available at the southernmost portion of the property. Water line extensions are possible from Compassion Way or Old Plantation Road.

Floodplain – The parcel is not located in a federally designated floodway and is located in an area of minimal flood hazard.

Drainage Basin – The subject property is located in the Fox Creek Basin. Fox Creek Basin is located at the edge of the city near the Edgefield County line and is primarily wooded. Creeks and streams flow into Gregory Lake. It converges with Pole Branch Basin at the bottom of the reach before discharging into the Savannah River upstream of I-20. The stream channel integrity in the basin is in good condition and with careful consideration of buffers and prevention of impacts to the channel, the basin can remain healthy.

SECTION 6: STAFF EVALUATION AND ANALYSIS

The applicant is proposing a mixed use planned development to be known as Moore's Bluff. The proposed project will include up to 180 townhomes accessed from Old Plantation Road and a commercial site developed as a storage facility. The original concept plan submittal in May 2022 proposed four commercial sites that would allow uses comparable to those permitted by right in the Thoroughfare Commercial Zoning. Access to the commercial lots was proposed through an easement extending from Compassion Way through the four commercial lots. The current Planned Development General Development Plan does not show a connection between the commercial and residential uses.

S.C. Code §6-29-720 defines a PD or "planned development district" as a development project comprised of *housing of different types and densities* and of compatible commercial uses, or shopping centers, office parks, and mixed-use developments. As the proposed development is

for townhouses only, a copy of Sinkler v. City of Charleston is included with this Staff Report for consideration by the Commission.

Section 5.7.3.4 of the NADC prescribes the issues and factors that must be taken into account by the staff and Planning Commission in the review of general development plans for proposed Planned Developments. The following discussion addresses each of the findings listed in the NADC.

1. ***Type of PD proposed, physical characteristics of the land, relation of the proposed development to surrounding areas and existing and probable future development.***

   The North Augusta Development Code requires Planned Development sites to be a minimum ten (10) acres in area. The subject property is over seventy acres in size. The proposed development includes townhomes accessible from Old Plantation Road. Commercial uses including a self-storage site will be located closer to Compassion Way along the I-20 frontage. Based on the proposed uses, general layout proposed, the implementation of infill development and the interconnectivity of multiple developments with the existing infrastructure, the proposed project generally complements the existing and anticipated future mixed use development in the area.

2. ***Relation to major roads, utilities and other facilities and services.***

   Access to the residential portion of the project will be via a new road system extending from Old Plantation Road into the subject parcel. The commercial portion of the Planned Development will be accessed from an extension of Compassion Way. Curb cuts, driveways, and access locations will be determined in conjunction with NADC Section 14.8 and SCDOT standards at the time of preliminary site plan or plat approval. A portion of Old Plantation Road lies within Aiken County's jurisdiction as a county road and the design must also be coordinated as such. Special care should be taken to design the project to ensure the future connection/realignment of Old Plantation Road to Knobcone Avenue in accordance with the adopted Martintown Road Corridor Study and Council priorities. The Martintown Road Corridor Study recommendation #12 states, "Encourage a parallel service road on the West Martintown Road connecting River Falls Apartments and Circle K back to Old Plantation Road." This request from City Council has not been coordinated between the applicant and adjacent property owners at this time.

Section 3.6.1.5 Private Streets of the North Augusta Development Code states that private streets may be permitted in an approved PD District provided such streets meet the design and construction standards of public streets (see Article 14, Streets). Streets are intended to remain private in the PD. Street types should be indicated on the preliminary and final subdivision plats, with the developer's Traffic Impact Analysis (TIA) serving as a guide for the number of trips.

City water is available adjacent to the site. City sanitary sewer is available immediately adjacent to the site. Service will be extended to the project.

3. Adequacy of evidence of unified control and suitability of any proposed agreements, contracts, deed restrictions, sureties, dedications, contributions, guarantees, or other instruments, or the need for such instruments, or for amendments in those proposed.

The property is currently owned by the Arthur Shealy Estate. Individual phases of the project will be developed independently and bound by the parameters of the approved general development plan. Access to the residential portion of the project will be via a new road extending from Old Plantation Road into the subject parcel through the Shealy property, a portion of TPN 002-08-01-002. A plat to subdivide this parcel should be submitted for staff review. The resulting parcels must meet the dimensional standards for the zoning district in which they are situated.

4. *Compliance of the general development plan with the provisions of this Chapter, the suitability of plans proposed, and the desirability of conditions on the approval, waivers, or amendments, if any, with reasons therefore.*

Plans proposed at this time are adequate for the purpose of General Development Plan review.

Table 3-6, Design Elements for a Planned Development includes various items that should be implemented in the development of the General Development Plan. At this time, it does not appear that the garage area meets the requirements of the guidelines. The applicant may also consider adding bicycle parking to meet Item 3 of the following table.

	A	B
1.	**Architectural Elements**. All of the following shall apply:	1. Building height, rhythm, articulation, massing and bulk shall be compatible with the individual site attributes and with the surrounding neighborhoods. 2. Distinctive architectural details such as covered front entryways, covered front porches, door and window details, roof overhangs, and/or parapet walls with cap features shall be provided on each dwelling, or principal structure. 3. Garage fronts shall be de-emphasized and shall not be the most prominent architectural feature of a house. This can be accomplished by providing side access garages, detached garages, and/or L- shaped floor plans. Front access garages shall be recessed from the front elevation of the structure at least 10 feet in order to provide interest and relief from the street. The garage area may not exceed 40% of the front facade of the structure. The front elevation shall include a porch or similar entrance designed for people rather than automobiles.
2.	**Recreational Elements**. All of the following shall apply:	1. At least 20% of the residential units shall be located within 1,000 feet of an open space, park or Greeneway. 2. Recreation and open space facilities should be aligned with the community parks and open space network, as provided in any adopted land use plans or parks and recreation master plans. 3. Neighborhood scale recreation facilities and amenities should be provided which are functional. If detention or retention areas are used for recreational amenities, they should be designed to have the appearance of natural ponds or hillsides rather than stormwater management facilities. Such areas should include natural vegetation, turf or landscaping within all areas not permanently covered with standing water.

3.	**Additional Elements.** At least two of the following shall apply:	1. Bicycle lanes should be included along at least 70% of the linear frontage of all planned collector or arterial streets within or adjacent to the development. 2. Bicycle parking facilities should be provided for all uses except single-family detached and duplex residences. 3. A customized entrance may be provided at the entry street intersecting an arterial or collector street which features a waterfall, sculpture, monument signage, special landscaping, specialty pavement, enhanced fence wall details, boulevard median, or other similar treatment.

This list is of potential waivers and variances required based on a preliminary review of the plans submitted for this review. Additional waivers or variances may be identified as more complete plans are developed. Waivers and variances will be considered by the Planning Commission or Board of Zoning Appeals as applicable at the time of site plan or preliminary plat approval.

- Block Length
- Connectivity Ratio
- Lot Frontage

5. Desirable specific modifications in regulations or the Comprehensive Plan as applicable in the particular case based on determinations that such modifications are necessary or justified in the particular case. Any recommended modifications shall be supported by demonstration that the public purpose of the Comprehensive Plan, PD District or other regulations would be met to at least an equivalent degree.

The Comprehensive Plan identifies the property as Mixed Use on the Future Land Use Map and the proposed uses are consistent with the category. No modifications to the North Augusta Development Code, Official Zoning Map, or the Comprehensive Plan are necessary to approve and implement the Moore's Bluff General Development Plan.

Section 5.7.4 of the NADC, Approval Criteria, lists factors the Planning Commission should consider in making its report to the City Council.

1. ***The relationship of the request to the Comprehensive Plan.***

   The Future Land Use Element of the city's Comprehensive Plan classifies the property as Mixed Use. The Mixed Use classification allows for a variety of uses including most residential, commercial, institutional, government, and religious uses. Areas adjacent to major arterial corridors are appropriate for the mixed use classification and allows zoning districts with substantially different standards to be located adjacent to each other. The proposed General Development Plan is consistent with the Future Land Use Element of the Comprehensive Plan. The proposed project is also consistent with Comprehensive Plan policies for priority investment areas along Martintown Road. The vision for Martintown Road is new mixed use development along major corridors in aging commercial areas, improved connectivity between mixed use centers and surrounding neighborhoods, and new housing options integrated into new mixed use centers.

2. ***Whether the request violates or supports the Comprehensive Plan;***

   Based on the proposed uses, general layout, the implementation of infill development and the interconnectivity of multiple developments with the existing infrastructure, the proposed project generally supports the goals of the Comprehensive Plan. Section 6.2 of the Comprehensive Plan supports providing a more varied housing stock with mixed-income neighborhoods, providing housing types at higher densities including townhouses, and creating additional connections in the existing street network to make North Augusta a more walkable city.

   The introduction of townhomes to the I-20/Martintown Road corridor introduces a more affordable housing model in an area with one of the highest median housing values in the City as indicated on Map 2.1: Housing Values by Census Tract in the 2021 Comprehensive Plan. The townhouse element also supports Goals & Strategies Item 2.1.5. Engage more compact development patterns with higher quality design and building materials to increase and maintain property values. It also aligns with Goals & Strategies Item 2.2 Provide a more varied housing stock to attract and retain a more diverse population.

   The storage units proposed support Chapter 4, Economic Development of the 2021 Comprehensive Plan. Goals & Strategies Item 4.4 is to identify targeted businesses and investment for the I-20 and I-520 interchanges. The storage facilities support ongoing development that is centered in the vicinity of Exit 1 including The Hive Planned

Development, River Falls Apartments, and subdivisions along Gregory Landing Road and Bergen Road.

3. Whether the permitted uses would be appropriate in the area concerned.

The proposed residential uses provide additional housing options in this part of the City. The General Development Plan has carefully considered the layout of commercial and residential uses in relation to the surrounding neighborhood. Commercial uses are oriented adjacent to the Interstate. Open spaces and green spaces provided in the plan allow additional recreational opportunities. The proposed Planned Development is compatible with surrounding area and existing developments.

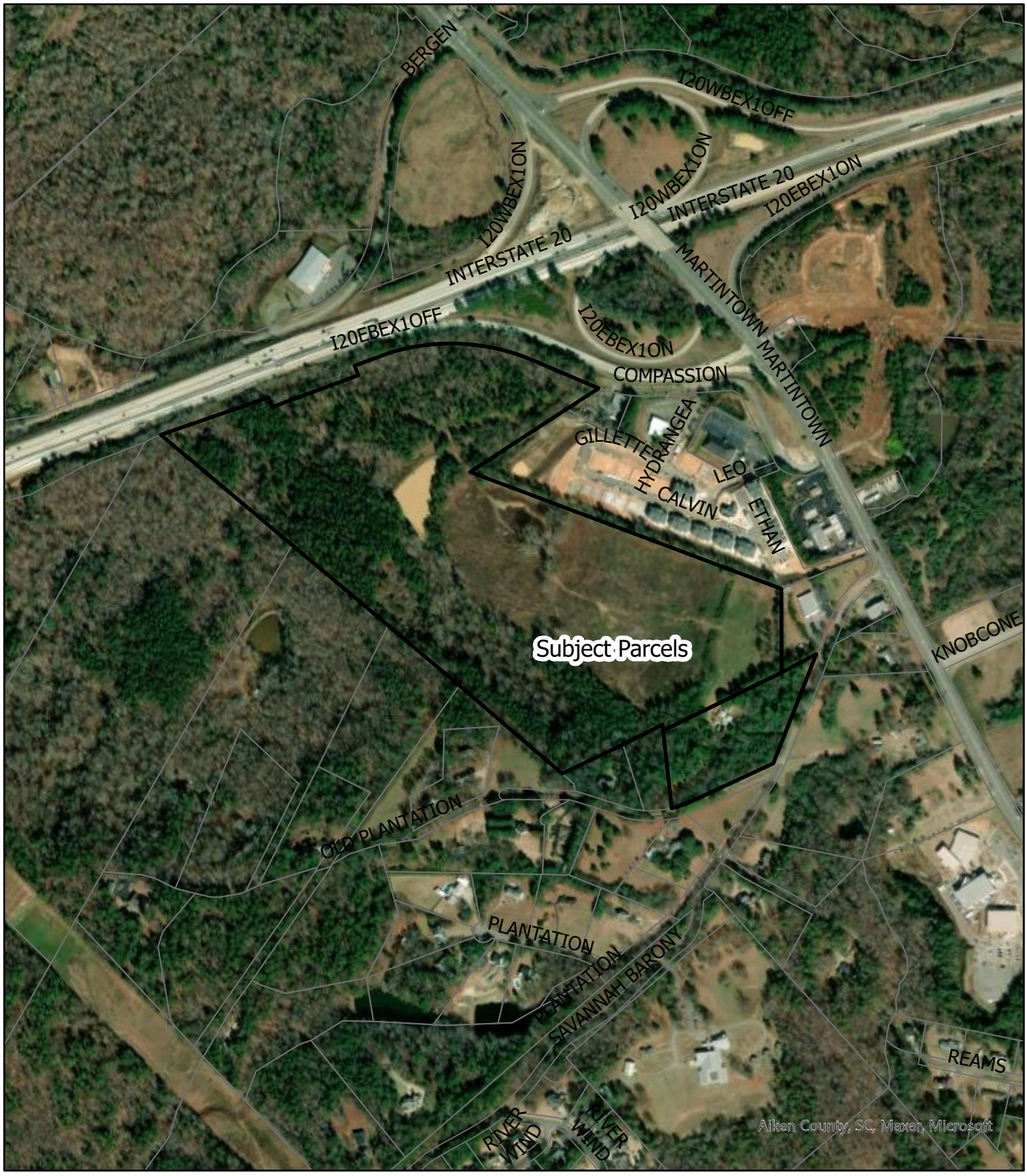
4. Whether adequate public facilities such as roads, water and sewer facilities, drainage facilities, and schools and other public services exist or can be provided to serve the needs of the development.

There will be a nominal impact on schools and social services, although an accurate demographic estimate is difficult because the ultimate mix of residents is not known. Additional review will be conducted as part of the preliminary plat application and site plan stages to verify the impacts to the existing utility services (sanitary sewer, potable water and storm sewer) and ensure compliance with city, state, and federal requirements.

SECTION 7: ATTACHMENTS

1. Project Maps
2. Public Notice
3. Martintown Road Corridor Study
4. Minutes of the May 18, 2022 Planning Commission Meeting
5. Application
6. GDP Narrative
7. Existing Conditions (Fig. 2)
8. Concept Plan (Fig. 3)
9. Conceptual Commercial Site Layout
10. Pedestrian Plan (Fig. 4)
11. Amenity Plan (Fig. 5)
12. Traffic Impact Study
13. Staff Draft Ordinance
14. Sinkler v. City of Charleston

Cc: Keith Lawrence, CSRA Development Company, LLC, via email



North Augusta
South Carolina's Riverfront

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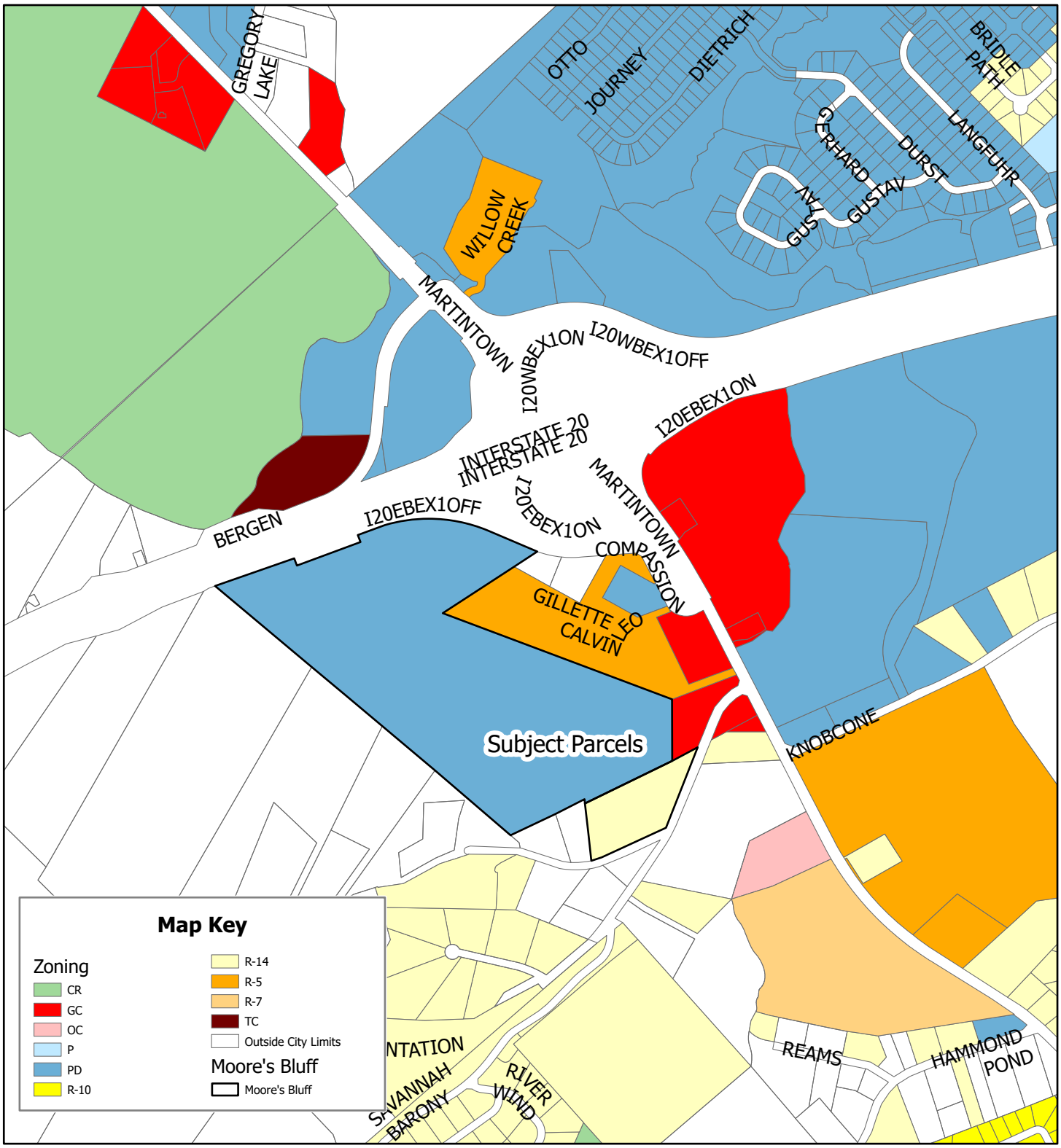
Aerial Map
Application Number PP23-003
Moore's Bluff
Tax Parcel Numbers
001-19-02-005 and 002-08-01-002

Path: H:\kbaker\ArcGIS\Planned Developments\PD23-003 Moore's Bluff\PD23-003 Moore's Bluff.aprx



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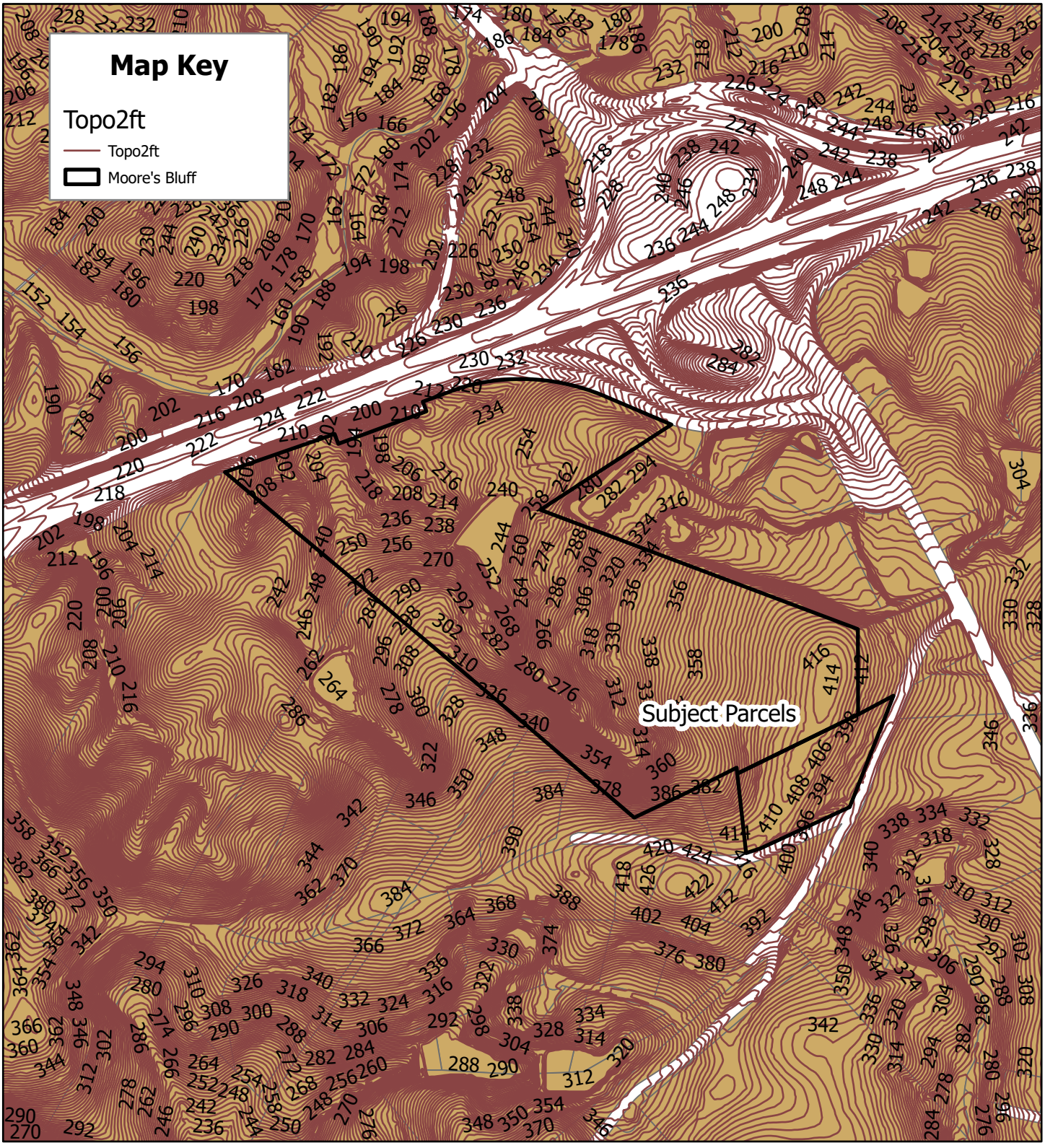
North Augusta
South Carolina's Riverfront

Zoning Map
Application Number PP23-003
Moore's Bluff
Tax Parcel Numbers
001-19-02-005 and 002-08-01-002
Zoned PD, Planned Development and
R-14, Large Lot, Single-Family Residential

Path: H:\kbaker\ArcGIS\Planned Developments\PD23-003 Moore's Bluff\PD23-003 Moore's Bluff.aprx



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North Augusta
South Carolina's Riverfront

Topography Map
Application Number PP23-003
Moore's Bluff
Tax Parcel Numbers
001-19-02-005 and 002-08-01-002

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City of
North Augusta, South Carolina

Planning Commission

Public Hearing Notice

The North Augusta Planning Commission will hold its regular monthly meeting at 6:00 PM on Wednesday, June 19, 2024, in the Council Chambers located on the 3rd floor of the North Augusta Municipal Center, 100 Georgia Avenue, to receive public input on the following applications:

RZT24-002 – A request by the City of North Augusta to amend Table 5.1, Use Matrix of the North Augusta Development Code to permit private non-profit organizations to operate in the Public Use zoning district as a Special Exception.

RZM24-004 – A request by WSM Ventures, LLC to rezone approximately 0.25 acres located at 10139 Atomic Road, TPN 007-16-04-002, from R-10, Medium Lot Single-Family Residential to GC, General Commercial.

PD23-003 – A request by CSRA Development Company, LLC for approval of a Planned Development General Development Plan affecting ±70.82 acres located between Compassion Way and Old Plantation Road near I-20, Tax Map Parcel Number 001-19-02-005 zoned PD, Planned Development and a portion of Tax Parcel Number 002-08-01-002 zoned R-14, Large Lot, Single-Family Residential. The proposed project is a mixed-use development consisting of townhomes and commercial uses.

Documents related to the application will be available for public inspection after June 12, 2024 in the office of the Department of Planning and Development on the 2nd floor of the Municipal Center, 100 Georgia Avenue, North Augusta, South Carolina and online at www.northaugustasc.gov. All members of the public interested in expressing a view on this case are encouraged to attend or provide written comments to planning@northaugustasc.gov.

CITIZEN ASSISTANCE:

Individuals needing special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development at 803-441-4221 at least 48 hours prior to the meeting.

RESOLUTION NO. 2021-12
TO ADOPT THE 2020-2021
WEST MARTINTOWN ROAD CORRIDOR STUDY

WHEREAS, the West Martintown Road Corridor has seen significant residential and commercial development growth, leading to roadway vehicle capacity and safety challenges along the 1.1 mile corridor between Knobcone Avenue and Gregory Lake Road; and

WHEREAS, corridor improvements through transportation plans require a coordinated approach to solve long term issues with access, safety and funding; and

WHEREAS, the City of North Augusta contracted with AECOM in January 2020 to complete a study of the West Martintown Road Corridor, taking into consideration known and anticipated future development, to evaluate existing traffic operations, project future traffic conditions, and identify strategies to improve traffic flow and safety; and

WHEREAS, the resulting project list is a guide for future improvements along the West Martintown Road Corridor with projects projected for near, intermediate and long term completion (until 2040); and

WHEREAS, the Planning Commission, after reviewing the study and receiving public comment, unanimously recommended approval and a prioritization of projects at their February 18, 2021 regular meeting; and

NOW THEREFORE, BE IT RESOLVED by the Mayor and City Council of the City of North Augusta, South Carolina, in meeting duly assembled and by the authority thereof, that:

1. The North Augusta City Council hereby adopts the West Martintown Road Corridor Study as a guide in the development of the West Martintown Road.
2. Staff is directed to enact the prioritized list of roadway improvement projects in conjunction with further development to the extent possible.
3. A copy of the adopted West Martintown Road Corridor Study is attached hereto.

DONE, RATIFIED AND ADOPTED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH AUGUSTA, SOUTH CAROLINA, ON THIS 5th DAY OF April, 2021.

Robert A. Pettit, Mayor

ATTEST:

Sharon Lamar
Sharon Lamar, City Clerk

Department of Planning and Development

Memorandum # 21-010

City of North Augusta

To: James S. Clifford, City Administrator

From: Libby Hodges, Director of Planning and Development

Subject: **Planning Commission Recommendations: W. Martintown Rd. Corridor Study**

Date: February 22, 2021

At the February 18, 2021, Planning Commission meeting, the Commission reviewed the recommendations from AECOM regarding the W. Martintown Corridor Study.

The Commission unanimously recommended approval of the study with cases prioritized as indicated on attached list. The Commission also recommended that Council consider funding these projects through ARTS (Augusta Regional Transportation Study, Metropolitan Planning Organization), Capital Projects Funds, and Impact Fees.

The study is being forwarded to Council to consider for adoption. By adopting the study and its recommendations, the study results will be used as a guiding document for staff project planning. The following information is included for review and reference:

- Project prioritization list: This is the Planning Commission's preferred project prioritization. After confirmation with the Chair, the intended order of prioritization are the "Primary Projects," projects I-4, L-3, I-5, I-2, and I-1. The remaining recommended projects are listed as "Secondary Projects." Adopting this priority list will not remove any other projects, but will clarify what projects are pursued first by staff.
- PowerPoint Presentation about the study
- Local Funding Brief
- Public comment: Public comment received to date (updated to the date of this memo) and the funding brief submitted to the Planning Commission. Comments will be accepted until at least March 1, 2021.
- Draft resolution for adoption: Several details remain at the discretion of the Council.

The entire plan may be reviewed here: http://www.northaugusta.net/MartintownRoadStudy

If any Council member would like a hard copy of the study, please let us know and we will assemble a notebook. If you have any questions, please do not hesitate to contact me.

PRIMARY PROJECTS

Project # (Figure #)	Location	Consideration	Notes	Cost
I-4 (Figure 7C)	Knobcone Avenue	Install a traffic signal with dual southbound left-turn lanes and northbound right-turn lane on West Martintown Road.	Constructed in conjunction with Hamrick Farms development schedule	$1,500,000
L-3 (Figure 7C)	Frontage Road to Old Plantation Road	Develop a parallel road to the west side West Martintown Road that provides access to River Falls Apartments and Circle K that connects to Old Plantation Road and eventually to the new signal at Knobcone Avenue (approximately 1700 ft)	Should be considered with any future development in the vicinity to help reduce the number of vehicles U- turning / taking left onto Frontage Road	$1,000,000
I-5 (Figure 7C)	Knobcone Avenue to Hammond Pond Rd	Build a sidewalk on both sides of the road connecting the two intersections (2500 centerline ft, 5000 linear ft of sidewalk, Needs Right of Way)	Provides a connection to multimodal facilities but not directly attributed to one particular development	$800,000
I-2 (Figure 7B)	I-20 WB Off Ramp	Install a dual lane roundabout	Constructed by 2027 or completion of Hamrick Farms Development	$2,750,000
I-1 (Figure 7A)	Gregory Lake Road	Install a single lane roundabout	Constructed by 2030 or completion of Saunders Place PD	$2,250,000

SECONDARY PROJECTS

Near Term: 2020-2025

Project # (Figure #)	Location	Consideration	Notes	Cost
N-1 (Figure 7B)	Bergen Road	Install a traffic signal	In progress	$100,000
N-2 (Figure 7C)	I-20 EB Off Ramp	Install a Traffic Signal – Includes dual eastbound left-turn lanes and maintains free flow right-turn lane	In progress	$150,000
N-3 (Figure 7C)	I-20 EB Off Ramp / Hamrick Farms Site Driveway #1	With proposed development, install a 4th leg for the Site Driveway for Hamrick Farms Development to include dual westbound left-turn lanes and one single right-turn lane. I-20 EB Off Ramp approach should have a through lane constructed to access Hamrick Farms driveway and the free flow right-turn lane should be replaced with dual right-turn lanes (350 feet storage). On West Martintown Road, a northbound right-turn lane (250 feet storage) and southbound left-turn lane (200 feet storage) should be provided.	In conjunction with Hamrick Farms development schedule	$2,000,000
N-4 (Figure 7B / Figure 7C)	I-20 EB On Ramp to I-20 WB Loop Ramp	Restripe West Martintown Road northbound right-turn lane onto I-20 EB On Ramp to a shared / through-right-turn lane that end at I-20 WB Loop On Ramp.	In conjunction with Hamrick Farms development schedule	$10,000

N-5 (Figure 7C)	Hamrick Farms Site Driveway #2	Provide a northbound right-turn lane with 150 feet of storage and access to / from Hamrick Farms Driveway #2 should be right-in / right-out (Overhead Utilities will have to be relocated)	In conjunction with Hamrick Farms development schedule	$300,000
N-6 (Figure 7C)	Hamrick Farms Site Driveway #3	Provide a northbound right-turn lane with 150 feet of storage and access to / from Hamrick Farms Driveway #3 should be right-in / right-out. Old Plantation Road should remain full access. (Overhead Utilities will have to be relocated)	In conjunction with Hamrick Farms development schedule	$300,000

Intermediate Term: 2025-2035

Project # (Figure #)	Location	Consideration	Notes	Cost
I-3 (Figure 7C)	Frontage Road / Hamrick Farms Site Driveway #2	Reconfigure Frontage to a reduced conflict intersection (RCI) and provide a flare out to make northbound U-turns	Constructed with completion of Rivers Falls Apartment Phase 2 or Hamrick Farms Development	$300,000

Long Term: 2035-2040

Project # (Figure #)	Location	Consideration	Notes	Cost
L-1 (Figure 7C)	Knobcone Avenue	Install a 4th leg connecting to Old Plantation Road	Needed to improve operation at Old Plantation Road once 75% of Hamrick Farms is built out; however Old Plantation Road users could turn right out and U-turn at Knobcone Avenue	$800,000
L-2 (Figure 7C)	Old Plantation Road	Restrict access to Old Plantation Road to right-in / right-out after completing a new connector road to Knobcone Avenue by installing a median that connects to RCI at Frontage Road.	Desirably to install with the new connector from Old Plantation Road to Knobcone Avenue	$100,000

West Martintown Road Corridor Study

City of North Augusta

North Augusta
South Carolina's Riverfront

Project number: 60627475

January 2021

Adopted Final Study
April 5, 2021

1.0 Executive Summary

Significant growth along West Martintown Road has led to new capacity and safety challenges along the corridor, which is a 1.1 mile section from Knobcone Avenue to just north of Gregory Lake Road, in North Augusta, South Carolina. Population density has been increasing over the past decade with 1,177 residences accessing Bergen Road, which intersects with West Martintown Road. A new regional park is located north of the corridor and there are plans for 900 residential units and close to 300,000 square feet of commercial development. With these new developments brings additional traffic issues requiring new forms of traffic control at key intersections and access management strategies to preserve progression and safety along West Martintown Road. On average, 35 collisions a year occur within the study area limits.

According to the 2019 SCDOT permanent count stations along West Martintown Road, the average daily traffic volumes along the corridor vary from 5,400 vehicles per day (vpd) just north of Gregory Lake Road to 18,300 vpd south of Knobcone Avenue. Using the Augusta Regional Transportation Study (ARTS) model to determine growth rates at these locations, these existing traffic volumes are expected to grow to 6,800 vpd north Gregory Lake Road and 20,800 vpd south of Knobcone Avenue by 2040. While most of the traffic is residential related, a large mixed-use development in the southeast corner of West Martintown Road and I-20 is planned changing traffic flow patterns to / from the interstate.

The purpose of this study is to develop a corridor plan to accommodate future development which includes identifying new forms of traffic control at key intersections, mitigating any existing crash patterns, and improving multimodal connectivity with pedestrian enhancement.

Below is a list of the general sequence of events for the projects identified along West Martintown Road with the 2040 build-out shown in **Figure 5.**

1. Install a traffic signal at Bergen Road – *In progress*
2. Install a traffic signal at I-20 Eastbound Off Ramps – *In progress*
3. Modify traffic signal laneage and phasing at I-20 Eastbound Ramps to accommodate Hamrick Farms Development new leg and signalize off ramp right-turns.
4. Restripe north of I-20 EB Off Ramp / Hamrick Farm Driveway #1 to provide three northbound through lanes ending at the I-20 WB Loop On Ramp.
5. Convert Frontage Road to a reduced conflict intersection and Hamrick Farms Driveway #2 to right-in / right-out.
6. Initially construct Hamrick Farms Driveway #3 right-in / right-out, but leave Old Plantation Road full access (short-term).
7. Install a traffic signal at Knobcone Avenue with dual southbound left-turn lanes once Hamrick Farms Driveway #4 on Knobcone Avenue is complete. One of the left-turn lanes will end at Hamrick Farms Driveway #4.
8. Install a dual lane roundabout at I-20 Westbound Off Ramp.
9. Install a single lane roundabout at Gregory Lake Road.
10. Provide a new connection from Old Plantation Road to Knobcone Avenue and convert Old Plantation Road from full access to a right-in / right-out.
11. Install sidewalks along West Martintown Road between Hammond Ponds Road northward connecting with Knobcone Avenue.
12. Encourage a parallel service road on west side of West Martintown Road connecting River Falls Apartments and Circle K back to Old Plantation Road.

Cost estimates for Near-term, Intermediate-term, and Long-term projects have been identified in **Section 7.0** of this report including development thresholds that trigger improvements along with concepts shown in **Figure 7A, Figure 7B, and Figure 7C.**

AECOM

FIGURE 1

Study Area Limits

West Martintown Road Corridor Study
North Augusta, SC

N

Drawing Not to Scale

7.0 Conclusions and Recommendations

The recommendations developed for West Martintown Road Corridor study focus on traffic operations, safety, and multimodal improvements. With the recommended roadway improvements shown in **Figure 5** and described below, the intersections along West Martintown Road within the study area are expected to operate at acceptable levels of service with the exception of I-20 Eastbound Ramps and Frontage Road as shown in **Table 14**. West Martintown Road at I-20 Eastbound Ramps / Hamrick Driveway #1 and at Frontage Road are the only intersections expected to operate at LOS D; however, the 95th percentile queues are accommodated with a LOS C along West Martintown Road.

Gregory Lake Road

- Install a single lane roundabout. The current stop-controlled intersection is likely to drop to a volume to capacity ratio greater than 0.80 with LOS F the during year 2030 assuming the growth form the nearby development is linear between the year 2020 and 2040. It should be noted that this single lane roundabout may be needed sooner based on the completion date of the Saunders Place PD mixed-use development.

Bergen Road

- Install an actuated two-phase traffic control signal. Vehicles exiting Bergen Road currently already experience excessive delay at operate at LOS F, and signal warrant criteria is already met at this location.

I-20 Westbound Ramps

- Install a two-lane roundabout. The current stop-controlled intersection is likely to drop to a volume to capacity ratio greater than 0.80 with LOS F the during year 2027 assuming the growth form the nearby development is linear between the year 2020 and 2040. This improvement is likely needed with the completion of Hamrick Farms Development; however, this intersection was not analyzed in their traffic impact analysis report.

I-20 Eastbound Ramps / Hamrick Farms Site Driveway #1

- Restripe the northbound right turn lane at the I-20 Eastbound On ramp to a shared through-right turn lane to provide three receiving lanes for the intersection

- Install an actuated coordinated traffic control signal, three through lanes and one exclusive right turn lane for the northbound approach, one exclusive left turn lane and two through lanes for the southbound approach. Two left turn lanes, one through lane, and two right turn lanes for the I-20 Eastbound Off Ramp approach, and two left turn lanes and one right turn lane for the Hamrick Farms driveway.

Both of these improvements should be considered with the Hamrick Farms Development.

Frontage Road/Hamrick Farms Site Drive #2

- Reconfigure Frontage Road to restrict vehicles exiting Frontage to right turn only. Restrict Hamrick Farms Site Driveway # 2 to right in and right out only. Allow left turns and U-turns from northbound using the reduced conflict intersection. The level of service for vehicles exiting Frontage Road (full access) is likely to drop to a volume to capacity ratio greater than 0.80 with a LOS F once Phase 2 of the proposed River Falls Apartment development is complete and occupied. Full access of Frontage Road needs to be removed with the completion of River Falls Apartment development Phase 2 or with the completion of Hamrick Farms Driveway #2.

Old Plantation Road/Hamrick Farms Site Drive #3

- Install a raised median to restrict side streets to right in and right out only. This should be implemented as part of the Hamrick Farms Development.
- Realign Old Plantation Road to connect with Knobcone Avenue as the fourth leg. It is estimated the level of service for vehicles exiting Old Plantation Road would operate at LOS F when Hamrick Farms development is at the stage of 75 percent. At this time the connector should be considered. Once full access is provided to Old Plantation Road connector, vehicles exiting the original Old Planation Road should be restricted to right in and right out only.

Knobcone Avenue

- Install a traffic signal. Based on engineering judgement, a signal warrant for the two conflicting movements of southbound left turns vs northbound through movement will trigger a warrant before it is met on the side street of Knobcone Avenue. It should be noted that this signal is needed with the completion date of the Hamrick Farms mixed-use development.
- Provide two U-turn/left turn lanes for the southbound approach, one left turn lane along with two through lanes and one right turn lane for the northbound approach. Provide two receiving lanes on Knobcone Avenue and terminate the inside lane as a left turn lane at Hamrick Farms Site Drive #4. This laneage is needed as part of the Hamrick Farms full build out plan in particular in the southern part of site.

Table 14: Intersection LOS Summary by Scenario

ID#	Intersection	AM Peak			PM Peak		
		Existing 2020	No-Build 2040	Build 2040	Existing 2020	No-Build 2040	Build 2040
1	W Martintown Rd at Gregory Lake Rd	D	F	A	D	F	A
2	W Martintown Rd at Bergen Rd	F	F	B	F	F	B
3	W Martintown Rd at I-20 WB Ramps	C	F	A	E	F	A
4	W Martintown Rd at I-20 EB Ramps	D	F	B	F	F	D
5	W Martintown Rd at Frontage Rd	C	F	C	E	F	D
6	W Martintown Rd at Old Plantation Rd	C	F	C	C	F	C
7	W Martintown Rd at Knobcone Ave	D	F	C	D	F	C

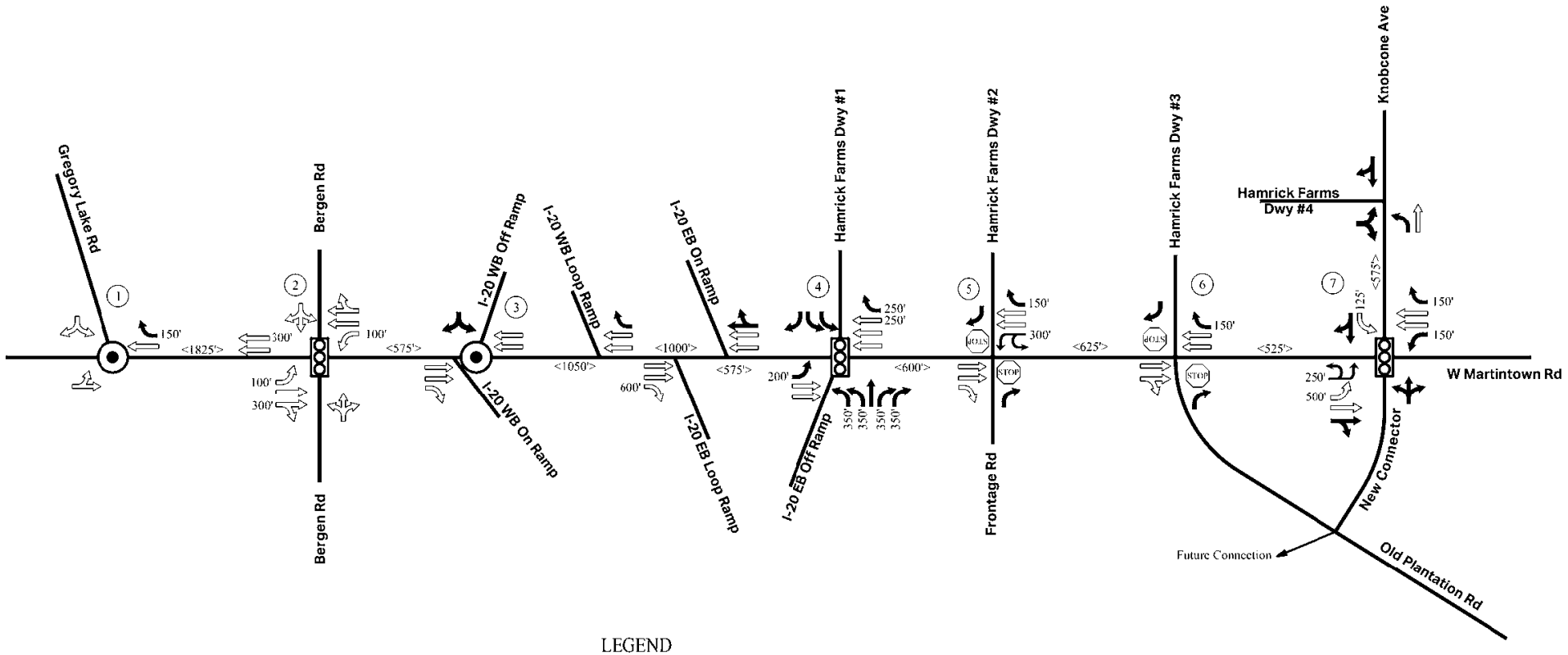
The construction of a new roadway connecting Old Plantation Road to the intersection of Knobcone Avenue and West Martintown Road as the fourth leg to this intersection (eastbound approach) was proposed as part of a long-term mitigation measure. It is recommended to keep

Old Plantation Road full access until this connection can be made. After this connection is provided, vehicles exiting Old Plantation Road should be restricted to right in and right out only. Hamrick Farms Site Drive #2 and #3 should be restricted to right in and right out with signalized access only at Site Drive #1 and at Knobcone Avenue.

The West Martintown Road corridor currently does not provide any pedestrian facilities along the study area. As more residential, commercial and office spaces develop, pedestrian activities are expected to increase in the area. It is recommended to install pedestrian crosswalks with the installation of the three traffic signals at the intersections of Martintown Road with Bergen Road, I-20 Eastbound Off Ramp/Hamrick Farms Site Drive #1, and Knobcone Avenue. Sidewalks along both sides of Martintown Road should be considered, and walking trails connecting to the communities on the eastside of Martintown Road.

AECOM has developed a prioritized list of projects that aim to improve safety, operation, and multimodal connectivity along the corridor. These projects have been grouped into Near-term (2020-2025), Intermediate-term (2025-2035), and Long-term (2035-2040) as shown in **Table 15**, **Table 16**, and **Table 17**. Notes have been provided in these tables to provide an approximate timeframe of when a particular improvement should be considered. Due to future development unknowns in regard to schedule, AECOM has also provided an approximate year using linear growth trends in the area.

A basic concept showing all of the projects at full build-out is shown in **Figure 7A, Figure 7B, and Figure 7C**.



LEGEND

- Existing Laneage
- New Laneage
- New Signal
- Stop Control
- New Roundabout
- XXX' Storage Length (feet)
- <XXX'> Distance (feet)
- (##) Intersection ID

West Martintown Road Corridor Study

Figure 5 - Recommended Lane Configuration

AECOM

November 2020
North Augusta, SC

West Martintown Road Corridor Study

Figure 7A - West Martintown Rd Conceptual Improvements

AECOM

November 2020
North Augusta, SC

West Martintown Road Corridor Study

Figure 7B - West Martintown Rd Conceptual Improvements

AECOM

November 2020
North Augusta, SC

West Martintown Road Corridor Study

Figure 7C - West Martintown Rd Conceptual Improvements

AECOM

November 2020
North Augusta, SC

Table 15: Near-term (2020-2025) Project Summary

Project # (Figure #)	Location	Consideration	Notes	Cost
N-1 (Figure 7B)	Bergen Road	Install a traffic signal	In progress	$100,000
N-2 (Figure 7C)	I-20 EB Off Ramp	Install a Traffic Signal – Includes dual eastbound left-turn lanes and maintains free flow right-turn lane	In progress	$150,000
N-3 (Figure 7C)	I-20 EB Off Ramp / Hamrick Farms Site Driveway #1	With proposed development, install a 4th leg for the Site Driveway for Hamrick Farms Development to include dual westbound left-turn lanes and one single right-turn lane. I-20 EB Off Ramp approach should have a through lane constructed to access Hamrick Farms driveway and the free flow right-turn lane should be replaced with dual right-turn lanes (350 feet storage). On West Martintown Road, a northbound right-turn lane (250 feet storage) and southbound left-turn lane (200 feet storage) should be provided.	In conjunction with Hamrick Farms development schedule	$2,000,000
N-4 (Figure 7B / Figure 7C)	I-20 EB On Ramp to I-20 WB Loop Ramp	Restripe West Martintown Road northbound right-turn lane onto I-20 EB On Ramp to a shared / through-right-turn lane that end at I-20 WB Loop On Ramp.	In conjunction with Hamrick Farms development schedule	$10,000
N-5 (Figure 7C)	Hamrick Farms Site Driveway #2	Provide a northbound right-turn lane with 150 feet of storage and access to / from Hamrick Farms Driveway #2 should be right-in / right-out (Overhead Utilities will have to be relocated)	In conjunction with Hamrick Farms development schedule	$300,000
N-6 (Figure 7C)	Hamrick Farms Site Driveway #3	Provide a northbound right-turn lane with 150 feet of storage and access to / from Hamrick Farms Driveway #3 should be right-in / right-out. Old Plantation Road should remain full access. (Overhead Utilities will have to be relocated)	In conjunction with Hamrick Farms development schedule	$300,000
Total				$2,860,000

Table 16: Intermediate-term (2025 - 2035) Project Summary

Project # (Figure #)	Location	Consideration	Notes	Cost
I-1 (Figure 7A)	Gregory Lake Road	Install a single lane roundabout	Constructed by 2030 or completion of Saunders Place PD	$2,250,000
I-2 (Figure 7B)	I-20 WB Off Ramp	Install a dual lane roundabout	Constructed by 2027 or completion of Hamrick Farms Development	$2,750,000
I-3 (Figure 7C)	Frontage Road / Hamrick Farms Site Driveway #2	Reconfigure Frontage to a reduced conflict intersection (RCI) and provide a flare out to make northbound U-turns	Constructed with completion of Rivers Falls Apartment Phase 2 or Hamrick Farms Development	$300,000
I-4 (Figure 7C)	Knobcone Avenue	Install a traffic signal with dual southbound left-turn lanes and northbound right-turn lane on West Martintown Road.	Constructed in conjunction with Hamrick Farms development schedule	$1,500,000
I-5 (Figure 7C)	Knobcone Avenue to Hammond Pond Rd	Build a sidewalk on both sides of the road connecting the two intersections (2500 centerline ft, 5000 linear ft of sidewalk, Needs Right of Way)	Provides a connection to multimodal facilities but not directly attributed to one particular development	$800,000
Total				$7,600,000

Table 17: Long-term (2035-2040) Project Summary

Project # (Figure #)	Location	Consideration	Notes	Cost
L-1 (Figure 7C)	Knobcone Avenue	Install a 4th leg connecting to Old Plantation Road	Needed to improve operation at Old Plantation Road once 75% of Hamrick Farms is built out; however Old Plantation Road users could turn right out and U-turn at Knobcone Avenue	$800,000
L-2 (Figure 7C)	Old Plantation Road	Restrict access to Old Plantation Road to right-in / right-out after completing a new connector road to Knobcone Avenue by installing a median that connects to RCI at Frontage Road.	Desirably to install with the new connector from Old Plantation Road to Knobcone Avenue	$100,000
L-3 (Figure 7C)	Frontage Road to Old Plantation Road	Develop a parallel road to the west side West Martintown Road that provides access to River Falls Apartments and Circle K that connects to Old Plantation Road and eventually to the new signal at Knobcone Avenue (approximately 1700 ft)	Should be considered with any future development in the vicinity to help reduce the number of vehicles U-turning / taking left onto Frontage Road	$1,000,000
Total				$1,900,000

Planning Commission

North Augusta
South Carolina's Riverfront

Minutes for the Wednesday, May 18, 2022, Regular Meeting

Members of the Planning Commission

Dr. Christine Crawford
Chair

Bob Bigger	Leonard Carter, Jr.
Jesse Elliott	Rett Harbeson
Timothy V. Key, *Vice Chair*	JoAnn McKie

CITIZEN ASSISTANCE: Individuals requiring special assistance or a sign interpreter to participate in the meeting are asked to please notify the Department of Planning and Development 48 hours prior to the meeting at 803-441-4221.

1. **Call to Order** – 7:00 p.m.

2. **Roll Call** – Members present were Chairman Dr. Christine Crawford, Commissioners Tim Key, Bob Bigger, Jesse Elliott, Rett Harbeson and JoAnn McKie.

3. **Approval of Minutes** – The minutes from the April 20, 2022 Regular Meeting were approved as written.

4. **Confirmation of Agenda** – There were no changes to the agenda.

5. **Application RZT22-001** – A request by the City of North Augusta for a Text Amendment to allow murals and public art in the P, Public Use District. The request affects Section 13.8.3, Signage Allowed for Non-Residential Districts and Uses, of the North Augusta Development Code.

    a. Public Hearing – There were no comments from the public.

    b. Consideration of the Text Amendment Request by the Planning Commission –

Dr. Crawford would like to add in Public Art, Section I, that other Regulatory body that maybe assigned that responsibility by Council.

c. Recommendation to City Council – Mr. Key made the motion and Mrs. McKie made the second motion. The application was approved unanimously.

6. **Application ANX22-001** – A request by Adams Brothers Properties, LLC represented by The Prather Company to annex ±43.9 acres located on Martintown Road, TPN 106-00-00-041. The property is requested to be zoned R-7, Small Lot, Single-Family Residential.

a. Consideration of the Annexation request by the Planning Commission – Mr. Paradise stated that this was before the Planning Commission a few months back with R-7 and R-10 zoning but prior to the annexation the developer found out about the wetlands and what was proposed to do would not fit. The developer decided to go back through the process and get the planning commission recommendation as well. They would need to come into the city for sewer services. The sewer would have to be tied in adjacent to Oak Creek. The development would consist of 157 single family attached homes. They have been to the Board of Zoning Appeals for lot width and R-7 zoning. They did get a variance from the Board of Zoning appeals as long as annexed in the city within one year. It allowed some 22 ft wide and 26ft lots.

Bobby Bagwell with the Prather Company. He is working with Stanley Martin Homes on this project. He stated they have been very cognitive about the environment and that is why they did a wetlands study. They are only using about 50% of the tract of land. It does meet the comprehensive growth plan. Luke Boatwright stated that the 2000 to 2500 square foot homes. The price will be in low to mid $200,000.

Glenn Barinowski came forward to speak. He has lived in the area for many years. He states that this is a bad idea for the area and North Augusta. It is not a good piece of property to build on. The traffic will be an issue. He does not like the townhomes in the area. He is in opposition to the R-7 zoning.

Barbara Sweeny lives in Savannah Barony. She was just asking about the location of the development.

Mrs. McKie wanted to know if they considered doing bigger homes and less of them. The developer decided to do a larger townhome versus the bigger home. Mr. Bagwell stated that a traffic study will be done prior to the final plans of the development.

b. Recommendation to City Council – Mr. Key made the first motion and Mr. Elliott made the second motion. Mr. Harbeson and Mr. Bigger opposed. But it was a 4 to 2 recommendation to City Council.

7. **Application CONPL22-002** – A request by CSRA Development Company, LLC for a sketch plan review of a proposed Planned Development to be known as Moore's Bluff consisting of four light industrial/commercial lots and up to 180 townhomes on ±68.73 acres off Old Plantation Road, TPN 001-19-02-005, zoned PD, Planned Development.

Mr. Paradise did let them know it was about 68 acres. It will also connect to Plantation Dr. The applicate will need to submit a general development plan to Planning Commission and approved by City Council to move forward. Planned Development requires both residential and industrial because of state laws and rulings from state court. There are 4 lots at end of frontage Road and then subdivision with townhomes that would come out on Old Plantation Road. The four parcels would be lite industrial which would be storage or warehousing. The street right away would stop where Frontage Road ends now and access to parcels 1,2,3 and 4 would be through a cross access easement. Only parcel 1 would have road frontage. This is a question as far as extending Frontage Road down. The Martintown Road quarter study showed consideration which showed to develop a parallel road to the west side of West Martintown Road which provides access to River Falls Apartments and Circle K and connects to Old Plantation Road and eventually to a new signal at Knobcone. There will also be a traffic study done before it comes back to Planning Commission.

Keith Lawrence was there to discuss this development. He discussed the road connection. There are some difficulties with the road connection. The frontage road is not going to work due to the curve at the end of the road plus do to wetlands on both sides of the road. The road connection can be made by working with River Falls Apartments. The road connection will be the part to be worked out for this development. Mr. Lawrence stated that the townhomes would be about $265,000 to $275,000 price range. The 47.1 open space and green space. They reforest the slopes and they do this in all their neighborhoods they develop. All homes will be tied into a drainage system which helps with erosion control. There will be a large buffer.

Barbara Sweeney of 79 Shoals Way Ct, Savannah Barony – She feels that with all the development going on in the area that this will bring even more cars on Martintown Rd. She also feels it's not safe and having all these additional cars within a mile. Is there a limit of cars within this stretch of road? Is there any additional property in the area that will have additional cars added to the area also?

Ken Crowder of River Wind Dr. – He mailed a letter to the planning commission on his concerns regarding this area being developed. His biggest concern is the density with apartments and townhomes. He also is concerned with the single access in this area. The other concern is needing a traffic light to help with traffic. That would make Old Planation Road have a 100 cars more.

Dave Kerko 70 Shoals Way Ct. – He is also concerned with the traffic. He expresses that with the slope it's hard to see what's coming over it.

Melinda Burckhalter 1034 Old Plantation Rd. – Mrs. Burckhalter is concerned because her house will be next to a mosquito bowl. Then she questions what kind of commercial. She is concerned about the traffic and how busy the road is going to be with extra cars from the development.

Van Monroe 570 Plantation Drive. – Mr. Monroe is concerned that the road and safety should be before a development. He says the future land use map shows the road goes through a low density area that is being proposed. So he says that is an encroaching from high density to low density residential area. It is against the master plan?

Diane Koehne 1051 Old Plantation Road. – She says that the green space is good idea. She says it needs to have a traffic circle.

Taylor Hawes 1129 Old Plantation Road. – The traffic getting into Knobcone for high school is not a good place to turn into.

Rick Goley 1060 Old Plantation Road. – He does think the developer has done a good job with the development. Will a traffic study take in account of the other two developments coming?

Lauren Anderson 1104/1130 Old Plantation Road. – Would like to know the impact this development will have on her and the other people living in the neighborhood?

Mr. Paradise responded to questions. The question about other things being built out in the area is not known at this time. The city can't guarantee what will come in the future.

Mr. Lawrence will be answering some questions that were brought up by the public. It would thoroughfare commercial. It would be ok to limit the uses of the commercial parcels. This development would have a traffic study and that would take all the surrounding areas in consideration. They understand about a red light needed but a traffic circle that was mentioned is not something they put on a four lane highway.

Mrs. Crawford is concerned of what kind of commercial. Mr. Lawrence stated maybe office space or something similar.

A planned development and with this you are setting up what is allowed in this development. So with that it would be binding.

a. Consideration of the Sketch Plan review by the Planning Commission.

8. Staff Report

a. April Performance Report – Development code is meeting on Thursday. The SCDOT has given authorization to receive the RFPs and now we are waiting to get the numbers back to be able to do the Georgia Ave. Traffic Study.

9. Adjourn – 9:00 p.m.

Respectfully Submitted,

Thomas L. Paradise
Director of Planning and Development
Secretary to the Planning Commission

Application for Development Approval

Please type or print all information

North Augusta
South Carolina's Riverfront

Staff Use

Application Number PD23-003 **Date Received** 5-18-23

Review Fee 2500.00 **Date Paid** 5-18-23

1. **Project Name** Moore's Bluff

   Project Address/Location 5dd Plantation Rd / 1010 Old Plantation Road

   Total Project Acreage ≈ 1Ac / 68.73 = 69.73 **Current Zoning** PD

   Tax Parcel Number(s) 001 19 02 005

2. **Applicant/Owner Name** CSRA Development Company **Applicant Phone** 706-394-2688

   Mailing Address 3519 Wheeler Rd

   City Augusta **ST** GA **Zip** 30909 **Email** Klawrence@maybohm.com

3. **Is there a Designated Agent for this project?** ✓ **Yes** _____ **No**
   If Yes, attach a notarized Designation of Agent form. (required if Applicant is not property owner)

4. **Engineer/Architect/Surveyor** _____ **License No.** _____

   Firm Name _____ **Firm Phone** _____

   Firm Mailing Address _____

   City _____ **ST** ____ **Zip** _____ **Email** _____

   Signature _____ **Date** _____

5. Is there any recorded restricted covenant or other private agreement that is contrary to, conflicts with or prohibits the use or activity on the property that is the subject of the application?
   (Check one.) _____ yes ___X___ no

6. In accordance with Section 5.1.2.3 of the North Augusta Development Code, I hereby request the City of North Augusta review the attached project plans. The documents required by the City of North Augusta, as outlined in Appendix B of the North Augusta Development Code, are attached for the City's review for completeness. The applicant acknowledges that all required documents must be correct and complete to initiate the compliance review process.

7. _____ 5/9/23
   Applicant or Designated Agent Signature **Date**

   Keith Lawrence
   Print Applicant or Agent Name

Designation of Agent

Please type or print all information

North Augusta
South Carolina's Riverfront

This form is required if the property owner is not the applicant.

Staff Use Only

Application Number PD23-003 **Date Received** 5-18-23

1. **Project Name** Moore's Bluff

   Project Address/Location 5 Old Plantation Road / 1010 Old Plantation Road

   Project Parcel Number(s) 001-19-02-005 / a portion of 002-08-01-002

2. **Property Owner Name** Arthur H Shealy, ET AL. **Owner Phone** 803-278-5149

   Mailing Address 1010 Old Plantation Rd.

   City North AugustA **ST** SC **Zip** 29841 **Email** Arthur.Shealy@Gmail.com

3. **Designated Agent** CSRA Development - Keith Lawrence

   Relationship to Owner Potential Purchaser

   Firm Name CSRA Development **Phone** 706-394-2688

   Agent's Mailing Address 3519 Wheeler Rd.

   City Augusta **ST** GA **Zip** 30909 **Email** KLawrence@Meybohm.com

   Agent's Signature _____ **Date** _____

4. **I hereby designate the above-named person (Line 3) to serve as my agent and represent me in the referenced application.** SEE ATTACHED ADDENDUM

   Owner Signature _____ **Date** May 16, 2023

5. **Sworn and subscribed to before me on this** 16 **day of** May, **20** 23.

   Notary Public Brandy N Smith-Brookshire

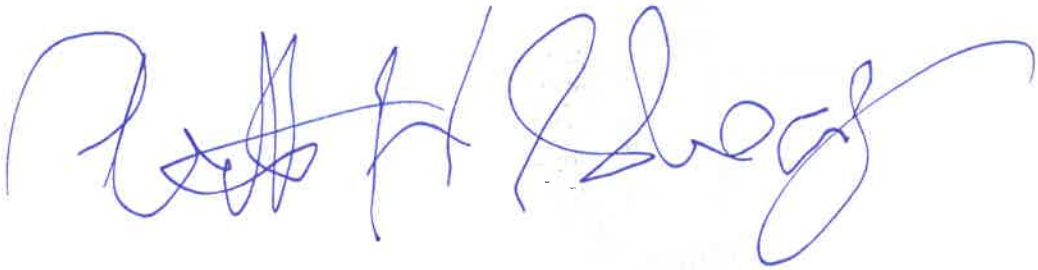
   Commission Expiration Date October 20, 2030

BRANDY N. SMITH-BROOKSHIRE NOTARY PUBLIC SOUTH CAROLINA

1/2013

ADDENDUM TO DESIGNATION OF AGENT FOR CITY OF NORTH AUGUSTA APPLICATION FOR DEVELOPMENT APPROVAL DATED MAY 16, 2023

Provided, however, that this document shall not grant any legal or contractual rights to the Applicant for Application for Development Approval. The sole purpose of this Designation of Agent is to allow the Applicant to proceed with submitting the Application for Development Approval. Owner and Applicant for Development Approval agree that this Designation of Agent document does not give either party any contractual or legal rights against the other.



MOORE'S Bluff

A Planned Development (PD)

The City of North Augusta

Zoning Narrative

October 13th, 2023

Project Information

OWNERS

Margaret T Shealy

Tax Map & Parcel #-001 19 02 005

1010 Old Plantation Road

North Augusta, SC 29841

arthur.shealy@gmail.com

803-278-5149

Arthur Shealy Estate

Tax Map & Parcel #-002 08 01 002

1010 Old Plantation Road

North Augusta, SC 29841

arthur.shealy@gmail.com

803-278-5149

APPLICANT

CSRA Development Company, LLC

Keith Lawrence

4426 Evans to Locks Road

Evans, Georgia 30809

klawrence@meybohm.com

706-394-2688

Table of Contents

MOORE'S Bluff

I. VICINITY MAP

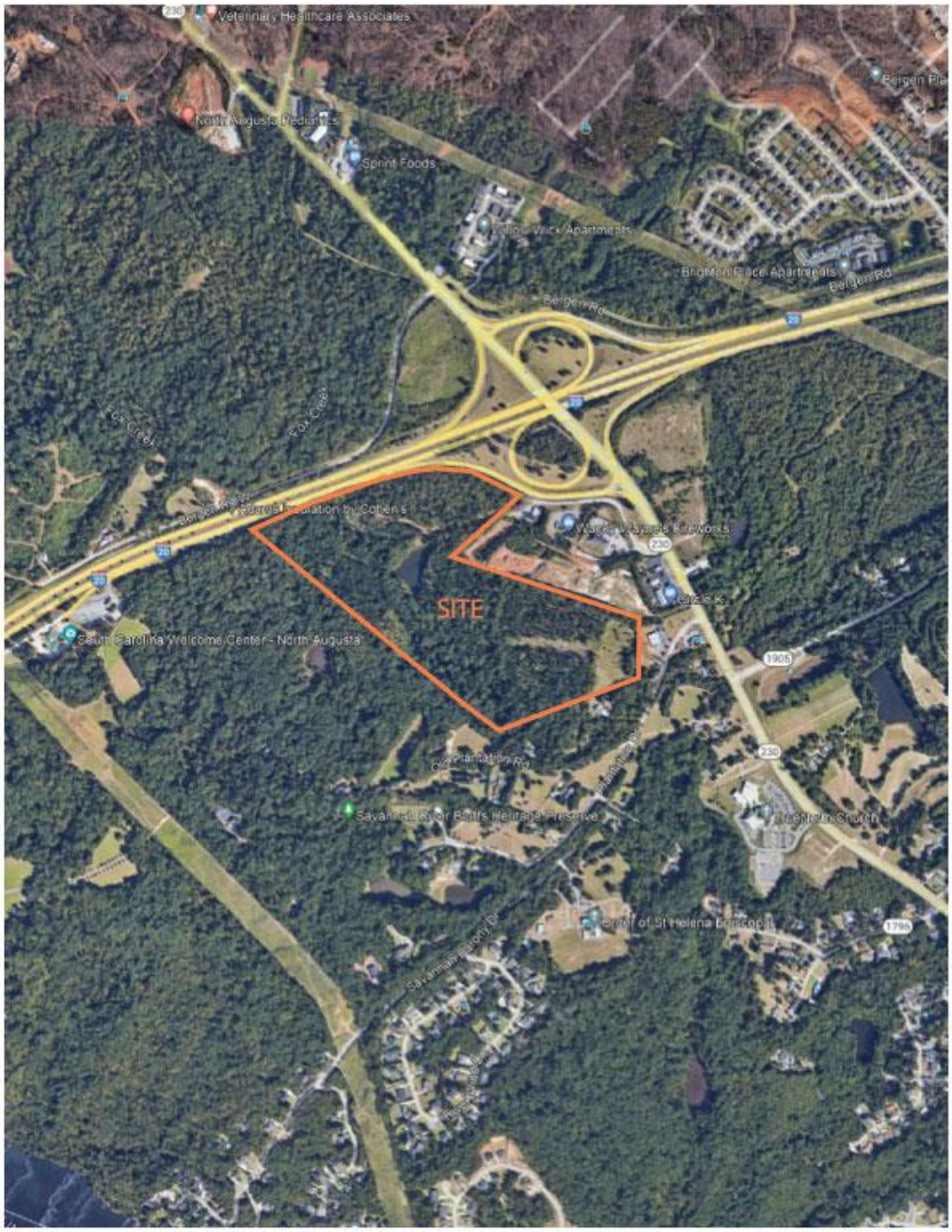


Figure 1

II. INTRODUCTION

CSRA Development Company, LLC is proposing Moore's Bluff, a 70.82 Planned Development ("PD") near Martintown Road and I-20. The goal is to provide The City of North Augusta with a model of how development can work to achieve both development standards, and provide a positive, lasting mark on the constituents of the City of North Augusta.

The Vicinity Map labeled as Figure 1 shows combined limits of the 70.82 acres that will comprise the community of Moore's Bluff.

The intent of this document is to provide a responsible development framework guideline which will serve Moore's Bluff through its development cycle - expected to last anywhere from 2 to 4 years. This PD will also provide the City of North Augusta Planning and Engineering departments with guidelines for the assurance of the quality of the development within predetermined parameters.

III. Existing Conditions

When determining how the land can be used you must first examine many items which will provide the canvas on which you can paint. The first and most important are the existing environmentally sensitive areas that the site boundaries contain.

- The **environmentally sensitive areas** have been identified and located. The limits of these are shown on are existing features map shown herein as Figure 2 presented at the end of this narrative. Our goal as a development company is to use the remaining land around these areas and establish a development envelope. The environmentally sensitive areas on these parcels of land are U.S. Army Corp of Engineer regulated wetlands and both buffered and non-buffered state waters.

  Our development goal is to minimize impact to these areas for a number of reasons. This allows us to develop the land in a manner that works with the sensitive areas in such a way that it improves esthetics and nature hand in hand.

  These nature areas provide a much-needed break in the developed landscape. They also provide wildlife corridors which allow the plants and animals both to flourish.

- The **topography** of the land is also a key component of a successful development. A plan that works with the natural flow of the land provides one that will handle drainage, erosion control and esthetics concurrently.

  Land that has a slope of greater than 15% is generally avoided. These areas require much more grading and become much more prone to erosion. These slopes are markedly more expensive to develop and are generally cost prohibitive.

- The **tree cover** on this tract is mix between planted pines and natural hardwoods. Where possible, the trees will be kept to provide meaningful buffers to the adjacent properties and street frontages. No mass clearing of the trees will occur, other than the areas being developed.

- The last existing condition presented in the narrative is **Existing Utility Infrastructure.** Existing potable water and Sanitary Sewer is already near the site for this project. Potable water is available by tapping into an existing water main owned by The City of North Augusta. The sanitary sewer for this project will be handled through gravity sewer, a pump station and a tie to exiting gravity sewer owned and operated by the City of North Augusta.

- ## IV. DEVELOPMENT PROGRAM

Several planning principles have guided the preparation of the PD concept plan, including:

Establishing a Master Plan which is reasonably flexible and responsive to the changing marketplace, while maintaining the framework of major streets and open spaces.

Creating walkable communities – There will be sidewalks on both sides of the road. We will also use a mid-block cross walk to shorten the length of travel from one side of the street loop to the other loop road.

Create a neighborhood that minimizes unnecessary grading of the land – "Major" grading of the land shall be used when necessary to provide a buildable lot, mitigate the challenging topography of the land, transition from the grading of the roadways, construction of drainage facilities and meet the required vertical alignment set forth in the City of North Augusta Design Standards. Steep slopes will be replanted with pine seedlings to eventually redefine the developed envelope of the land. The next page shows what the reforested areas look like in 4 years from the planting of the seedlings. The seedlings are over 7 feet tall now. They also effectively make the detention pond to the right of the picture blend back into nature.

Picture taken in December 2017

Picture taken in October 2021

Develop in a manner that minimizes the impact of Moore's Bluff on the Surrounding land Owners – A 25' buffer along the sides of all outside side property lines adjoining residential uses shall be established. The existing vegetation shall be preserved in this 25' unless necessary for utility or drainage construction. The buffered area shall be maintained by the neighborhood homeowner's association. The owner of Tax map and parcel number 002-08-01-002 has asked that the trees be removed from the buffer area so that he can maintain his views. There will be a 6' Shadow box fence at the rear of all residential units.

The Character of Moore's Bluff – What makes Moore's Bluff different from the prototypical neighborhood is defined throughout this narrative, but is summarized below:

- One of the defining characteristics of Moore's Bluff is amount of greenspace that is being left through the neighborhood. The Planned Development or PD guidelines require 25% of the land to be left as open space, parks and recreation. The proposed community

preserves 47% in Greenspace. This is not just wetlands and flood plain. This includes parks, internal buffers, and the 25' minimum exterior buffer.

- Limiting the impact of development on the land – We want the impact of the development of this community to be as minimal as possible. Accordingly, we propose to reforest the disturbed slopes with pine seedlings. This tree planting will be done in conjunction with the stabilization of the slopes. The actual planting period can only be done during winter months. As these trees grow in the limits of disturbance the impact will be much less and in most cases be limits to the lot lines. The pictures on the previous page demonstrate this process.
- Innovative solutions to handle storm water - We proposed to use a private structured drainage system on the uphill side of the road to handle each building's drainage. This works by installing a pipe along the right of way that will then provide a tee and short section of pipe at the low side of each lot. This system will allow the builder to handle the drainage on their lot with yard drains that then drain into this storm system. This eliminates the need to break the curb to bring the water to the street, reduces storm flow against the curb line and eliminates the need for a deep swale from the backyard to the front yard. Gutters will also be provided on the front and back of the townhomes.

V. THE STREET SYSTEM GUIDELINES

The street system within Moore Bluff will be designed to be dedicated to The City of North Augusta. Landscaping in street rights-of-way will be maintained by Moore's Bluff homeowner associations in areas not bordered by a homeowner's property lines.

The guidelines are based upon the following objectives:

- Traffic within Moore's Bluff should be slow rather than fast-moving, with speeds of 25 miles per hour or slower. A variety of traffic calming devices may be designed into the road system - these may chokers, speed humps, on-street parking, and other appropriate measures.
- Consistent streetscaping will be planned to provide landscape unity. Street trees will be planted along all residential street right of ways. The street tree shall be a minimum of 2" in caliper and shall be planted with a spacing of about 40' on center. There may be some variance to this to accommodate driveway locations.
- Street lighting will be consistent in design. All roads will have street lights.

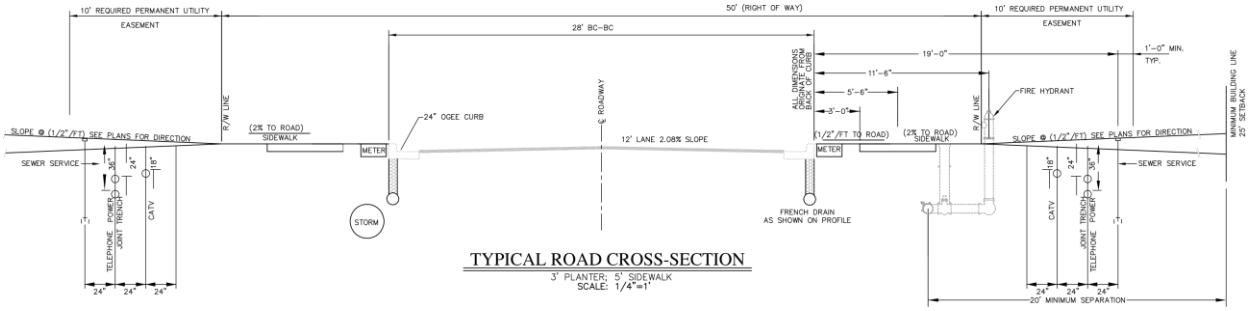
A. Public Street Designs

(1) Neighborhood Roads. Neighborhood roads shall be a minimum of 28 feet including the concrete curb and gutter and with landscaping within a 50-foot right-of-way. Due to the sloping topography a mid-block road connection is not able to be made. We are there for asking for a waiver of the required maximum block length. The townhome community will have access off of Plantation Road. The Thorough fare Commercial will be access off of the existing public road, Compassion Way

There will also only be one point of roadway access into this new neighborhood. This is due to the fact that the neighboring developments did no leave any possible connection points.

Environmental conditions at the northeast corner of the property also prevent a connection to Frontage road.

The developers of Moore's Bluff are also proposing a contribution to any roadway improvements at Martintown Road and Knollwood Drive in the amount of $150,000. This amount would be paid to the City of North Augusta at the time the first phase was final platted.



TYPICAL ROAD CROSS-SECTION
3' PLANTER; 5' SIDEWALK
SCALE: 1/4"=1'

VI. Open Space Guidelines

Open spaces, for both passive and active recreational uses, have been delineated on the Moore's Bluff Concept Plan. Components to the open space program may include wildlife corridors, numerous small neighborhood greenways, and open spaces. Some of these open spaces may be improved for use as parks, while others may be natural wildlife habitat areas with connections via wildlife corridors within this development and connecting to the corridors in the environmentally sensitive areas. Preservation, wherever possible, of existing vegetation, along with introduced plant material, will give Moore's Bluff an uninterrupted landscape presence. Moore's Bluff is committed to setting aside at least 40% of its total area as open space. Some of this area may be needed for slope transitions, but with the reforestation plan we have implemented, it will still be greenspace.

A. Buffering. Buffering will be provided to minimize the impact to surrounding land owners. The current plan shows a minimum of a 25' natural or revegetated buffer around all side and rear property lines that adjoin residential uses. The buffer along the western side of the property will be a minimum of 125'. The buffer will be kept in its natural state unless impact is needed to handle storm water or to extend underground utilities. Buffering of grading will be incorporated to minimize the impact of the development and housing. Where large slopes behind lots are created because of grading, pine seedlings will be replanted on these slopes to close the scar of this grading. The seedlings can only be planted during certain times of the year so this will be done seasonally. These plantings will be in addition to the grassing of the slopes for erosion control. The reforestation is our way of reducing the developed envelope.

B. Park & Neighborhood Amenity. The concept plan for Moore's Bluff shows the use and the enhancement of the existing pond. Access to this area will be through a low impact walking trail. The intent is to bring families closer to nature. Benches will also be added as places of reflection.

A pavilion area, fire pit, and a playground will be constructed near the entrance to the neighborhood. A detail of this area is presented on the following page.

C. Centralized Mail. The last character of the open space section is the use of centralized mail. As required by the United States Postal Service Centralized Box Units or CBU's will be used in this development. Below is one way we may present these for our homeowners. The CBU's location will be approved by the U.S. Postal Service prior to construction.

VII. Residential Guidelines

Moore's Bluff will offer the residents of The City of North Augusta a quality housing option. Housing prices are expected to begin in the $260's. The maximum density shall not exceed 145 Units. The concept plan that is attached shows 141 units. Any change in density would be in the lot size and not result in a resulting concept plan with less than 40% open space. Also, any changes contemplated would not involve roadway reconfigurations, unless required due to engineering reasons. The applicant understands that any major changes in the roadway configuration would involve the new submittal of a concept plan.

A. Residential Development

Lot size	lot can range in size from 1900 sq. ft. and greater.
Minimum frontage	20 feet at the minimum building line
Minimum Lot depth	100 feet
Minimum Setbacks	
Side Yard	0 or 10 feet. The zero is for the attached buildings. The 10' is for the exterior homes.
Rear Yard	10 feet
Front Yard	25 feet

VIII. THOROUGHFARE COMMERCIAL

As part of Moore's Bluff, there will be one commercial sites. This sites will comply with the standard set forth by The City of North Augusta's Thoroughfare Commercial "TC" Section 3.3.3.4. Access to this parcel will be at the end of Frontage Road.

These lot will be served with public water and sewer as well.

There will be a 50' undisturbed buffer along the rear of the parcels where possible. The developer may grant exceptions to the buffer requirement as needed to accommodate the site plan for the parcel.

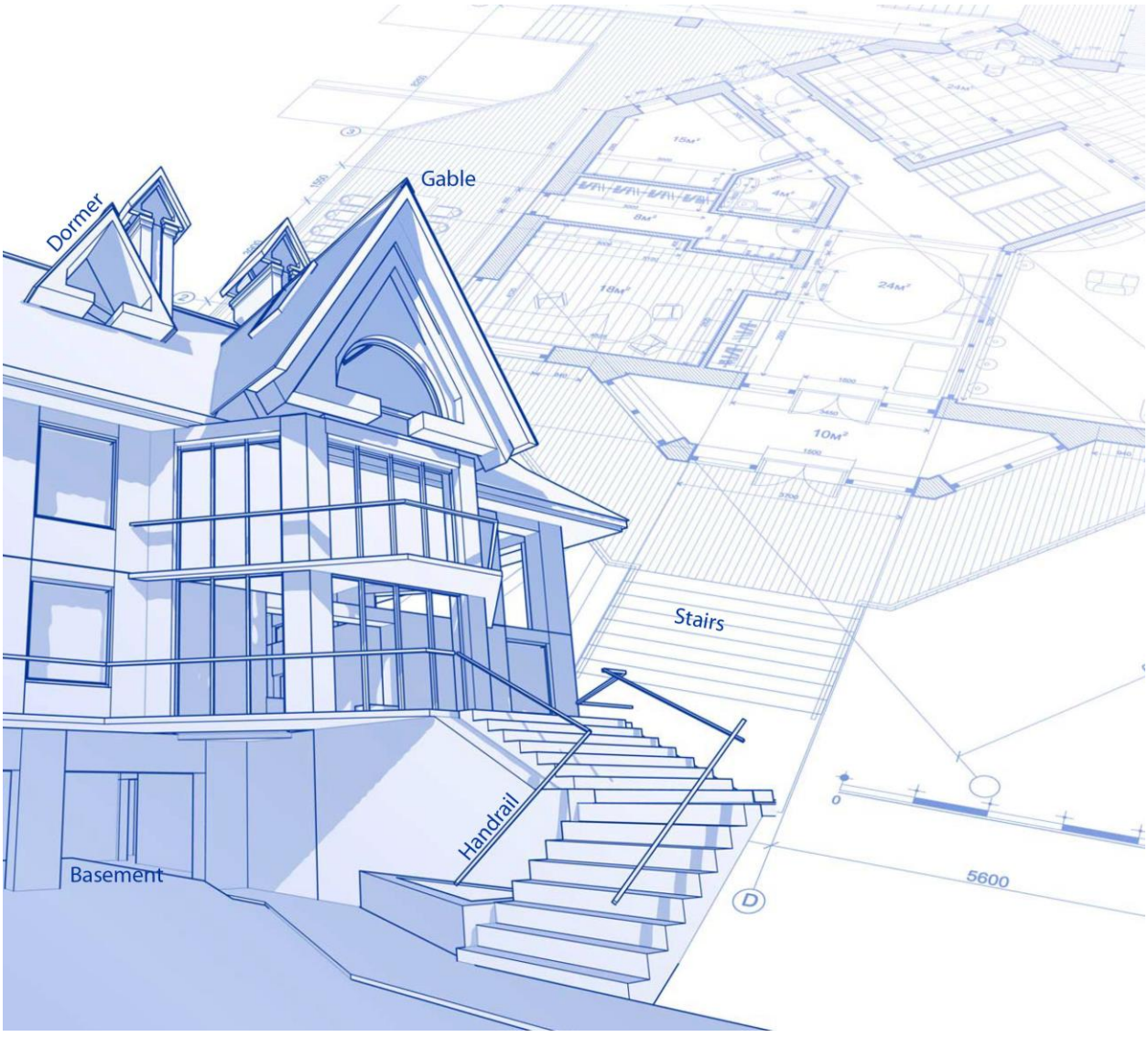
The proposed use will be a Self-storage site. There will be conditioned and unconditioned storage. This area is also proposed to be used for vehicle, recreation vehicle and boat storage.

Below are the maximum allowable uses on the proposed site.

- Self-Storage – 206,000 square feet
- Open RV Storage 40,000 square feet
- Enclosed RV Storage – 90,000 square feet

IX. Representative Photographs of the Product Types

This section of the narrative is intended to provide a representative idea of the types of homes proposed to be built. The exact house elevation and colors will vary to meet the ever-evolving buyer demands. The quality and styles of the home will be similar in nature to one another.



Townhomes

These homes are designed for the first-time homebuyers and young professionals. Every home will have a garage. The home elevations will include Brick or stone accents based on market demand and buyer preference. The color palette shall be generally neutral in nature. The garages will be no closer than 20’ to the edge of the sidewalk in any case. The planting of trees within this area will be coordinated with the City of North Augusta. Trees may have to be clustered in greenspace areas where utility lines do not permit their planting.

BUILDING ELEVATION-22'W & 26'W TH

FRONT ELEVATION A

SCALE: 1/8" = 1'-0" (11x17 SHEET)

FRONT ELEVATION B

SCALE: 1/8" = 1'-0" (11x17 SHEET)

FRONT ELEVATION C

SCALE: 1/8" = 1'-0" (11x17 SHEET)

Representative Home finishes are shown below

** The Homes pictured above are being shown to provide a general idea of the styles of the homes. Exact home will vary in color and appearance.

XI. Moore's Bluff - Design & Building Criteria 5/15/2023

The Design criteria for all homes remain the same. It is the developers plan to ensure that all of the residents of Moore's Bluff have home of similar quality and character. Some homes may have different interior finishes, but a buyer choice of home should be based more on the size of the home that suits their needs rather than the quality of the home.

HOME DESIGN CRITERIA

Accessory Buildings:

Design should follow the same design and criteria as the main buildings. Unity of appearance is the goal.

Building Height:

Three stories are the maximum building height unless a basement is being constructed or if a bonus space is added.

Colors:

All exterior colors are to be approved by the Architectural Control Committee or ACC. Colors should be of a neutral Palette.

Driveways:

Use graceful lines, and where possible, curved lines.

Fences:

All homes will include 6' shadow box fence

Gutters:

Gutters will be required on all homes to better control stormwater runoff. The gutters must be tied into subsurface drainage system that discharge at the edge of the lot. The colors selected should blend with the home.

Landscaping:

Emphasis should be placed on selecting landscaping materials which are compatible with, and which enhance the surrounding environments.

All lots are required to have an underground irrigation system to irrigate the front, sides and rear yards. All landscape plans shall incorporate sodding in the front, side and rear yards at a minimum. Corner lots shall be sodded on front and sides to the curb. Foundation plantings must be used on street sides of the house.

Mail Box Installation:

A centralized mailbox will be used in this community. This mail Kiosk shall be located in the one or more central location near the entrance . The Mail Kiosk shall be covered.

Porches:

The use of rear porches is required to provide additional depth to the homes.

Roofs:

Roof shape, pitch, materials, and colors should be harmonious with existing housing and overall building design, including solar devices, skylights and dormers. Gable and hip roofs are permitted. Vinyl fascia and soffit is permitted. Skylights on the front elevations are not permitted. The main roof pitch should be an 8:12 minimum. Any variation to the minimum roof pitch must be approved by the Architectural Review Board or ARB. Non-standard colors must be approved by the ACC.

Setbacks:

See lot size for minimum setbacks

Minimum setbacks will also be noted on the recorded plat. In cases where an easement is present on the lot then the greater of the easement line or the setback line limits the location of where the house can be placed.

Soil Erosion Control Plan:

As required under recent state adopted federal NPDES regulations, during construction each lot must comply with the overall development and individual lot soil and erosion control plan according to DHEC standards. Each builder understands that they are secondary permittees according to the state's regulations. The builders understand that additional erosion control measures may be required to prevent silt from leaving the site as required by The City of North Augusta.

Storm Water:

Detention shall be provided for in the detention facilities shown on the concept plan.

Special attention during the construction process shall be placed by the builder regarding storm water runoff. Lot grading and drainage design shall not concentrate drainage on adjoining lots. Lot grading adjacent to existing houses shall be done in a manner to incorporate existing drainage patterns. Swales shall be added or extended to protect adjacent properties. Any existing swales on the property must be protected from disturbance. Damming of swales is prohibited. The use of yard drains between homes shall be used where possible to carry surface water to existing storm systems.

Windows and Doors:

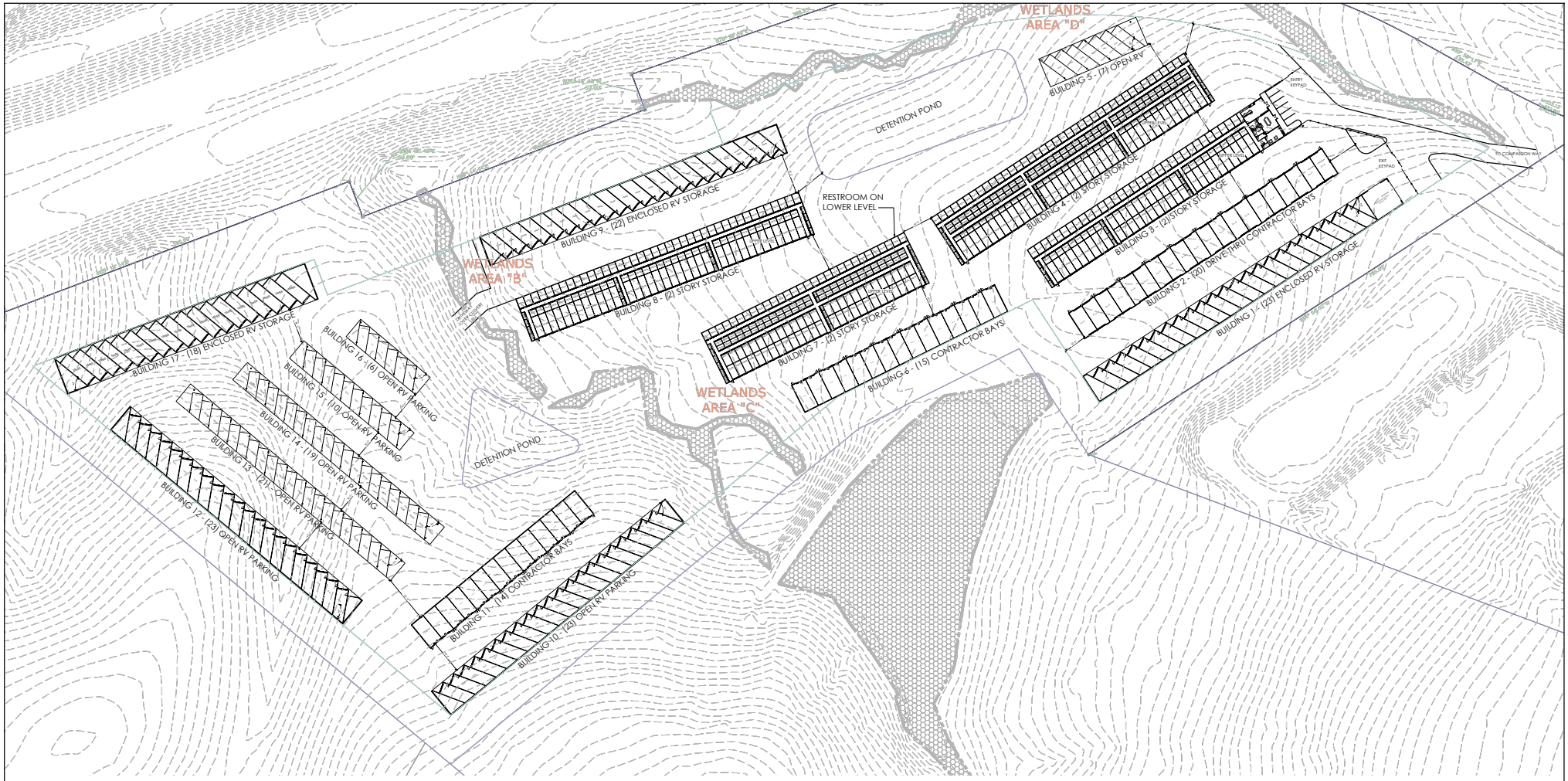
Finish and trim should coordinate with the overall architectural scheme. Square windows may be used for minor openings. All garage doors can be white or a pre-approved color. All storm doors must be approved prior to installation.

XII. CONSTRUCTION PHASING

It's anticipated that construction will begin on Phase I in June of 2022. The remaining portion of the phasing is based on this start date.

Phase I-	Begin Construction March 2024
Phase II -	Begin Construction June 2025

XIV FIGURES



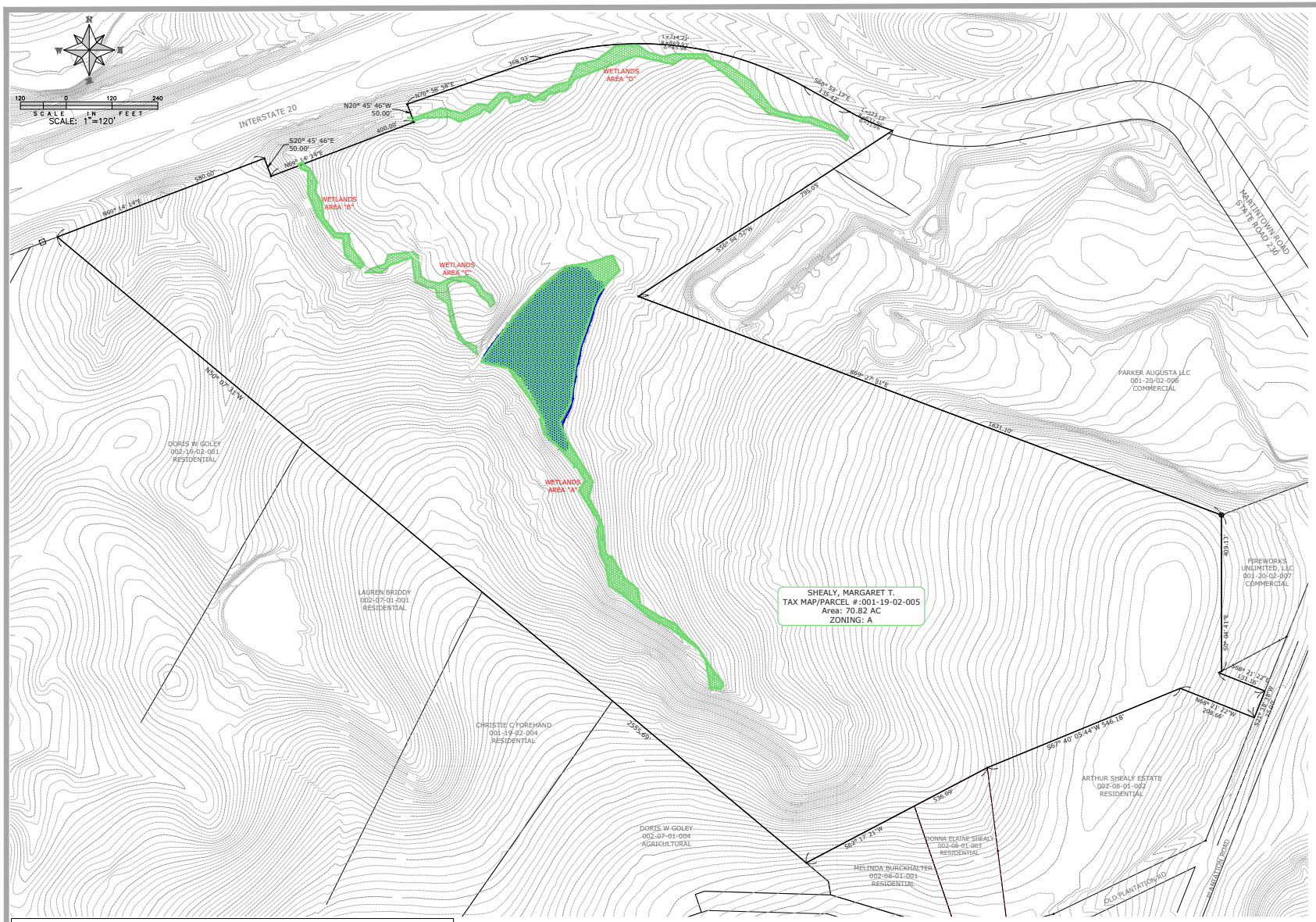
1 CONCEPTUAL SITE LAYOUT - N. AUGUSTA, SC

SCALE: 1:60

STORAGE UNITS		
Item	Count	S.F.
UNIT SIZE:10x10	113	11,300
UNIT SIZE:10x12	70	8,400
UNIT SIZE:10x12.5	70	8,750
UNIT SIZE:10x15	163	24,450
UNIT SIZE:10x17.5	27	4,725
UNIT SIZE:10x20	71	14,200
UNIT SIZE:10x30	212	63,600
UNIT SIZE:20 x 40	49	39,200
UNIT SIZE:4x10	62	2,480
UNIT SIZE:4x7.5	6	180
UNIT SIZE:5x10	56	2,800
UNIT SIZE:5x7.5	20	750
UNIT SIZE:7.5x10	324	24,300
TOTAL	1,243	205,135

OPEN RV		
Item	Count	S.F.
OPEN RV:14x35	57	27,930
OPEN RV:14x45	7	4,410
TOTAL	64	32,340

ENCLOSED RV		
Item	Count	S.F.
ENCLOSED RV:15x45	87	58,725
ENCLOSED RV:15x55	18	14,850
TOTAL	105	73,575



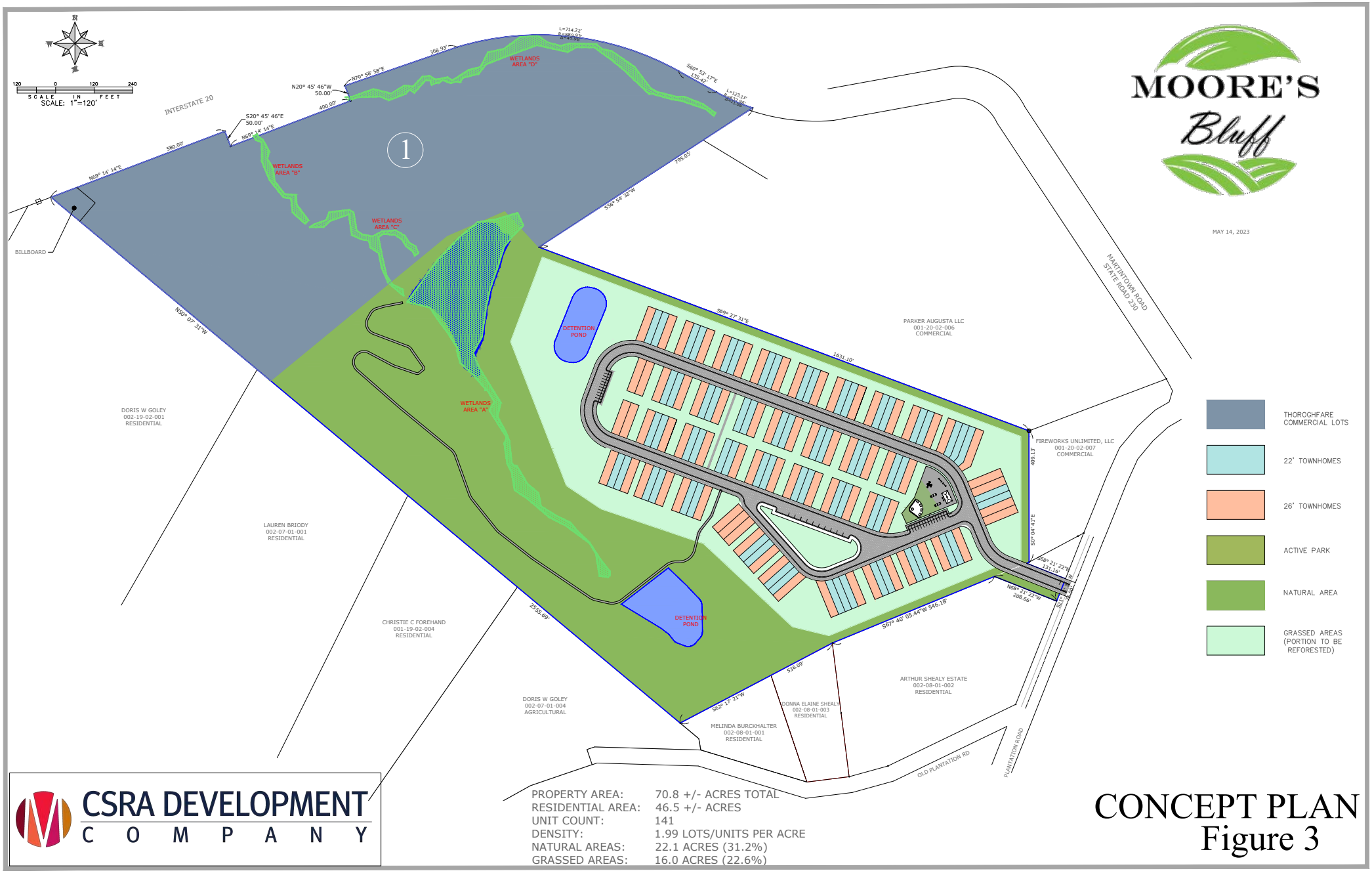
MOORE'S Bluff

MAY 14, 2023

WETLANDS

CSRA DEVELOPMENT COMPANY

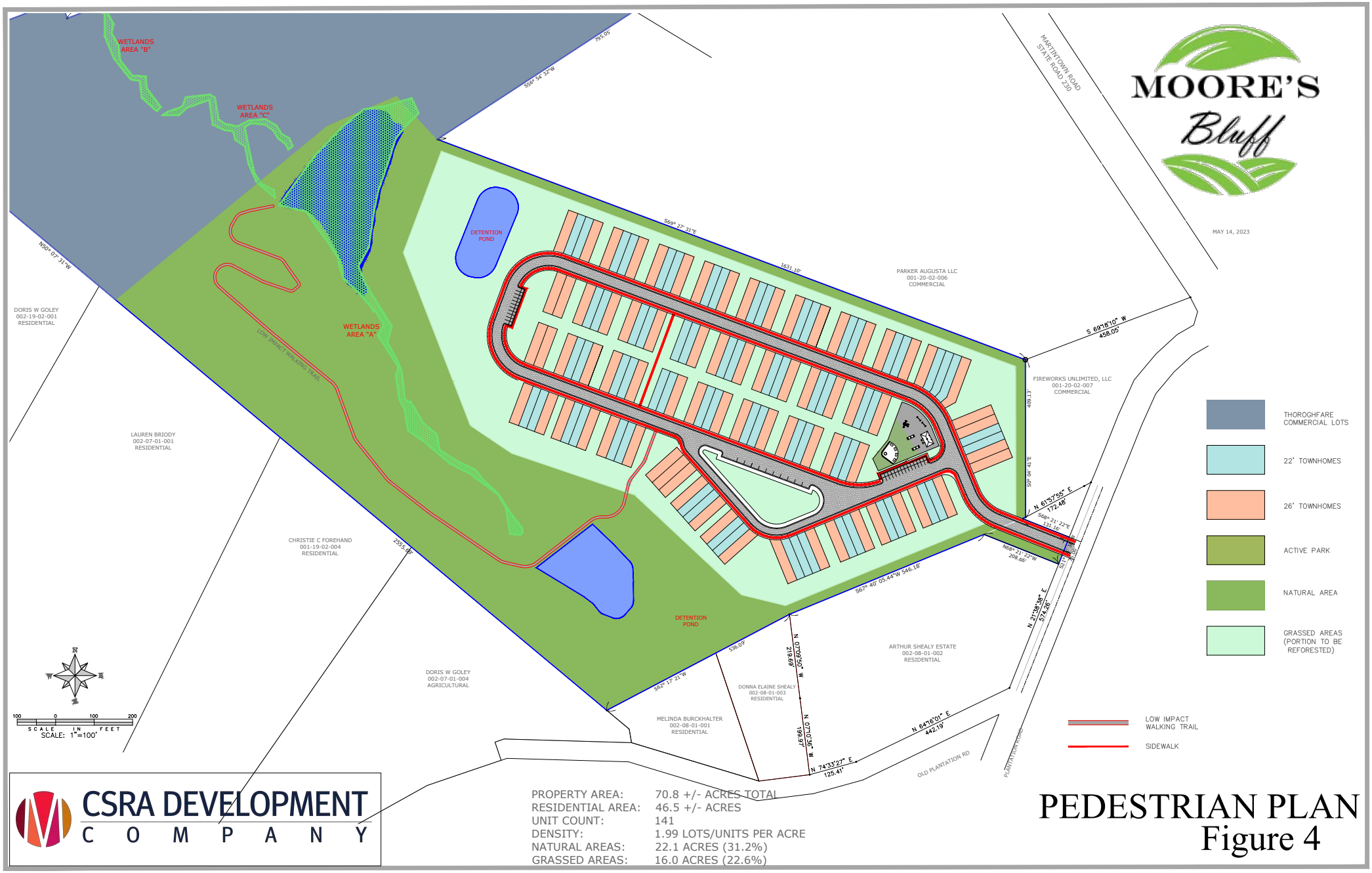
EXISTING CONDITIONS
Figure 2



CSRA DEVELOPMENT COMPANY

PROPERTY AREA:	70.8 +/- ACRES TOTAL
RESIDENTIAL AREA:	46.5 +/- ACRES
UNIT COUNT:	141
DENSITY:	1.99 LOTS/UNITS PER ACRE
NATURAL AREAS:	22.1 ACRES (31.2%)
GRASSED AREAS:	16.0 ACRES (22.6%)

CONCEPT PLAN
Figure 3



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PEDESTRIAN PLAN
Figure 4

AMENITY PLAN
Figure 5

Moore's Bluff
Traffic Impact Study

May 2024

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
Jacob Nelson, PE	Ryan Eckenrode, P.E. PTOE, RSP2I		

Revision History

Revision	Revision date	Details	Authorized	Name	Position

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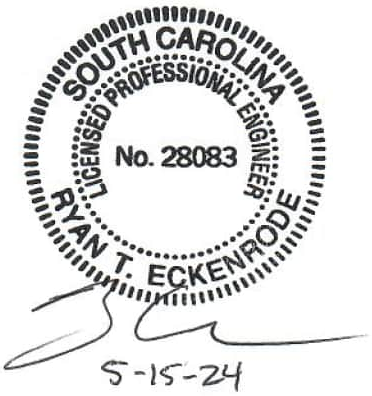

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Appendix

1. Executive Summary

The planned development is to be located on the west side of SC 230 (W Martintown Road) between Interstate 20 and Old Plantation Drive in North Augusta, South Carolina. The development is expected to be fully built out by the end of 2027 and is planned to consist of 170 Single-Family homes and a new 160,000 square foot self-storage facility.

All study intersections operate at an acceptable level of service during the Build 2027 scenario. The following background and recommended site improvements are summarized in **Figure 13:**

Background Improvements – To be Built by others

W Martintown Road at Compassion Way

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Compassion Way and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #1) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.

W Martintown Road at Old Plantation Drive

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Old Plantation Drive and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #2) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.
- Reduce northbound left-turn lane on W Martintown Road onto Old Plantation Drive to 150 of storage.
- Construct a raised concrete median between Old Plantation Drive and Knobcone Avenue

W Martintown Road at Knobcone Avenue

- Install a traffic signal
- Construct an additional southbound left-turn lane on W Martintown Road with 200 feet of storage and protected-only phasing. Westbound right-turns from Knobcone Avenue should have a No-Turn on Red Sign to avoid U-turn conflicts.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage with an overlap phase.
- Construct a raised concrete median between Knobcone Avenue and Old Plantation Drive.

Site Improvements – To be built by Developer

Compassion Way at Site Driveway #1

- Construct a single lane, stop controlled approach for access to and from the storage facility.

Old Plantation Drive at Site Driveway #2

- Construct a single lane, stop controlled approach for access to and from the residential development.

2. Introduction

The planned development is to be located on the west side of SC 230 (W Martintown Road) between Interstate 20 and Old Plantation Drive in North Augusta, South Carolina as seen in **Figure 1**. The development is expected to be fully built out by the end of 2027 and is planned to consist of 170 Single-Family homes and a new 160,000 square foot self-storage facility. The proposed site plan is shown in **Figure 2**.

The existing intersections studied in this report are listed below:

1. SC 230 (W Martintown Road) at Compassion Way
2. SC 230 (W Martintown Road) at Old Plantation Drive
3. SC 230 (W Martintown Road) at S-1905 Knobcone Avenue

This traffic study focuses on trip generation, distribution, traffic analyses, and provides recommendations for mitigating Level of Service (LOS) and queuing incurred by the proposed development.

AECOM was tasked with studying traffic conditions near the proposed project during the weekday AM and PM peak hours for three (3) scenarios:

- 2023 Existing: An analysis of the existing conditions.
- 2027 Background: An analysis of conditions in the year 2027 if the development is not constructed.
- 2027 Build: An analysis of conditions in the year 2027 if the development is constructed.

Based on these scenarios, the study is structured to focus on whether the proposed development will have a negative impact on traffic regarding LOS, delay, and queuing.

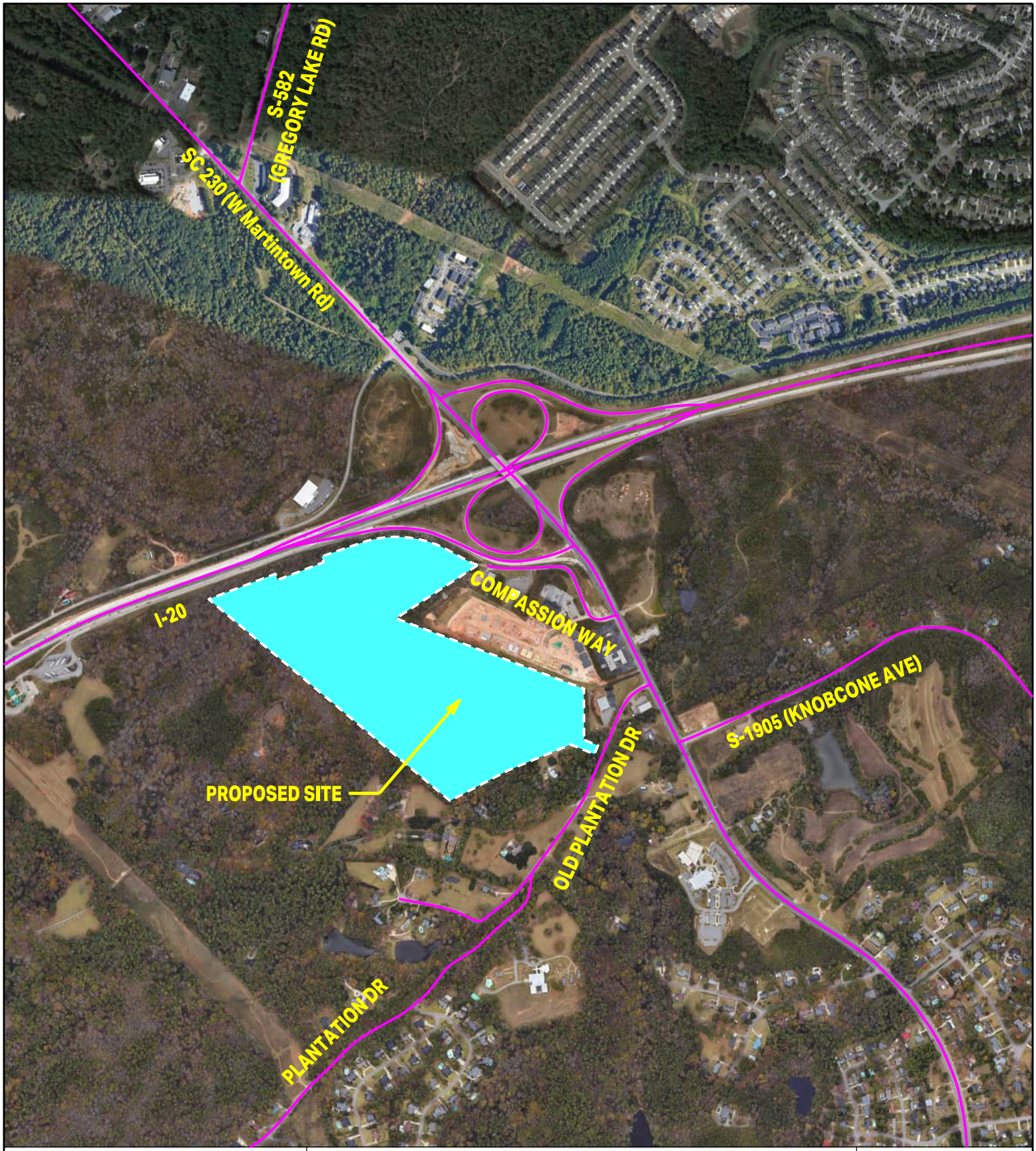

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FIGURE 1

VICINITY MAP

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

N

Drawing Not to Scale

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FIGURE 2

PROPOSED SITE PLAN

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

3. Existing Conditions

Resources on the South Carolina Department of Transportation (SCDOT) website were referenced to determine the functional classification and Annual Average Daily Traffic (AADT) of the roadways studied in this report. This data assisted with determination of growth rates and other analysis factors.

3.1 Roadway Characteristics

SC 230 (W Martintown Road)

- 5-lane urban major arterial with a speed limit of 45 miles per hour (mph) that intersects with Old Plantation Drive and Compassion Way near the study area.
- According to SCDOT traffic data, SC 230 carried 17,200 vehicles (2% trucks) in 2022.
- Terrain could be classified as rolling with both uphill and downhill sections in and near the study area.
- Street lighting was observed in the study area.

S-2181 (Compassion Way)

- 2-lane secondary road that intersects with SC 230 (W Martintown Road) within the study area.
- There were no sight distance issues noted near the site driveways.

Old Plantation Drive

- 2-lane secondary road with a speed limit of 25 miles per hour (mph) that intersects with SC 230 (W Martintown Road) within the study area.
- There were no sight distance issues noted near the site driveways.
- No on-street parking was provided along Old Plantation Drive.

S-1905 (Knobcone Avenue)

- 2-lane urban major collector with a speed limit of 35 miles per hour (mph) that intersects with SC 230 (W Martintown Road) within the study area.
- According to SCDOT traffic data, S-1905 carried 3,100 vehicles (2% trucks) in 2022.
- Street lighting was not observed in the study area.

The existing lane configuration is shown in **Figure 3**.

3.2 Traffic Counts

Turning movement count data was collected by Marr Traffic Data Collection at the study intersections on the following days:

1. SC 230 (W Martintown Road) at Compassion Way – Tuesday May 23, 2023
2. SC 230 (W Martintown Road) at Old Plantation Drive – Tuesday May 9, 2023
3. SC 230 (W Martintown Road) at S-1905 (Knobcone Avenue) – Tuesday May 9, 2023

The AM and PM peak hours for each individual intersection were utilized. The afternoon school peak was also collected, but was lower than the PM peak. The existing volumes are shown in **Figure 4.** Peak hour factors and truck percentages for the roadway are also reflected in the analysis. Traffic count data can be found in **Appendix A**.

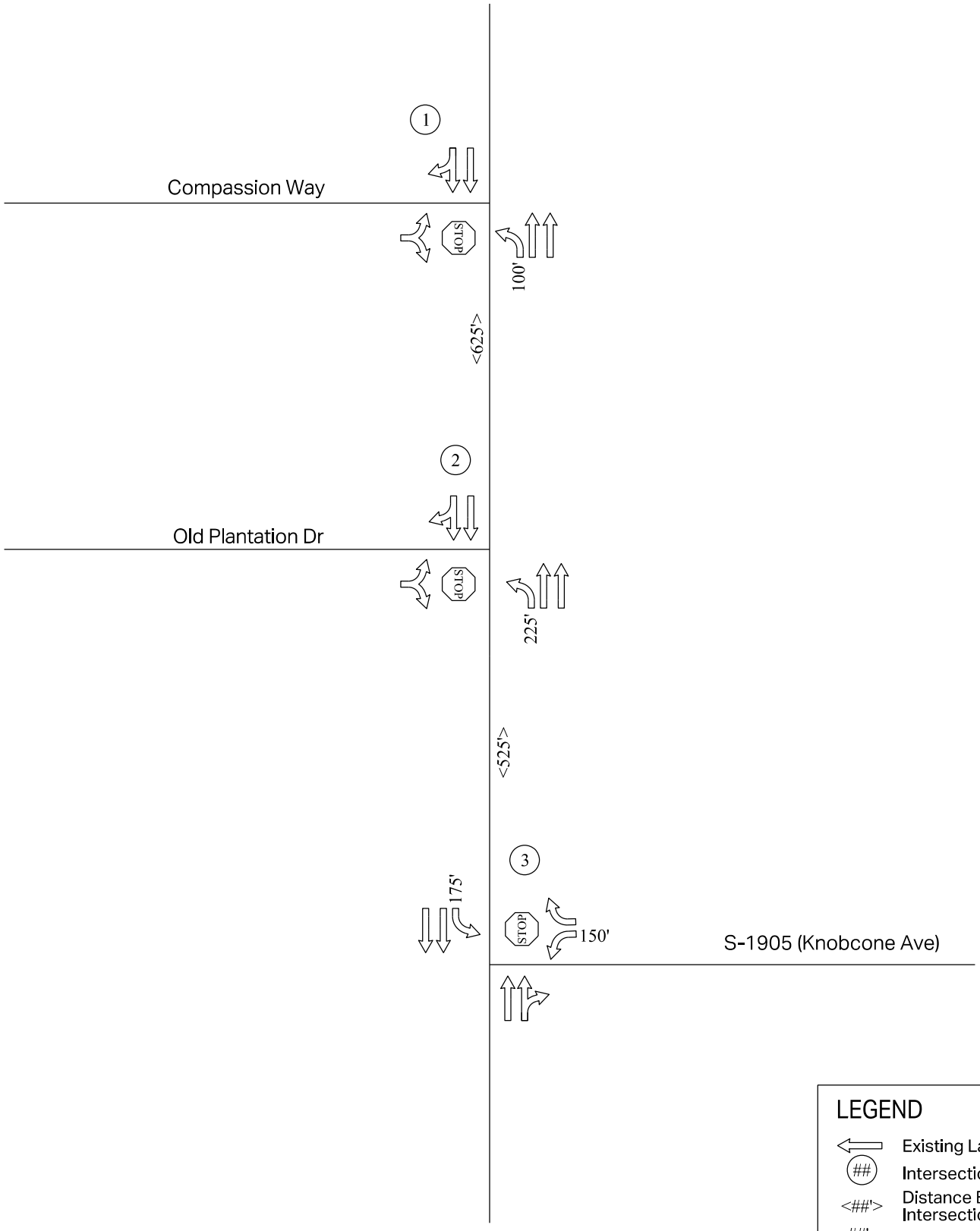

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FIGURE 3

Existing 2023 Lane Configuration

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

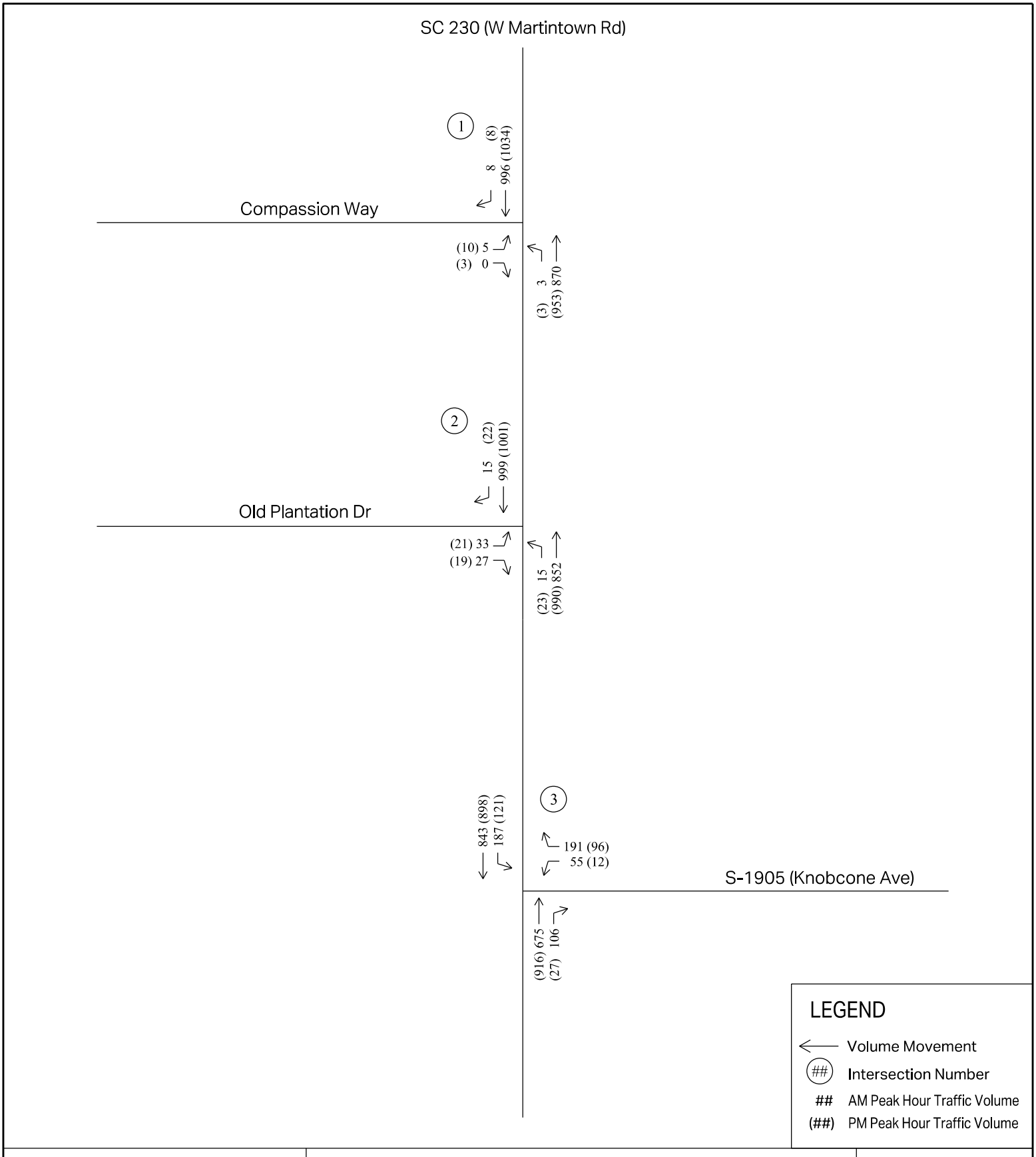

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FIGURE 4

Existing 2023
AM / PM Peak Hour Volumes

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

4. Background Growth

4.1 AADT Trends

Historic trend analysis of the data referenced from the SCDOT website shows the compounded annual historic growth rate on SC 230 (W Martintown Road) and S-1905 (Knobcone Avenue) near the study area at approximately 1.5% per year from 2014-2022. **Table 1** shows selected data for the Annual Average Daily Traffic (AADT) Trends from 2014 to 2022. The image below shows details of the traffic trend analysis.

Table 1 – AADT Trends

Station	Location	2014	2016	2018	2019	2020	2021	2022
02-0210	**SC 230 north of Interstate 20**	11,200	11,400	13,400	13,300	11,900	12,600	12,800
02-0209	**SC 230 south of Interstate 20**	15,400	16,600	18,500	18,300	16,800	17,900	17,200
02-0379	**S-1905 east of SC 230**	2,700	2,800	3,800	3,700	2,200	2,400	3,100

Background 2027 volumes are shown in **Figure 5**.

4.2 Background Development

SCDOT provided two background studies to consider in this report. The expected site traffic and laneage improvements were included in the background and build analysis.

The Hive is a mixed-use development located off W Martintown Road between Knobcone Avenue and I-20. The planned land use will include 343 multi-family residential units, 250k SF of retail/commercial, 50k SF supermarket, 24k SF of sit down/high turnover restaurants, 17k SF of fast-food restaurants, and a 4k SF gas station with a convenience market. The site will include 4 total driveways (3 along West Martintown Road, 1 along Knobcone Avenue). The site will be constructed in 4 phases and is expected to be fully built out by 2028.

The Parker Augusta (formerly called River Falls) is a residential development that is planned to include 264 apartments and be fully built out by 2025 with driveway access from Compassion Way.

There are multiple background improvements recommended in these background studies that are included in this TIA. The background improvements within the study area included in this report are:

W Martintown Road at Compassion Way

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Compassion Way and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #1) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.

W Martintown Road at Old Plantation Drive

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Old Plantation Drive and right-out only access from Compassion Way onto W Martintown Road.

- Construct a new east leg to the intersection (The Hive Driveway #2) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.
- Reduce northbound left-turn lane on W Martintown Road onto Old Plantation Drive to 150 of storage.
- Construct a raised concrete median between Old Plantation Drive and Knobcone Avenue

W Martintown Road at Knobcone Avenue

- Install a traffic signal
- Construct an additional southbound left-turn lane to provide dual left-turns on W Martintown Road with 200 feet of storage and protected-only phasing. Westbound right-turns from Knobcone Avenue should have an overhead No-Turn on Red Sign to avoid u-turn conflicts.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage with an overlap phase.
- Construct a raised concrete median between Knobcone Avenue and Old Plantation Drive.

As mentioned in these background studies, traffic from Compassion Way and Old Plantation Drive that were previously turning left onto West Martintown Road will now be making a right turn and then making a U-turn utilizing the southbound approach at Knobcone Avenue. The site traffic generated in this TIA will be expected to use this same traffic pattern.

The background studies for The Hive and The Parker Augusta can be found in **Appendix B**.

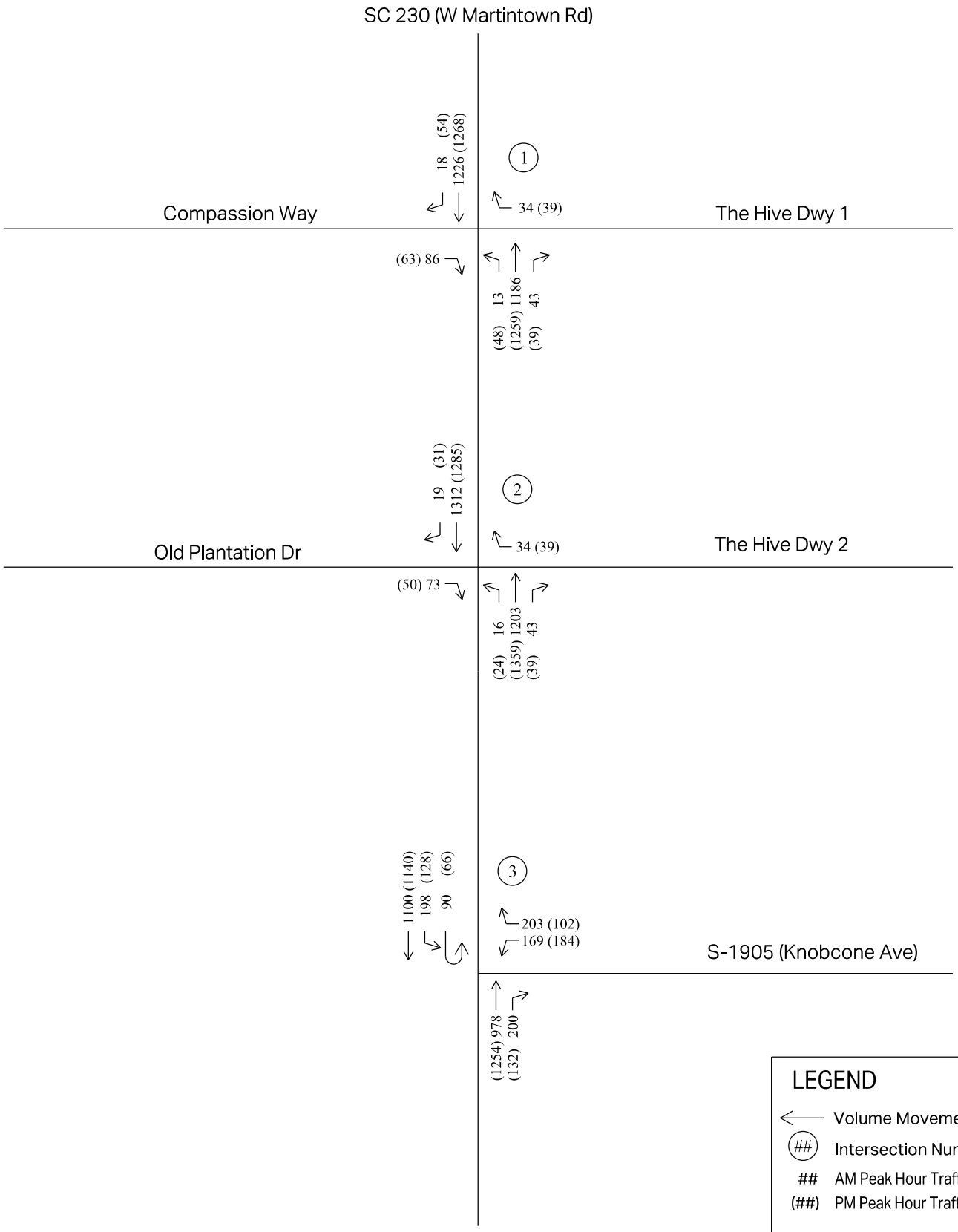

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FIGURE 5

Background 2027
AM / PM Peak Hour Volumes

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

5. Trip Generation and Distribution

5.1 Trip Generation

AECOM used the Trip Generation Manual (Institute of Transportation Engineers, 11th Edition, 2022) to generate the site trips for the Moore's Bluff development as shown in **Table 2.**

The Trip Generation Handbook (Institute of Transportation Engineers, 3rd Edition, 2017) was referenced for determining whether to use the average rate or equation to generate projected traffic.

The development is planned to consist of 170 Single-Family attached housing units and 160,000 square feet of self-storage unit space and is expected to be fully built out by 2027.

The proposed developments are projected to generate 1,478 new daily trips (739 entering, 739 exiting) for a normal weekday. During the peak hours the proposed developments are expected to generate 98 new trips (29 entering, 69 exiting) in the AM peak, and 122 new trips (69 entering, 53 exiting) during the PM peak.

Table 2 – Trip Generation

Land Use Type	ITE Code	Daily			AM Peak Hour			PM Peak Hour		
		Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Single Family Attached Housing	215	1,246	623	623	84	21	63	98	58	40
Self-Storage Facility	151	232	116	116	14	8	6	24	11	13
New External Trips	**-**	**1,478**	**739**	**739**	**98**	**29**	**69**	**122**	**69**	**53**

5.2 Trip Distribution

The planned development is to be accessed by two (2) separate driveways with one on Old Plantation Drive for the residential section and the other along Compassion Way for the self-storage unit facility. Trip distributions for the development were developed by analyzing existing traffic patterns, background improvements, and engineering judgement. The distribution percentages are described below:

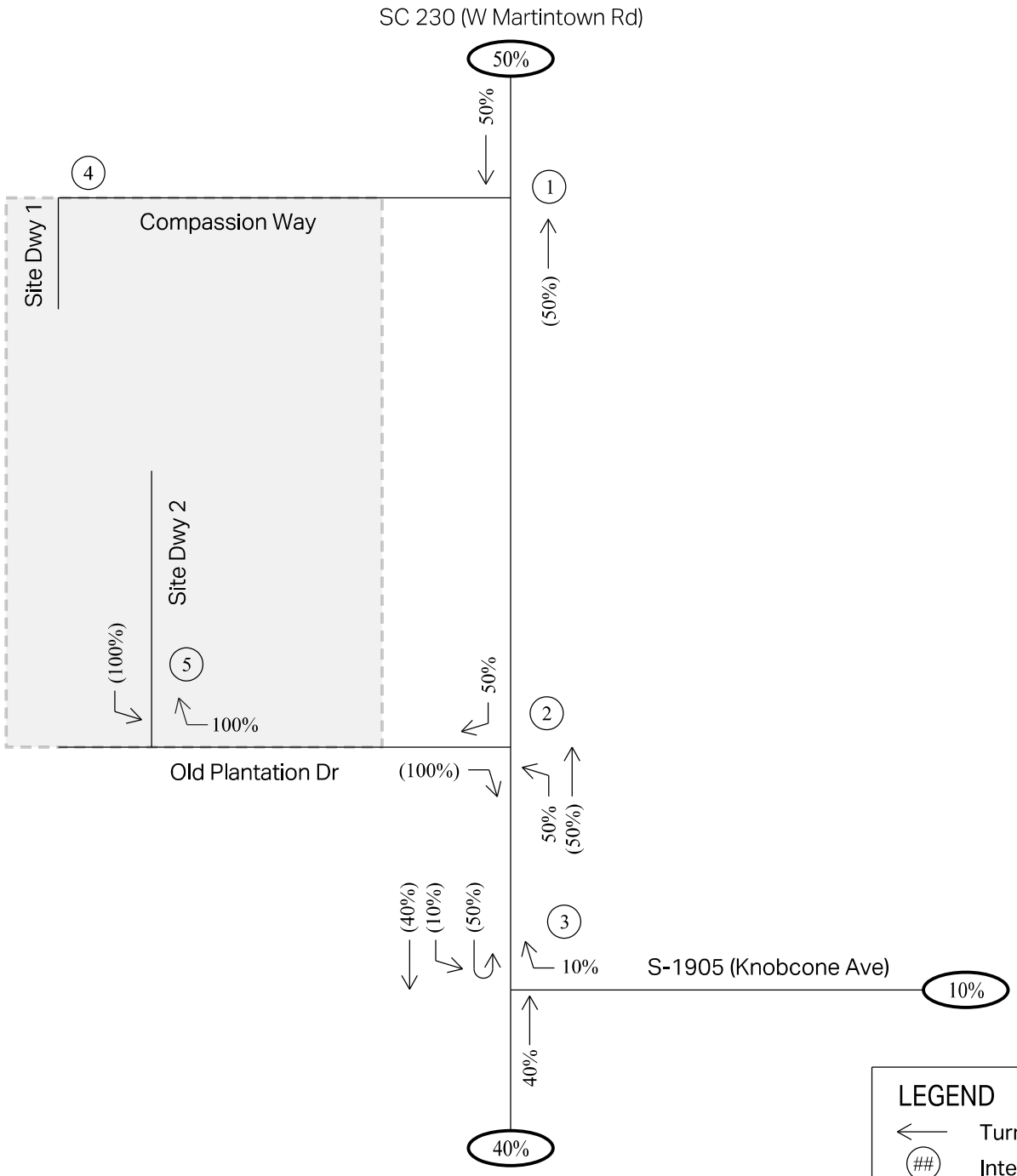
Residential

- 50% to / from the north on SC 230 (W Martintown Road)
- 10% to / from the east on S-1905 (Knobcone Avenue)
- 40% to / from the south on SC 230 (W Martintown Road)

Self-Storage Facility

- 50% to / from the north on SC 230 (W Martintown Road)
- 50% to / from the south on SC 230 (W Martintown Road)

Site trip distribution and assignment for the residential development are presented in **Figure 6** and the self-storage facility is shown in **Figure 7**. The total AM site trips are shown in **Figure 8**. The total PM site trips using this distribution are shown in **Figure 9.**



LEGEND

- Turning Movement
- (##) Intersection Number
- XX% Origin / Destination
- ##% Peak Entering
- (##%) Peak Exiting
- Site

AECOM

FIGURE 6

Site Traffic Distribution (Residential)

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

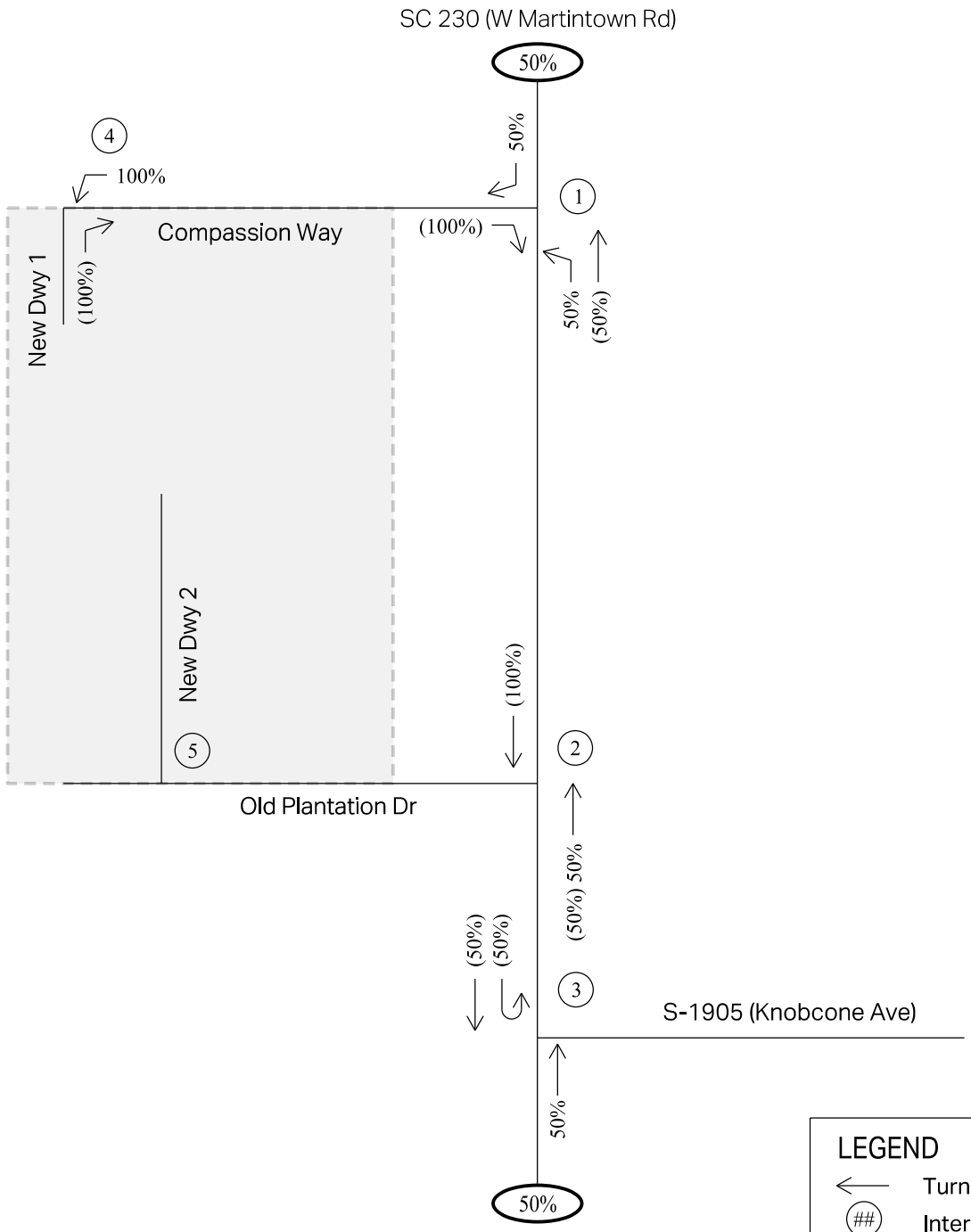


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FIGURE 7

Site Traffic Distribution (Self-Storage Facility)

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

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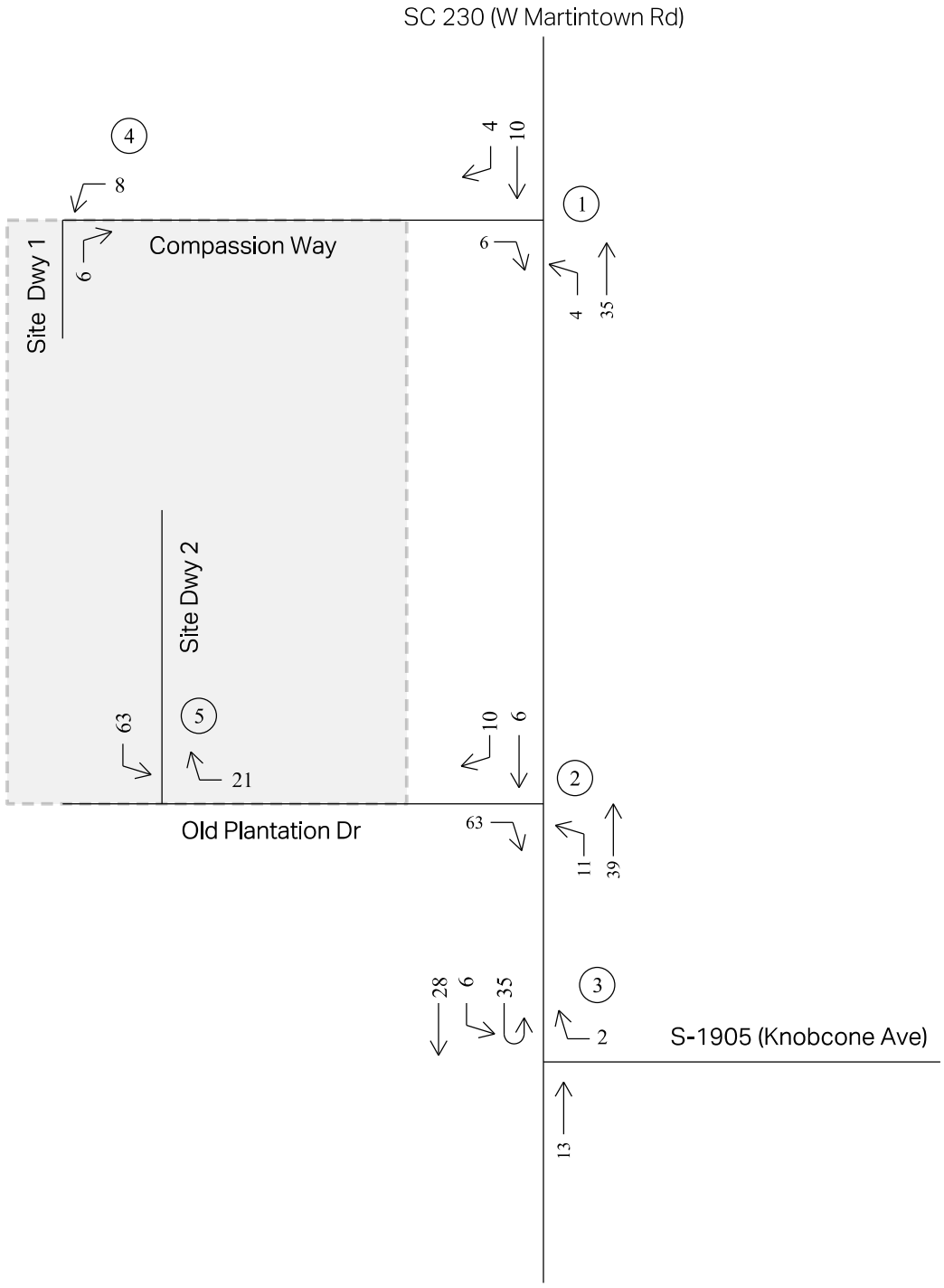

LEGEND

- ← Turning Movement
- (##) Intersection Number
- ## AM Peak Hour Site Traffic Volume
- Site

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FIGURE 8

Site Traffic Volume AM Peak Hour

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

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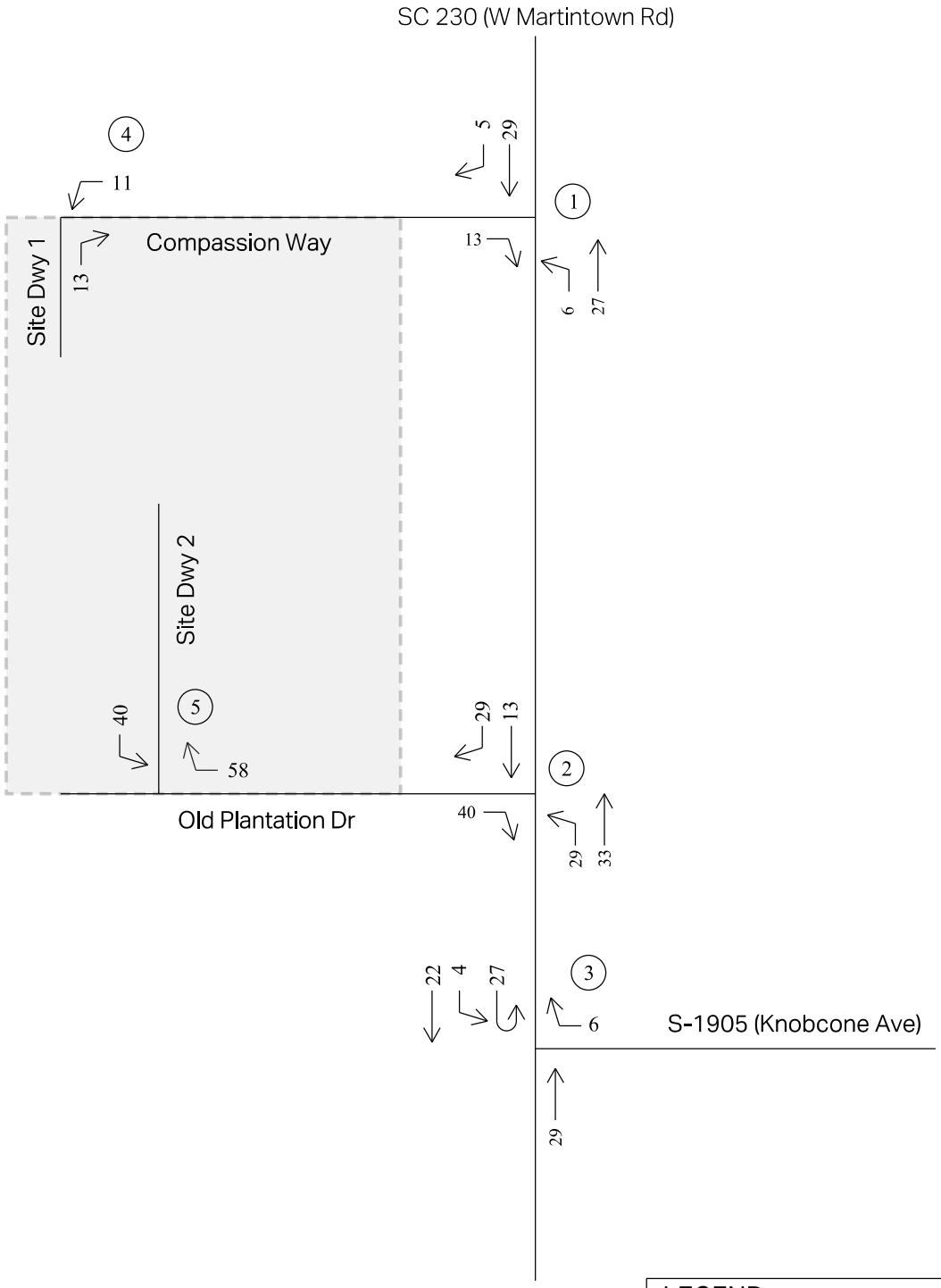

LEGEND

- Turning Movement
- (##) Intersection Number
- ## PM Peak Hour Site Traffic Volume
- Site

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FIGURE 9

Site Traffic Volume PM Peak Hour

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

6. Capacity Analysis

The traffic carrying ability of a roadway is described by levels of service (LOS) that range from LOS A to LOS F. LOS A represents unrestricted maneuverability and operating speeds. LOS B represents reduced maneuverability and operating speeds. LOS C represents restricted maneuverability and operating speeds closer to the speed limit. LOS D represents severely restricted maneuverability and unstable, low operating speeds. LOS E represents operating conditions at or near the capacity level. LOS F represents breakdown conditions characterized by stop and go travel. A visual representation of each LOS is shown below.

The Highway Capacity Manual (HCM) 6 defines LOS at an unsignalized intersection by average control delay per vehicle, which includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue. The Highway Capacity Manual explains that drivers perceive that a signalized intersection is designed to carry higher traffic volumes and therefore expect to experience greater delays at signalized intersections. Unsignalized intersections are assigned a LOS for each minor movement. Typically, LOS C is considered the minimum acceptable level of service at an urban intersection. **Table 3** presents LOS thresholds for unsignalized intersections.

Table 3 – LOS Thresholds for Unsignalized Intersections

Level of Service	Average Control Delay (sec/veh)
A	< 10.0
B	> 10.0 and < 15.0
C	> 15.0 and < 25.0
D	> 25.0 and < 35.0
E	> 35.0 and < 50.0
F	> 50.0

AECOM performed an analysis using Synchro 11 (Build 0, Rev 8) for the study intersections. AECOM analyzed each scenario for the AM and PM peak hours.

AECOM determined the required laneage to satisfy the LOS requirement as well as the appropriate storage lengths to accommodate 95th percentile queuing. According to Highway Capacity Manual (HCM) 6, an acceptable Level-of-Service (LOS) is "C" or better with "A" having the shortest delays and "F" having the longest delays. Sim Traffic was used to report 95th percentile queuing.

Appendix C provides the volume calculation spreadsheets used to develop all capacity analysis scenarios.

6.1 Existing 2023

AECOM analyzed the Existing 2023 traffic conditions during the AM and PM peak hours at the study intersections.

Figure 10 shows the Existing 2023 AM and PM peak hour volumes and LOS.

Table 4 presents a summary of the LOS, delay, and volume to capacity ratios for the Existing 2023 conditions.

Table 4 – Existing 2023 Summary of LOS and Delay

ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBLR	D	C	27.3	22.2	0.069	0.087
		NBL	B	B	10.8	10.9	0.005	0.005
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBLR	D	C	25.4	20.9	0.364	0.176
		NBL	B	B	11.5	10.8	0.028	0.040
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Unsignalized)*	WBL	E	D	40.1	29.2	0.455	0.082
		WBR	C	B	17.1	14.3	0.497	0.217
		SBL	B	B	11.1	11.8	0.257	0.200

The westbound left-turn movement from Knobcone Avenue operates at LOS E during the AM peak hour, but v/c ratio is only 0.455.

The 95th percentile queues for the Existing 2023 scenario are shown in **Table 5**. There is minor queuing along the eastbound approach of Old Plantation Drive and westbound approach of Knobcone Avenue in the AM peak hour.

Table 5 – Existing 2023 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBLR	-	35	34
		NBL	100	0	0
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBLR	-	142	51
		NBL	225	21	40
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Unsignalized)*	WBL	150	149	24
		WBR	-	83	61
		NBTR	-	13	0
		SBL	175	96	77

Synchro 11 and Sim Traffic outputs from the Existing 2023 analysis are provided in **Appendix D.**

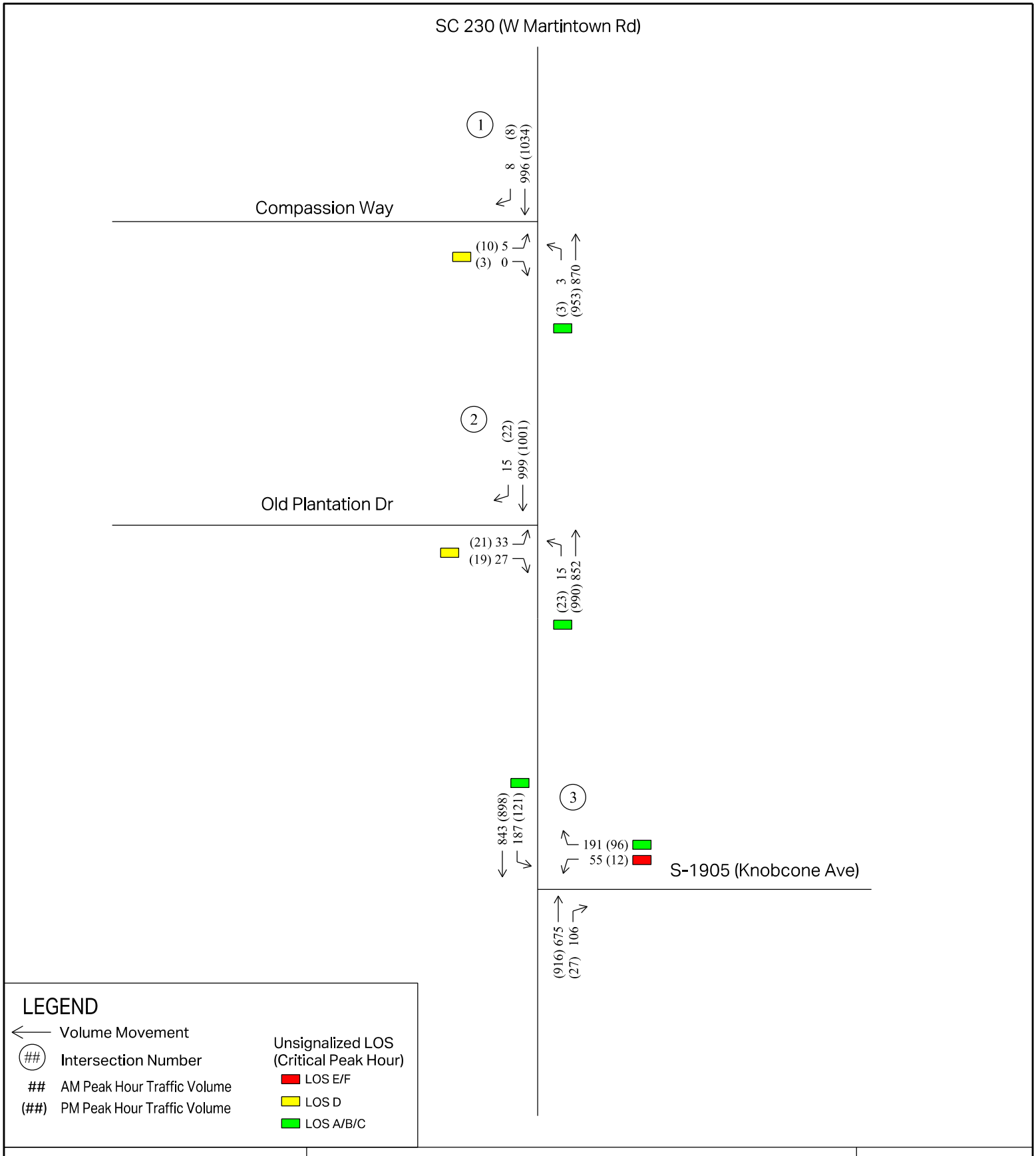

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FIGURE 10

Existing 2023 AM / PM
Peak Hour Volumes & LOS

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

6.2 Background 2027

AECOM analyzed the Background 2027 traffic conditions during the AM and PM peak hours at each study intersection. As previously mentioned, this is an analysis of conditions in the year 2023 if the project is not constructed.

The background improvements mentioned previously in this report were all included to develop this Background 2027 and stated again:

W Martintown Road at Compassion Way

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Compassion Way and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #1) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.

W Martintown Road at Old Plantation Drive

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Old Plantation Drive and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #2) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.
- Reduce northbound left-turn lane on W Martintown Road onto Old Plantation Drive to 150 of storage.
- Construct a raised concrete median between Old Plantation Drive and Knobcone Avenue

W Martintown Road at Knobcone Avenue

- Install a traffic signal
- Construct an additional southbound left-turn lane to provide dual left-turns on W Martintown Road with 200 feet of storage and protected-only phasing. Westbound right-turns from Knobcone Avenue should have an overhead No-Turn on Red Sign to avoid u-turn conflicts.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage with an overlap phase.
- Construct a raised concrete median between Knobcone Avenue and Old Plantation Drive.

The lane configuration, including background improvements, for the Background 2027 scenario is shown in **Figure 11**.

Table 6 presents a summary of the LOS, delay, and volume to capacity ratios for the Background 2027 conditions which show acceptable operation for all study intersections.

Table 6 – Background 2027 Summary of LOS and Delay

ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBR	C	C	17.3	18.3	0.247	0.264
		WBR	B	C	14.5	15.2	0.089	0.107
		NBL	B	B	12.5	13.7	0.029	0.112
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBR	C	C	19.0	16.2	0.323	0.158
		WBR	B	C	14.5	16.7	0.089	0.121
		NBL	B	B	14.1	12.8	0.042	0.055
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Signalized)*	**Overall**	**B**	**B**	**14.3**	**14.4**	**-**	**-**
		WBL	C	D	25.4	35.1	0.560	0.780
		WBR	C	C	29.3	29.8	0.770	0.460
		NBT	B	B	16.4	16.9	0.710	0.790
		NBR	A	A	6.2	4.9	0.220	0.140
		SBL	C	C	27.4	31.8	0.500	0.390
		SBT	A	A	6.9	5.8	0.540	0.510

Figure 12 shows the Background 2027 AM and PM peak hour volumes and LOS.

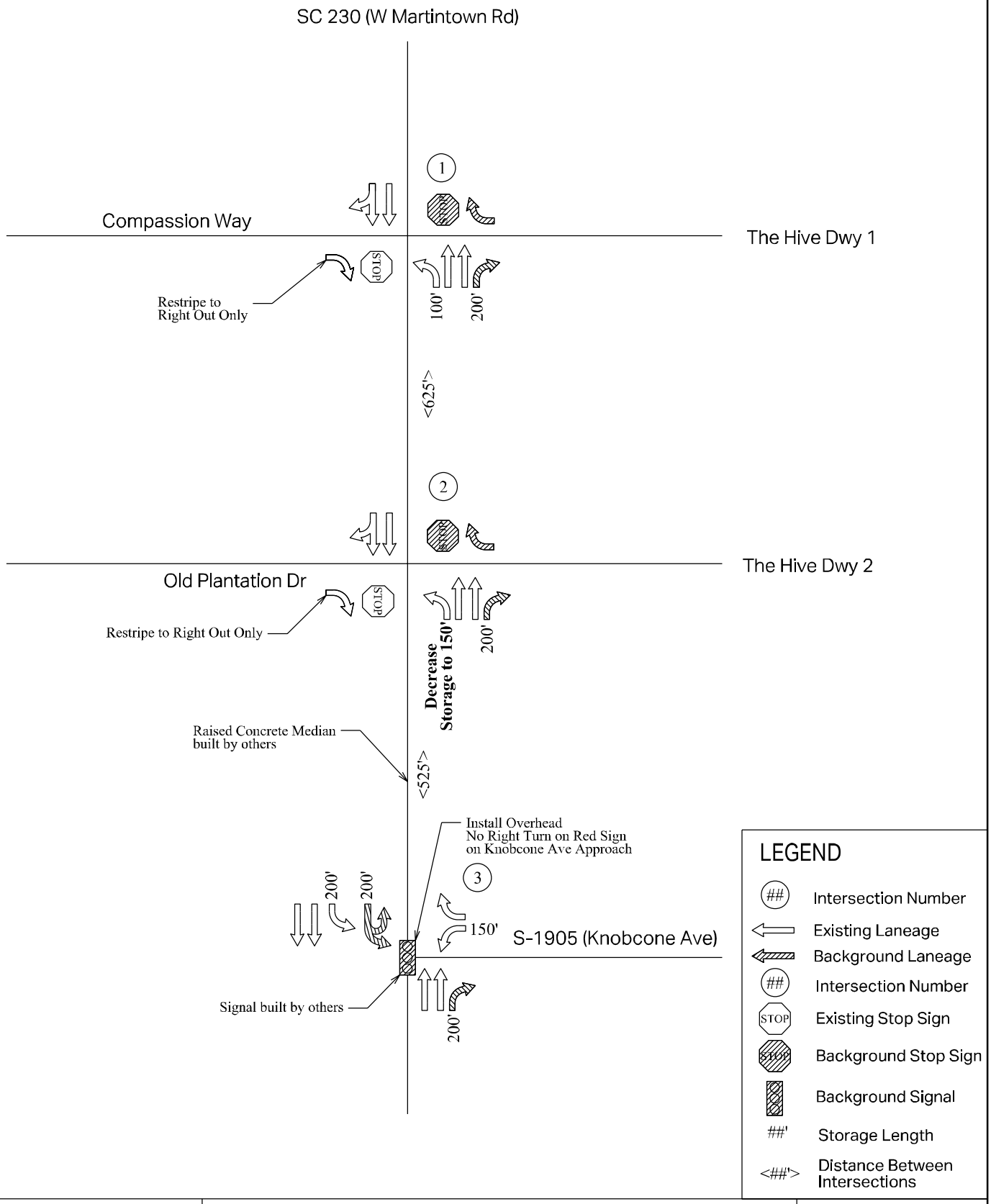
The 95th percentile queues for the Build 2027 scenario are shown in **Table 7**.

Table 7 – Background 2027 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBR	-	53	49
		WBR	-	38	42
		NBL	100	27	50
		SBTR	-	0	0
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBR	-	51	47
		WBR	-	30	58
		NBL	150	25	31
		NBT	-	0	0
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Signalized)*	WBL	150	181	194
		WBR	-	270	173
		NBT	-	321	349
		NBT	-	310	294
		NBR	200	110	120
		SBUL	200	197	124
		SBL	200	169	68
		SBT	-	169	140
		SBT	-	165	143

As seen in the table above, there is some moderate queuing along Knobcone Avenue. Additionally, the southbound U-turn/left turn lane is approaching the full storage length in the AM peak hour.

Synchro 11 and Sim Traffic outputs from the Background 2027 analysis are provided in **Appendix E.**



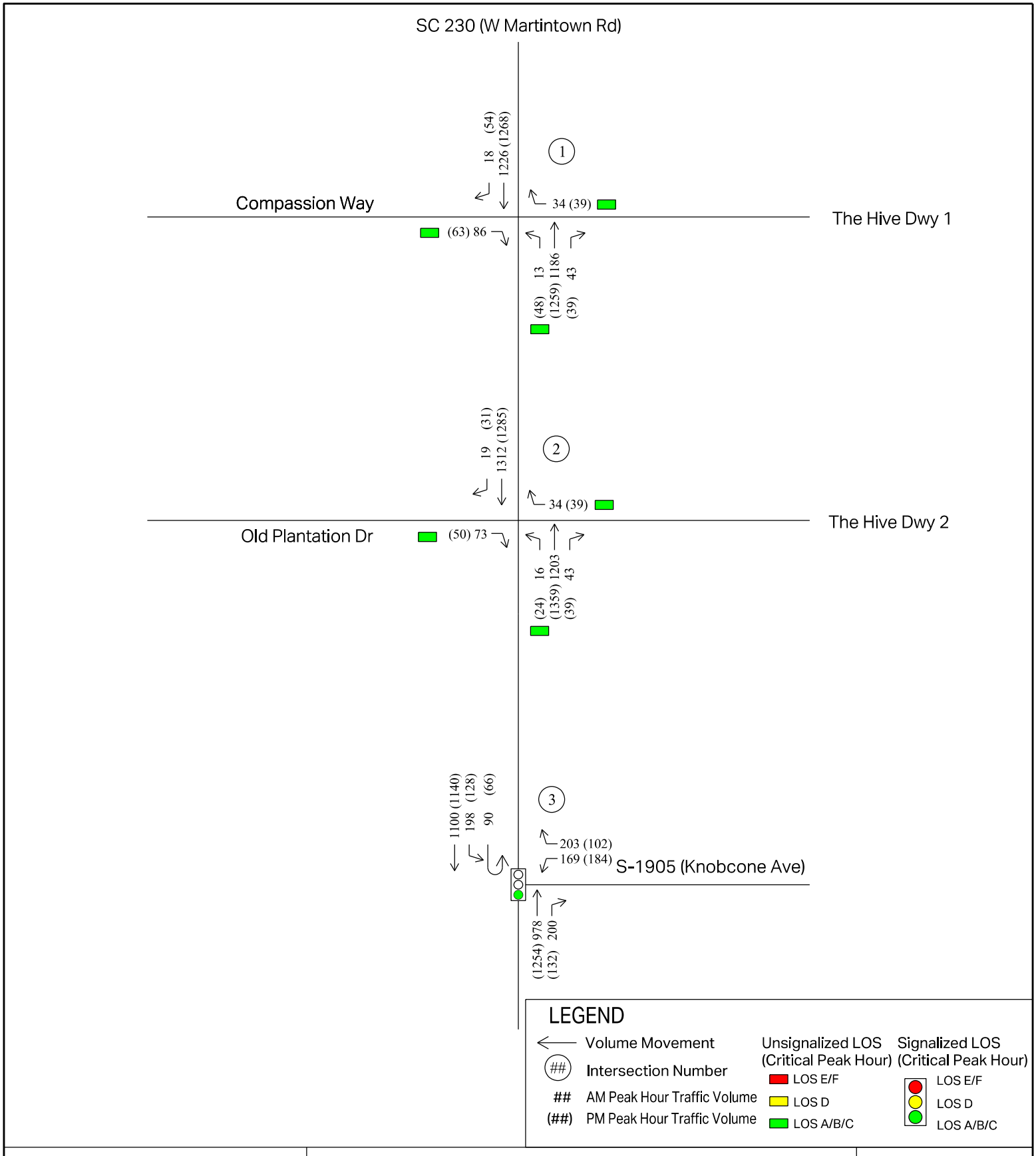
AECOM

FIGURE 11

Background 2027
Lane Configuration

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale



AECOM

FIGURE 12

Background 2027 AM / PM
Peak Hour Volumes & LOS

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

6.3 Build 2027

AECOM analyzed the Build 2027 traffic conditions during the AM and PM peak hours at the study intersections, including the proposed site driveways. This is an analysis of conditions in the year 2027 if the development is constructed. As previously mentioned, the background improvements discussed in the background development section in this report were assumed to be constructed by the time this development is fully built out.

The following site improvements are recommended for the Build 2027 scenario:

Compassion Way at Site Driveway #1

- Construct a single lane, stop controlled approach for access to and from the storage facility.

Old Plantation Drive at Site Driveway #2

- Construct a single lane, stop controlled approach for access to and from the residential development.

It should be noted that the queuing in the southbound U-turn/left turn lane at the intersection of W Martintown Road at Knobcone Avenue slightly exceeds the proposed storage length during the AM peak hour according to SimTraffic 95th percentile queuing. This is not expected to occur outside of the AM peak hour and can likely be attributed to traffic traveling to North Augusta High School. Signal timing should be adjusted to manage queue lengths at this intersection.

No other roadway improvements in the study area are recommended due to the projected development at this time.

Table 8 presents a summary of the LOS, delay, and volume to capacity ratios for the Build 2027 conditions.

Table 8 – Build 2027 Summary of LOS and Delay

ID#	Intersection	Approach	HCM 6 Level of Service (LOS)		Control Delay (sec/veh)		Volume to Capacity Ratio (V/C)	
			AM	PM	AM	PM	AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBR	C	C	17.8	20.0	0.268	0.328
		WBR	B	C	14.8	15.4	0.092	0.110
		NBL	B	B	12.7	14.2	0.038	0.130
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBR	C	C	21.1	18.8	0.405	0.294
		WBR	B	C	14.9	17.1	0.092	0.124
		NBL	B	B	14.5	13.8	0.071	0.127
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Signalized)*	**Overall**	**B**	**B**	**14.4**	**14.7**	**-**	**-**
		WBL	C	D	25.5	35.7	0.560	0.780
		WBR	C	C	29.4	30.7	0.770	0.490
		NBT	B	B	16.4	17.3	0.720	0.800
		NBR	A	A	6.0	4.9	0.220	0.140
		SBL	C	C	27.9	32.5	0.530	0.410
		SBT	A	A	7.0	5.9	0.550	0.510
4	Compassion Way At New Dwy 1 *(Unsignalized)*	WBL	A	A	7.2	7.2	0.005	0.007
		NBR	A	A	8.3	8.4	0.006	0.013
5	Old Plantation Dr at New Dwy 2 *(Unsignalized)*	SBL	A	A	9.5	9.5	0.079	0.051

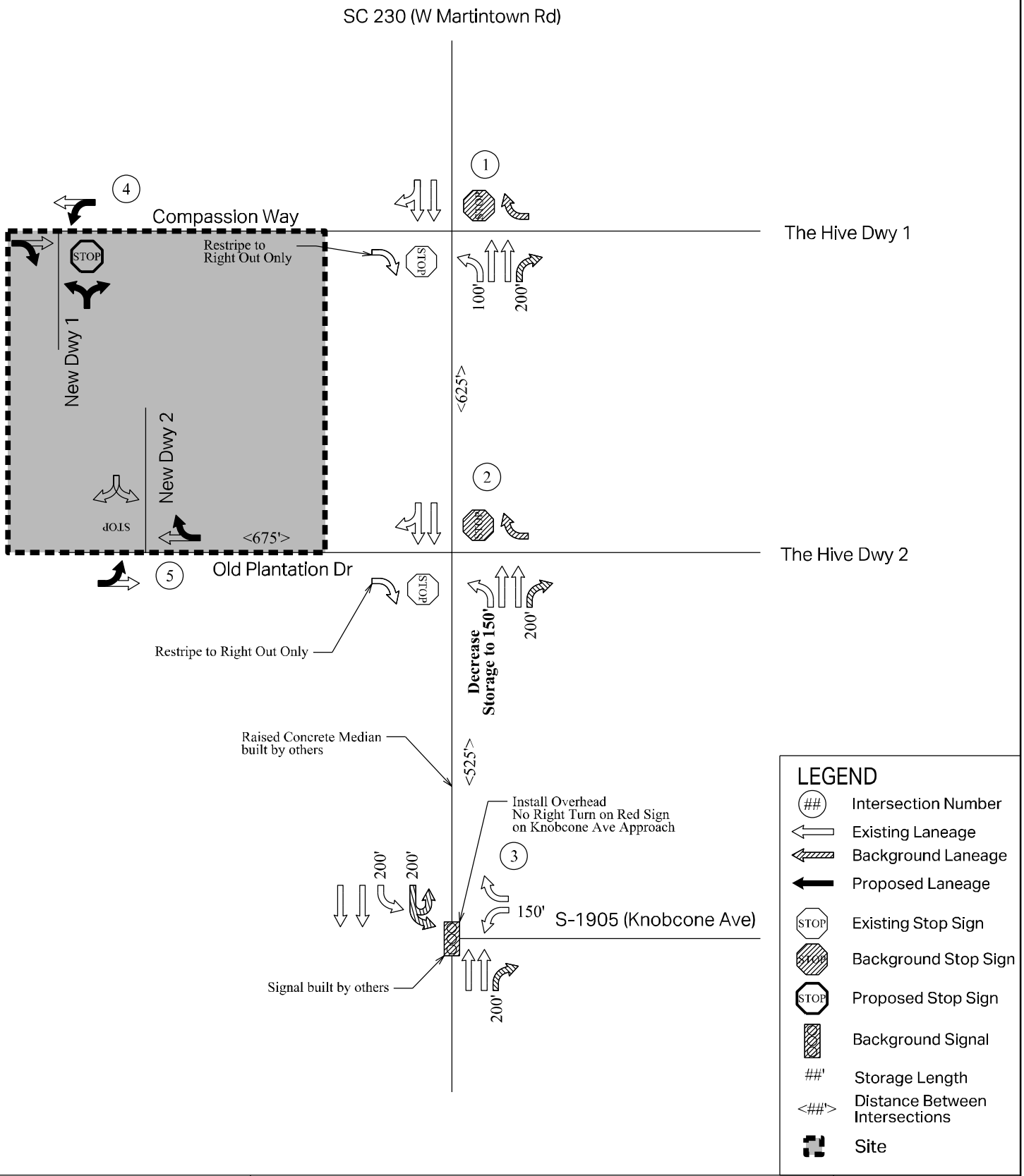
Figure 13 shows the proposed Build 2027 proposed laneage and **Figure 14** shows the Build 2027 AM and PM peak hour volumes and LOS.

The 95th percentile queues for the Build 2027 scenario are shown in **Table 9**.

Table 9 – Build 2027 Summary of 95th Percentile Queues

ID#	Intersection	Approach	Storage Length (ft)	95th Percentile Queue (ft)	
				AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EBR	-	74	44
		WBR	-	45	39
		NBL	100	29	64
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EBR	-	101	61
		WBR	-	38	32
		NBL	150	55	55
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(Unsignalized)*	WBL	150	179	189
		WBR	-	230	210
		NBT	-	339	433
		NBT	-	319	399
		NBR	200	152	199
		SBUL	200	225	165
		SBL	200	168	114
		SBT	-	173	146
		SBT	-	195	152
4	Compassion Way at New Dwy 1 *(Unsignalized)*	WBLT	-	-	-
		NBLR	-	26	29
5	Old Plantation Dr at New Dwy 2 *(Unsignalized)*	SBLR	-	43	40

Synchro 11 and Sim Traffic outputs from the Build 2027 analysis are provided in **Appendix F**.



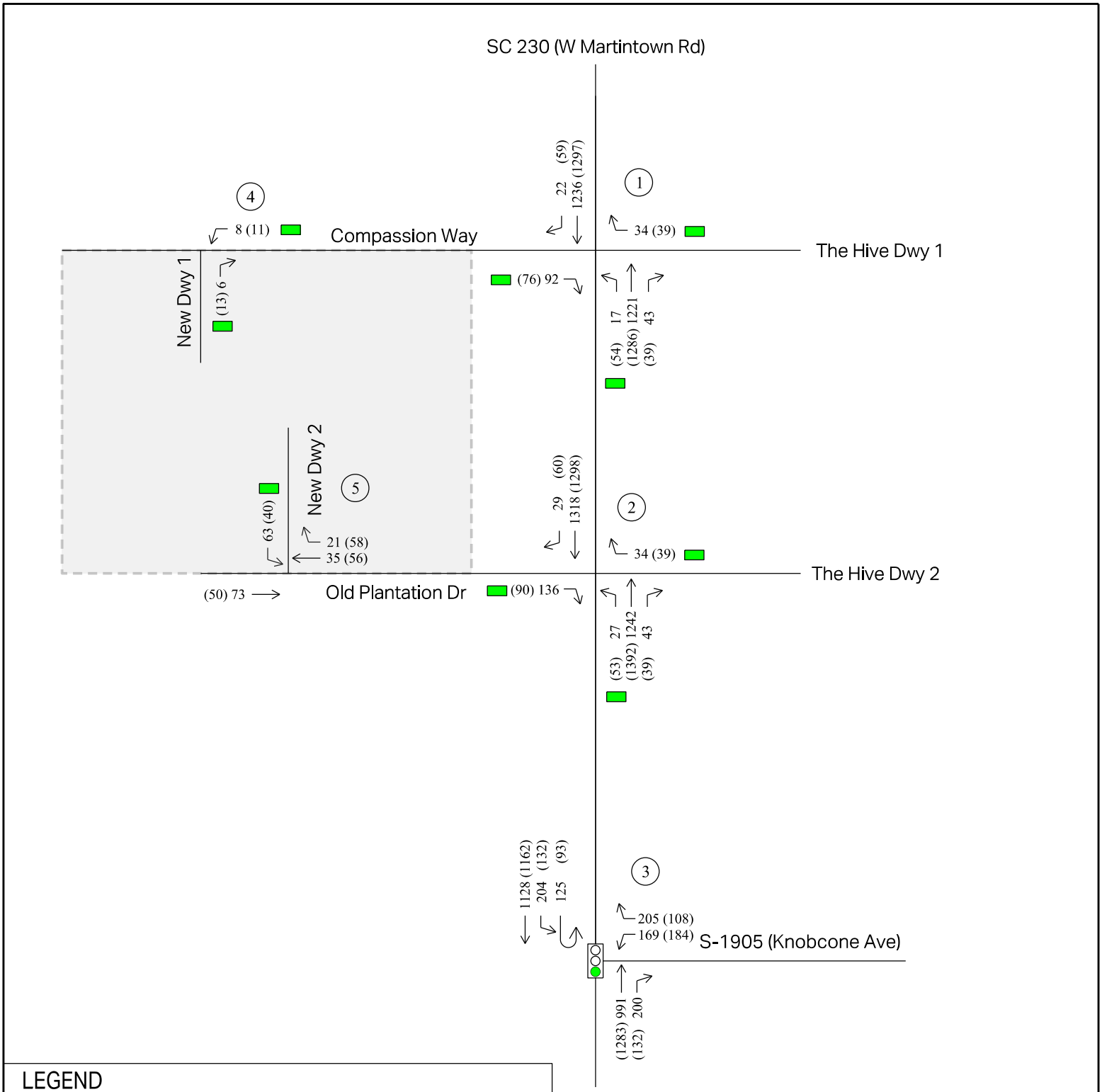
AECOM

FIGURE 13

Build 2027
Lane Configuration

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale



LEGEND

- Volume Movement
- (##) Intersection Number
- ## AM Peak Hour Traffic Volume
- (##) PM Peak Hour Traffic Volume

Unsignalized LOS (Critical Peak Hour)
- LOS E/F
- LOS D
- LOS A/B/C

Signalized LOS (Critical Peak Hour)
- LOS E/F
- LOS D
- LOS A/B/C

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FIGURE 14

Build 2027 AM / PM
Peak Hour Volumes & LOS

Moore's Bluff TIA
Traffic Impact Analysis - North Augusta, SC

Drawing Not to Scale

7. Conclusions and Recommendations

AECOM analyzed multiple scenarios for the Moore's Bluff development. A summary of the LOS and delay for each scenario is summarized in **Table 10**.

Table 10 – Scenario Summary of LOS and Delay

ID#	Intersection	Approach	Level of Service and Delay (sec)					
			2023 Existing		2027 Background		2027 Build	
			AM	PM	AM	PM	AM	PM
1	SC 230 (W Martintown Rd) at Compassion Way *(Unsignalized)*	EB	D (27.3)	C (22.2)	C (17.3)	C (18.3)	C (17.8)	C (20.0)
		WB	-	-	B (14.5)	C (15.2)	B (14.8)	C (15.4)
		NB	B (10.8)	B (10.9)	A (12.5)	A (13.7)	A (12.7)	A (14.2)
2	SC 230 (W Martintown Rd) at Old Plantation Dr *(Unsignalized)*	EB	D (25.4)	C (20.9)	C (19.0)	C (16.2)	C (21.1)	C (18.8)
		WB	-	-	B (14.5)	C (16.7)	B (14.9)	C (17.1)
		NB	B (11.5)	B (10.8)	A (14.1)	A (12.8)	A (14.5)	A (13.8)
3	SC 230 (W Martintown Rd) at S-1905 (Knobcone Ave) *(2023 Unsignalized / 2027 Signalized)*	-	Unsignalized (WB Approach)		Signalized (Overall)			
			E (40.1)	D (29.2)	B (14.3)	B (14.4)	B (14.4)	B (14.7)
4	Compassion Way at New Dwy 1 *(Unsignalized)*	NB	-	-	-	-	A (8.3)	A (8.4)
5	Old Plantation Dr at New Dwy 2 *(Unsignalized)*	SB	-	-	-	-	A (9.5)	A (9.5)

The summary table above indicates that all intersections operate at an acceptable level of service during the Build 2027 scenario. The following background and site improvements are recommended as summarized **Figure 13**:

Background Improvements – To be built by others

W Martintown Road at Compassion Way

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Compassion Way and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #1) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.

W Martintown Road at Old Plantation Drive

- Convert intersection to a reduced conflict intersection which includes a northbound left-turn from W Martintown Road onto Old Plantation Drive and right-out only access from Compassion Way onto W Martintown Road.
- Construct a new east leg to the intersection (The Hive Driveway #2) with right-in / right-out access under stop control.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage.
- Reduce northbound left-turn lane on W Martintown Road onto Old Plantation Drive to 150 of storage.
- Construct a raised concrete median between Old Plantation Drive and Knobcone Avenue

W Martintown Road at Knobcone Avenue

- Install a traffic signal
- Construct an additional southbound left-turn lane on W Martintown Road with 200 feet of storage and protected-only phasing. Westbound right-turns from Knobcone Avenue should have a No-Turn on Red Sign to avoid U-turn conflicts.
- Construct a northbound right-turn lane on W Martintown Road with 200 feet of storage with an overlap phase.
- Construct a raised concrete median between Knobcone Avenue and Old Plantation Drive.

Site Improvements – To be built by Developer

Compassion Way at Site Driveway #1

- Construct a single lane, stop controlled approach for access to and from the storage facility.

Old Plantation Drive at Site Driveway #2

- Construct a single lane, stop controlled approach for access to and from the residential development.

Appendix A – Traffic Count Data

Peak Hour Turning Movement Count

North Augusta, SC

Click here for Map

Marr Traffic DATA COLLECTION

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23 May 2023	
Period	0700 - 0900
Peak Hour	0715 - 0815

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
0715 - 0730	1	193	-	0	194	-	249	1	0	250	1	-	0	0	1	-	-	-	-	0	445
0730 - 0745	1	236	-	0	237	-	264	1	0	265	2	-	0	1	3	-	-	-	-	0	505
0745 - 0800	1	226	-	0	227	-	278	5	0	283	0	-	0	0	0	-	-	-	-	0	510
0800 - 0815	0	215	-	0	215	-	205	1	0	206	1	-	0	0	1	-	-	-	-	0	422
Total	3	870	0	0	873	0	996	8	0	1004	4	0	0	1	5	0	0	0	0	0	1882
Approach %	0.34	99.66	0.00	0.00	-	0.00	99.20	0.80	0.00	-	80.00	0.00	0.00	20.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.75	0.92	0.00	0.00	**0.92**	0.00	0.90	0.40	0.00	**0.89**	0.50	0.00	0.00	0.25	**0.42**	0.00	0.00	0.00	0.00	**0.00**	**0.92**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
0715 - 0730	1	193	-	0	194	-	239	1	0	240	0	-	0	0	0	-	-	-	-	0	434
0730 - 0745	1	228	-	0	229	-	255	1	0	256	2	-	0	1	3	-	-	-	-	0	488
0745 - 0800	1	222	-	0	223	-	269	5	0	274	0	-	0	0	0	-	-	-	-	0	497
0800 - 0815	0	214	-	0	214	-	201	1	0	202	1	-	0	0	1	-	-	-	-	0	417
Total	3	857	0	0	860	0	964	8	0	972	3	0	0	1	4	0	0	0	0	0	1836
Approach %	0.35	99.65	0.00	0.00	-	0.00	99.18	0.82	0.00	-	75.00	0.00	0.00	25.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.75	0.94	0.00	0.00	**0.94**	0.00	0.90	0.40	0.00	**0.89**	0.38	0.00	0.00	0.25	**0.33**	0.00	0.00	0.00	0.00	**0.00**	**0.92**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
0715 - 0730	0	0	-	0	0	-	7	0	0	7	1	-	0	0	1	-	-	-	-	0	8
0730 - 0745	0	5	-	0	5	-	5	0	0	5	0	-	0	0	0	-	-	-	-	0	10
0745 - 0800	0	3	-	0	3	-	3	0	0	3	0	-	0	0	0	-	-	-	-	0	6
0800 - 0815	0	1	-	0	1	-	4	0	0	4	0	-	0	0	0	-	-	-	-	0	5
Total	0	9	0	0	9	0	19	0	0	19	1	0	0	0	1	0	0	0	0	0	29
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.45	0.00	0.00	**0.45**	0.00	0.68	0.00	0.00	**0.68**	0.25	0.00	0.00	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	**0.73**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
0715 - 0730	0	0	-	0	0	-	3	0	0	3	0	-	0	0	0	-	-	-	-	0	3
0730 - 0745	0	3	-	0	3	-	4	0	0	4	0	-	0	0	0	-	-	-	-	0	7
0745 - 0800	0	1	-	0	1	-	6	0	0	6	0	-	0	0	0	-	-	-	-	0	7
0800 - 0815	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	4	0	0	4	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	17
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.33	0.00	0.00	**0.33**	0.00	0.54	0.00	0.00	**0.54**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.61**

Bikes

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
0715 - 0730	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0730 - 0745	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0745 - 0800	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0800 - 0815	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Peak Hour Turning Movement Count

North Augusta, SC

Click here for Map

Marr Traffic DATA COLLECTION

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23 May 2023	
Period	1400 - 1800
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
1700 - 1715	1	259	-	0	260	-	226	3	0	229	4	-	1	0	5	-	-	-	-	0	494
1715 - 1730	1	230	-	0	231	-	243	3	0	246	4	-	1	0	5	-	-	-	-	0	482
1730 - 1745	0	249	-	0	249	-	275	1	0	276	0	-	0	0	0	-	-	-	-	0	525
1745 - 1800	1	215	-	0	216	-	290	1	0	291	2	-	1	0	3	-	-	-	-	0	510
Total	3	953	0	0	956	0	1034	8	0	1042	10	0	3	0	13	0	0	0	0	0	2011
Approach %	0.31	99.69	0.00	0.00	-	0.00	99.23	0.77	0.00	-	76.92	0.00	23.08	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.75	0.92	0.00	0.00	**0.92**	0.00	0.89	0.67	0.00	**0.90**	0.63	0.00	0.75	0.00	**0.65**	0.00	0.00	0.00	0.00	**0.00**	**0.96**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
1700 - 1715	1	257	-	0	258	-	225	3	0	228	4	-	1	0	5	-	-	-	-	0	491
1715 - 1730	1	225	-	0	226	-	239	3	0	242	4	-	1	0	5	-	-	-	-	0	473
1730 - 1745	0	244	-	0	244	-	271	1	0	272	0	-	0	0	0	-	-	-	-	0	516
1745 - 1800	1	213	-	0	214	-	287	0	0	287	2	-	1	0	3	-	-	-	-	0	504
Total	3	939	0	0	942	0	1022	7	0	1029	10	0	3	0	13	0	0	0	0	0	1984
Approach %	0.32	99.68	0.00	0.00	-	0.00	99.32	0.68	0.00	-	76.92	0.00	23.08	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.75	0.91	0.00	0.00	**0.91**	0.00	0.89	0.58	0.00	**0.90**	0.63	0.00	0.75	0.00	**0.65**	0.00	0.00	0.00	0.00	**0.00**	**0.96**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
1700 - 1715	0	2	-	0	2	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	3
1715 - 1730	0	4	-	0	4	-	3	0	0	3	0	-	0	0	0	-	-	-	-	0	7
1730 - 1745	0	3	-	0	3	-	2	0	0	2	0	-	0	0	0	-	-	-	-	0	5
1745 - 1800	0	2	-	0	2	-	3	1	0	4	0	-	0	0	0	-	-	-	-	0	6
Total	0	11	0	0	11	0	9	1	0	10	0	0	0	0	0	0	0	0	0	0	21
Approach %	0.00	100.00	0.00	0.00	-	0.00	90.00	10.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.69	0.00	0.00	**0.69**	0.00	0.75	0.25	0.00	**0.63**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.75**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
1700 - 1715	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1715 - 1730	0	1	-	0	1	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	2
1730 - 1745	0	2	-	0	2	-	2	0	0	2	0	-	0	0	0	-	-	-	-	0	4
1745 - 1800	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	6
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.38	0.00	0.00	**0.38**	0.00	0.38	0.00	0.00	**0.38**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.38**

Bikes

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					Compassion Wy										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	1.1	1.2		1.3	Total		1.4	1.5	1.6	Total	1.7		1.8	1.9	Total					Total	Total
1700 - 1715	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1715 - 1730	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1730 - 1745	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1745 - 1800	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Classified Turn Movement Count || All vehicles

North Augusta, SC

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

Date
23 May 2023

Lat/Long
33.536979°, -81.988873°

Weather
Mostly Cloudy
69°F

0700 - 0900 (Weekday 2h Session) (05-23-2023)
All vehicles

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	1	151	0	152	190	0	0	190	0	0	0	0	342
0715 - 0730	1	193	0	194	249	1	0	250	1	0	0	1	445
0730 - 0745	1	236	0	237	264	1	0	265	2	0	1	3	505
0745 - 0800	1	226	0	227	278	5	0	283	0	0	0	0	510
Hourly Total	4	806	0	**810**	981	7	0	**988**	3	0	1	**4**	**1802**
0800 - 0815	0	215	0	215	205	1	0	206	1	0	0	1	422
0815 - 0830	3	220	0	223	152	3	0	155	1	0	1	2	380
0830 - 0845	0	171	0	171	156	5	0	161	1	2	0	3	335
0845 - 0900	0	143	0	143	146	0	0	146	0	0	0	0	289
Hourly Total	3	749	0	**752**	659	9	0	**668**	3	2	1	**6**	**1426**
Grand Total	7	1555	0	**1562**	1640	16	0	**1656**	6	2	2	**10**	**3228**
Approach %	0.45	99.55	0.00	-	99.03	0.97	0.00	-	60.00	20.00	20.00	-	
Intersection %	0.22	48.17	0.00	48.39	50.81	0.50	0.00	51.30	0.19	0.06	0.06	0.31	
PHF	0.75	0.92	0.00	**0.92**	0.90	0.40	0.00	**0.89**	0.50	0.00	0.25	**0.42**	**0.92**

1400 - 1800 (Weekday 4h Session) (05-23-2023)
All vehicles

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1400 - 1415	0	163	0	163	173	2	0	175	0	1	0	1	339
1415 - 1430	1	154	0	155	189	4	0	193	1	2	0	3	351
1430 - 1445	3	182	0	185	183	2	0	185	5	2	0	7	377
1445 - 1500	1	153	0	154	180	4	0	184	1	5	0	6	344
Hourly Total	5	652	0	**657**	725	12	0	**737**	7	10	0	**17**	**1411**
1500 - 1515	1	179	0	180	165	0	0	165	1	2	0	3	348
1515 - 1530	1	200	0	201	173	2	0	175	1	1	1	3	379
1530 - 1545	2	256	2	260	193	3	0	196	2	5	0	7	463
1545 - 1600	0	261	0	261	196	1	0	197	2	1	0	3	461
Hourly Total	4	896	2	**902**	727	6	0	**733**	6	9	1	**16**	**1651**
1600 - 1615	2	210	0	212	190	2	0	192	4	0	0	4	408
1615 - 1630	0	211	0	211	203	0	0	203	1	1	0	2	416
1630 - 1645	1	237	0	238	198	1	0	199	1	5	0	6	443
1645 - 1700	0	220	0	220	206	0	0	206	2	1	0	3	429
Hourly Total	3	878	0	**881**	797	3	0	**800**	8	7	0	**15**	**1696**
1700 - 1715	1	259	0	260	226	3	0	229	4	1	0	5	494
1715 - 1730	1	230	0	231	243	3	0	246	4	1	0	5	482
1730 - 1745	0	249	0	249	275	1	0	276	0	0	0	0	525
1745 - 1800	1	215	0	216	290	1	0	291	2	1	0	3	510
Hourly Total	3	953	0	**956**	1034	8	0	**1042**	10	3	0	**13**	**2011**
Grand Total	15	3379	2	**3396**	3283	29	0	**3312**	31	29	1	**61**	**6769**
Approach %	0.44	99.50	0.06	-	99.12	0.88	0.00	-	50.82	47.54	1.64	-	
Intersection %	0.22	49.92	0.03	50.17	48.50	0.43	0.00	48.93	0.46	0.43	0.01	0.90	
PHF	0.75	0.92	0.00	**0.92**	0.89	0.67	0.00	**0.90**	0.63	0.75	0.00	**0.65**	**0.96**

Classified Turn Movement Count || Passenger Vehicles (1-3)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

Date
23 May 2023

Weather
Mostly Cloudy
69°F

Lat/Long
33.536979°, -81.988873°

0700 - 0900 (Weekday 2h Session) (05-23-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	1	151	0	152	189	0	0	189	0	0	0	0	341
0715 - 0730	1	193	0	194	239	1	0	240	0	0	0	0	434
0730 - 0745	1	228	0	229	255	1	0	256	2	0	1	3	488
0745 - 0800	1	222	0	223	269	5	0	274	0	0	0	0	497
Hourly Total	4	794	0	**798**	952	7	0	**959**	2	0	1	**3**	**1760**
0800 - 0815	0	214	0	214	201	1	0	202	1	0	0	1	417
0815 - 0830	3	213	0	216	147	3	0	150	1	0	1	2	368
0830 - 0845	0	168	0	168	152	5	0	157	1	2	0	3	328
0845 - 0900	0	140	0	140	140	0	0	140	0	0	0	0	280
Hourly Total	3	735	0	**738**	640	9	0	**649**	3	2	1	**6**	**1393**
Grand Total	7	1529	0	**1536**	1592	16	0	**1608**	5	2	2	**9**	**3153**
Approach %	0.46	99.54	0.00	-	99.00	1.00	0.00	-	55.56	22.22	22.22	-	
Intersection %	0.22	48.49	0.00	48.72	50.49	0.51	0.00	51.00	0.16	0.06	0.06	0.29	

1400 - 1800 (Weekday 4h Session) (05-23-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1400 - 1415	0	159	0	159	164	2	0	166	0	1	0	1	326
1415 - 1430	1	147	0	148	185	3	0	188	1	2	0	3	339
1430 - 1445	3	178	0	181	178	2	0	180	5	2	0	7	368
1445 - 1500	1	149	0	150	178	3	0	181	1	4	0	5	336
Hourly Total	5	633	0	**638**	705	10	0	**715**	7	9	0	**16**	**1369**
1500 - 1515	1	179	0	180	162	0	0	162	0	2	0	2	344
1515 - 1530	0	196	0	196	167	1	0	168	0	1	0	1	365
1530 - 1545	2	253	2	257	190	3	0	193	2	4	0	6	456
1545 - 1600	0	255	0	255	194	1	0	195	2	1	0	3	453
Hourly Total	3	883	2	**888**	713	5	0	**718**	4	8	0	**12**	**1618**
1600 - 1615	2	210	0	212	186	2	0	188	3	0	0	3	403
1615 - 1630	0	207	0	207	200	0	0	200	1	1	0	2	409
1630 - 1645	1	235	0	236	195	1	0	196	1	5	0	6	438
1645 - 1700	0	218	0	218	204	0	0	204	1	1	0	2	424
Hourly Total	3	870	0	**873**	785	3	0	**788**	6	7	0	**13**	**1674**
1700 - 1715	1	257	0	258	225	3	0	228	4	1	0	5	491
1715 - 1730	1	225	0	226	239	3	0	242	4	1	0	5	473
1730 - 1745	0	244	0	244	271	1	0	272	0	0	0	0	516
1745 - 1800	1	213	0	214	287	0	0	287	2	1	0	3	504
Hourly Total	3	939	0	**942**	1022	7	0	**1029**	10	3	0	**13**	**1984**
Grand Total	14	3325	2	**3341**	3225	25	0	**3250**	27	27	0	**54**	**6645**
Approach %	0.42	99.52	0.06	-	99.23	0.77	0.00	-	50.00	50.00	0.00	-	
Intersection %	0.21	50.04	0.03	50.28	48.53	0.38	0.00	48.91	0.41	0.41	0.00	0.81	

Classified Turn Movement Count || Single Unit Trucks (4-7)

North Augusta, SC

Marr Traffic DATA COLLECTION
www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

Date
23 May 2023

Lat/Long
33.536979°, -81.988873°

Weather
Mostly Cloudy
69°F

0700 - 0900 (Weekday 2h Session) (05-23-2023)
Single Unit Trucks (4-7)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	0	0	0	0	1	0	0	1	0	0	0	0	1
0715 - 0730	0	0	0	0	7	0	0	7	1	0	0	1	8
0730 - 0745	0	5	0	5	5	0	0	5	0	0	0	0	10
0745 - 0800	0	3	0	3	3	0	0	3	0	0	0	0	6
Hourly Total	0	8	0	**8**	16	0	0	**16**	1	0	0	**1**	**25**
0800 - 0815	0	1	0	1	4	0	0	4	0	0	0	0	5
0815 - 0830	0	5	0	5	2	0	0	2	0	0	0	0	7
0830 - 0845	0	2	0	2	3	0	0	3	0	0	0	0	5
0845 - 0900	0	1	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	0	9	0	**9**	10	0	0	**10**	0	0	0	**0**	**19**
Grand Total	0	17	0	**17**	26	0	0	**26**	1	0	0	**1**	**44**
Approach %	0.00	100.00	0.00	-	100.00	0.00	0.00	-	100.00	0.00	0.00	-	
Intersection %	0.00	38.64	0.00	38.64	59.09	0.00	0.00	59.09	2.27	0.00	0.00	2.27	

1400 - 1800 (Weekday 4h Session) (05-23-2023)
Single Unit Trucks (4-7)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1400 - 1415	0	3	0	3	4	0	0	4	0	0	0	0	7
1415 - 1430	0	3	0	3	3	1	0	4	0	0	0	0	7
1430 - 1445	0	2	0	2	0	0	0	0	0	0	0	0	2
1445 - 1500	0	3	0	3	1	1	0	2	0	1	0	1	6
Hourly Total	0	11	0	**11**	8	2	0	**10**	0	1	0	**1**	**22**
1500 - 1515	0	0	0	0	3	0	0	3	1	0	0	1	4
1515 - 1530	1	3	0	4	3	0	0	3	1	0	1	2	9
1530 - 1545	0	3	0	3	2	0	0	2	0	0	0	0	5
1545 - 1600	0	6	0	6	1	0	0	1	0	0	0	0	7
Hourly Total	1	12	0	**13**	9	0	0	**9**	2	0	1	**3**	**25**
1600 - 1615	0	0	0	0	4	0	0	4	1	0	0	1	5
1615 - 1630	0	3	0	3	2	0	0	2	0	0	0	0	5
1630 - 1645	0	1	0	1	3	0	0	3	0	0	0	0	4
1645 - 1700	0	2	0	2	1	0	0	1	1	0	0	1	4
Hourly Total	0	6	0	**6**	10	0	0	**10**	2	0	0	**2**	**18**
1700 - 1715	0	2	0	2	1	0	0	1	0	0	0	0	3
1715 - 1730	0	4	0	4	3	0	0	3	0	0	0	0	7
1730 - 1745	0	3	0	3	2	0	0	2	0	0	0	0	5
1745 - 1800	0	2	0	2	3	1	0	4	0	0	0	0	6
Hourly Total	0	11	0	**11**	9	1	0	**10**	0	0	0	**0**	**21**
Grand Total	1	40	0	**41**	36	3	0	**39**	4	1	1	**6**	**86**
Approach %	2.44	97.56	0.00	-	92.31	7.69	0.00	-	66.67	16.67	16.67	-	
Intersection %	1.16	46.51	0.00	47.67	41.86	3.49	0.00	45.35	4.65	1.16	1.16	6.98	

Classified Turn Movement Count || Combination Trucks (8-13)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

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Mostly Cloudy
69°F

0700 - 0900 (Weekday 2h Session) (05-23-2023)

Combination Trucks (8-13)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	3	0	0	3	0	0	0	0	3
0730 - 0745	0	3	0	3	4	0	0	4	0	0	0	0	7
0745 - 0800	0	1	0	1	6	0	0	6	0	0	0	0	7
Hourly Total	0	4	0	**4**	13	0	0	**13**	0	0	0	**0**	**17**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	2	0	2	3	0	0	3	0	0	0	0	5
0830 - 0845	0	1	0	1	1	0	0	1	0	0	0	0	2
0845 - 0900	0	2	0	2	5	0	0	5	0	0	0	0	7
Hourly Total	0	5	0	**5**	9	0	0	**9**	0	0	0	**0**	**14**
Grand Total	0	9	0	**9**	22	0	0	**22**	0	0	0	**0**	**31**
Approach %	0.00	100.00	0.00	-	100.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	29.03	0.00	29.03	70.97	0.00	0.00	70.97	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-23-2023)

Combination Trucks (8-13)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1400 - 1415	0	1	0	1	5	0	0	5	0	0	0	0	6
1415 - 1430	0	4	0	4	1	0	0	1	0	0	0	0	5
1430 - 1445	0	2	0	2	5	0	0	5	0	0	0	0	7
1445 - 1500	0	1	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	0	8	0	**8**	12	0	0	**12**	0	0	0	**0**	**20**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	1	0	1	3	1	0	4	0	0	0	0	5
1530 - 1545	0	0	0	0	1	0	0	1	0	1	0	1	2
1545 - 1600	0	0	0	0	1	0	0	1	0	0	0	0	1
Hourly Total	0	1	0	**1**	5	1	0	**6**	0	1	0	**1**	**8**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	1	0	1	1	0	0	1	0	0	0	0	2
1630 - 1645	0	1	0	1	0	0	0	0	0	0	0	0	1
1645 - 1700	0	0	0	0	1	0	0	1	0	0	0	0	1
Hourly Total	0	2	0	**2**	2	0	0	**2**	0	0	0	**0**	**4**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	1	0	1	1	0	0	1	0	0	0	0	2
1730 - 1745	0	2	0	2	2	0	0	2	0	0	0	0	4
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	3	0	**3**	3	0	0	**3**	0	0	0	**0**	**6**
Grand Total	0	14	0	**14**	22	1	0	**23**	0	1	0	**1**	**38**
Approach %	0.00	100.00	0.00	-	95.65	4.35	0.00	-	0.00	100.00	0.00	-	
Intersection %	0.00	36.84	0.00	36.84	57.89	2.63	0.00	60.53	0.00	2.63	0.00	2.63	

Classified Turn Movement Count || Bikes

North Augusta, SC

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

Date
23 May 2023

Lat/Long
33.536979°, -81.988873°

Weather
Mostly Cloudy
69°F

0700 - 0900 (Weekday 2h Session) (05-23-2023)

Bikes

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-23-2023)

Bikes

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				Compassion Wy				
TIME	Left 1.1	Thru 1.2	U-Turn 1.3	App Total	Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pedestrian Count || All vehicles

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 1 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
Compassion Wy

Date
23 May 2023

Weather
Mostly Cloudy
69°F

Lat/Long
33.536979°, -81.988873°

0700 - 0900 (Weekday 2h Session) (05-23-2023)

Pedestrians

	Northbound			Southbound			Eastbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			Compassion Wy			
TIME	EB 1a	WB 1b	App Total	EB 1c	WB 1d	App Total	NB 1e	SB 1f	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-23-2023)

Pedestrians

	Northbound			Southbound			Eastbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			Compassion Wy			
TIME	EB 1a	WB 1b	App Total	EB 1c	WB 1d	App Total	NB 1e	SB 1f	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Start Date: 5/23/2023	SC-230 W Martintown Rd (South) Northbound			SC-230 W Martintown Rd (North) Southbound			Compassion Wy Eastbound			Westbound			
Time	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**Total**
15 Minute Totals													
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM - 01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM - 01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM - 01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM - 01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM - 02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM - 02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM - 02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM - 02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM - 03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM - 03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM - 03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM - 03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM - 04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM - 04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM - 04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM - 04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 AM - 05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM - 05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 AM - 05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM - 05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM - 06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 AM - 06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM - 06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM - 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM - 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM - 07:15 AM	1	151	0	0	190	0	0	0	0	0	0	0	342
07:15 AM - 07:30 AM	1	193	0	0	249	1	1	0	0	0	0	0	445
07:30 AM - 07:45 AM	1	236	0	0	264	1	2	0	0	0	0	0	505
07:45 AM - 08:00 AM	1	226	0	0	278	5	0	0	0	0	0	0	510
08:00 AM - 08:15 AM	0	215	0	0	205	1	1	0	0	0	0	0	422
08:15 AM - 08:30 AM	3	220	0	0	152	3	1	0	0	0	0	0	380
08:30 AM - 08:45 AM	0	171	0	0	156	5	1	0	2	0	0	0	335
08:45 AM - 09:00 AM	0	143	0	0	146	0	0	0	0	0	0	0	289
09:00 AM - 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM - 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM - 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM - 01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM - 01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM - 01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM - 01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM - 02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM - 02:15 PM	0	163	0	0	173	2	0	0	1	0	0	0	339
02:15 PM - 02:30 PM	1	154	0	0	189	4	1	0	2	0	0	0	351
02:30 PM - 02:45 PM	3	182	0	0	183	2	5	0	2	0	0	0	377
02:45 PM - 03:00 PM	1	153	0	0	180	4	1	0	5	0	0	0	344
03:00 PM - 03:15 PM	1	179	0	0	165	0	1	0	2	0	0	0	348
03:15 PM - 03:30 PM	1	200	0	0	173	2	1	0	1	0	0	0	379
03:30 PM - 03:45 PM	2	256	0	0	193	3	2	0	5	0	0	0	463
03:45 PM - 04:00 PM	0	261	0	0	196	1	2	0	1	0	0	0	461
04:00 PM - 04:15 PM	2	210	0	0	190	2	4	0	0	0	0	0	408
04:15 PM - 04:30 PM	0	211	0	0	203	0	1	0	1	0	0	0	416
04:30 PM - 04:45 PM	1	237	0	0	198	1	1	0	5	0	0	0	443
04:45 PM - 05:00 PM	0	220	0	0	206	0	2	0	1	0	0	0	429
05:00 PM - 05:15 PM	1	259	0	0	226	3	4	0	1	0	0	0	494
05:15 PM - 05:30 PM	1	230	0	0	243	3	4	0	1	0	0	0	482
05:30 PM - 05:45 PM	0	249	0	0	275	1	0	0	0	0	0	0	525
05:45 PM - 06:00 PM	1	215	0	0	290	1	2	0	1	0	0	0	510
06:00 PM - 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM - 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM - 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM - 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM - 07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM - 07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM - 07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM - 08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM - 08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM - 08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM - 08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM - 09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 PM - 09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 PM - 09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 PM - 09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 PM - 10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM - 10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM - 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM - 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM - 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM - 11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM - 11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM - 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM - 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Turning Movement Count

North Augusta, SC

Click here for Map

Marr Traffic DATA COLLECTION

www.marrtraffic.com

09 May 2023	
Period	0700 - 0900
Peak Hour	0715 - 0815

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
Time	Left 2.1	Thru 2.2		U-Turn 2.3	App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7		Right 2.8	U-Turn 2.9	App Total					App Total	Int Total
0715 - 0730	4	184	-	0	188	-	260	6	0	266	5	-	6	0	11	-	-	-	-	0	465
0730 - 0745	3	216	-	0	219	-	271	3	0	274	10	-	4	0	14	-	-	-	-	0	507
0745 - 0800	5	228	-	0	233	-	265	1	0	266	12	-	13	0	25	-	-	-	-	0	524
0800 - 0815	2	224	-	1	227	-	203	5	0	208	6	-	4	0	10	-	-	-	-	0	445
Total	14	852	0	1	867	0	999	15	0	1014	33	0	27	0	60	0	0	0	0	0	1941
Approach %	1.61	98.27	0.00	0.12	-	0.00	98.52	1.48	0.00	-	55.00	0.00	45.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.70	0.93	0.00	0.25	**0.93**	0.00	0.92	0.63	0.00	**0.93**	0.69	0.00	0.52	0.00	**0.60**	0.00	0.00	0.00	0.00	**0.00**	**0.93**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
Time	Left 2.1	Thru 2.2		U-Turn 2.3	App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7		Right 2.8	U-Turn 2.9	App Total					App Total	Int Total
0715 - 0730	4	183	-	0	187	-	258	4	0	262	4	-	6	0	10	-	-	-	-	0	459
0730 - 0745	2	215	-	0	217	-	264	3	0	267	9	-	4	0	13	-	-	-	-	0	497
0745 - 0800	4	224	-	0	228	-	261	1	0	262	12	-	13	0	25	-	-	-	-	0	515
0800 - 0815	2	219	-	1	222	-	197	5	0	202	6	-	4	0	10	-	-	-	-	0	434
Total	12	841	0	1	854	0	980	13	0	993	31	0	27	0	58	0	0	0	0	0	1905
Approach %	1.41	98.48	0.00	0.12	-	0.00	98.69	1.31	0.00	-	53.45	0.00	46.55	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.75	0.94	0.00	0.25	**0.94**	0.00	0.93	0.65	0.00	**0.93**	0.65	0.00	0.52	0.00	**0.58**	0.00	0.00	0.00	0.00	**0.00**	**0.92**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
Time	Left 2.1	Thru 2.2		U-Turn 2.3	App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7		Right 2.8	U-Turn 2.9	App Total					App Total	Int Total
0715 - 0730	0	1	-	0	1	-	1	2	0	3	1	-	0	0	1	-	-	-	-	0	5
0730 - 0745	1	1	-	0	2	-	5	0	0	5	1	-	0	0	1	-	-	-	-	0	8
0745 - 0800	0	2	-	0	2	-	2	0	0	2	0	-	0	0	0	-	-	-	-	0	4
0800 - 0815	0	3	-	0	3	-	5	0	0	5	0	-	0	0	0	-	-	-	-	0	8
Total	1	7	0	0	8	0	13	2	0	15	2	0	0	0	2	0	0	0	0	0	25
Approach %	12.50	87.50	0.00	0.00	-	0.00	86.67	13.33	0.00	-	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.25	0.58	0.00	0.00	**0.67**	0.00	0.65	0.25	0.00	**0.75**	0.50	0.00	0.00	0.00	**0.50**	0.00	0.00	0.00	0.00	**0.00**	**0.78**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
Time	Left 2.1	Thru 2.2		U-Turn 2.3	App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7		Right 2.8	U-Turn 2.9	App Total					App Total	Int Total
0715 - 0730	0	0	-	0	0	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	1
0730 - 0745	0	0	-	0	0	-	2	0	0	2	0	-	0	0	0	-	-	-	-	0	2
0745 - 0800	1	2	-	0	3	-	2	0	0	2	0	-	0	0	0	-	-	-	-	0	5
0800 - 0815	0	2	-	0	2	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	3
Total	1	4	0	0	5	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	11
Approach %	20.00	80.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.25	0.50	0.00	0.00	**0.42**	0.00	0.75	0.00	0.00	**0.75**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.55**

Bikes

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
Time	Left 2.1	Thru 2.2		U-Turn 2.3	App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7		Right 2.8	U-Turn 2.9	App Total					App Total	Int Total
0715 - 0730	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0730 - 0745	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0745 - 0800	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
0800 - 0815	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Peak Hour Turning Movement Count

North Augusta, SC

Click here for Map

Marr Traffic DATA COLLECTION

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09 May 2023	
Period	1400 - 1800
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	2.1	2.2		2.3	Total		2.4	2.5	2.6	Total	2.7		2.8	2.9	Total					Total	Total
1700 - 1715	6	247	-	0	253	-	240	4	0	244	4	-	5	0	9	-	-	-	-	0	506
1715 - 1730	7	277	-	0	284	-	267	8	0	275	3	-	7	0	10	-	-	-	-	0	569
1730 - 1745	3	222	-	0	225	-	268	8	0	276	9	-	3	0	12	-	-	-	-	0	513
1745 - 1800	7	244	-	0	251	-	226	2	0	228	5	-	4	0	9	-	-	-	-	0	488
Total	23	990	0	0	1013	0	1001	22	0	1023	21	0	19	0	40	0	0	0	0	0	2076
Approach %	2.27	97.73	0.00	0.00	-	0.00	97.85	2.15	0.00	-	52.50	0.00	47.50	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.82	0.89	0.00	0.00	**0.89**	0.00	0.93	0.69	0.00	**0.93**	0.58	0.00	0.68	0.00	**0.83**	0.00	0.00	0.00	0.00	**0.00**	**0.91**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	2.1	2.2		2.3	Total		2.4	2.5	2.6	Total	2.7		2.8	2.9	Total					Total	Total
1700 - 1715	6	245	-	0	251	-	238	4	0	242	4	-	5	0	9	-	-	-	-	0	502
1715 - 1730	7	276	-	0	283	-	267	8	0	275	3	-	7	0	10	-	-	-	-	0	568
1730 - 1745	3	221	-	0	224	-	268	8	0	276	9	-	3	0	12	-	-	-	-	0	512
1745 - 1800	7	242	-	0	249	-	225	2	0	227	5	-	4	0	9	-	-	-	-	0	485
Total	23	984	0	0	1007	0	998	22	0	1020	21	0	19	0	40	0	0	0	0	0	2067
Approach %	2.28	97.72	0.00	0.00	-	0.00	97.84	2.16	0.00	-	52.50	0.00	47.50	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.82	0.89	0.00	0.00	**0.89**	0.00	0.93	0.69	0.00	**0.92**	0.58	0.00	0.68	0.00	**0.83**	0.00	0.00	0.00	0.00	**0.00**	**0.91**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	2.1	2.2		2.3	Total		2.4	2.5	2.6	Total	2.7		2.8	2.9	Total					Total	Total
1700 - 1715	0	1	-	0	1	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	2
1715 - 1730	0	1	-	0	1	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	1
1730 - 1745	0	1	-	0	1	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	1
1745 - 1800	0	1	-	0	1	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	1
Total	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	1.00	0.00	0.00	**1.00**	0.00	0.25	0.00	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.63**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	2.1	2.2		2.3	Total		2.4	2.5	2.6	Total	2.7		2.8	2.9	Total					Total	Total
1700 - 1715	0	1	-	0	1	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	2
1715 - 1730	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1730 - 1745	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1745 - 1800	0	1	-	0	1	-	1	0	0	1	0	-	0	0	0	-	-	-	-	0	2
Total	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.50	0.00	0.00	**0.50**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.50**

Bikes

	Northbound					Southbound					Eastbound										
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)					SR-2024 Old Plantation Dr										
	Left	Thru		U-Turn	App		Thru	Right	U-Turn	App	Left		Right	U-Turn	App					App	Int
Time	2.1	2.2		2.3	Total		2.4	2.5	2.6	Total	2.7		2.8	2.9	Total					Total	Total
1700 - 1715	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1715 - 1730	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1730 - 1745	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
1745 - 1800	0	0	-	0	0	-	0	0	0	0	0	-	0	0	0	-	-	-	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Classified Turn Movement Count || All vehicles

North Augusta, SC

Marr Traffic DATA COLLECTION

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Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Lat/Long
33.535467°, -81.987902°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)
All vehicles

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
0700 - 0715	0	151	0	151	183	0	0	183	7	4	0	11	345
0715 - 0730	4	184	0	188	260	6	0	266	5	6	0	11	465
0730 - 0745	3	216	0	219	271	3	0	274	10	4	0	14	507
0745 - 0800	5	228	0	233	265	1	0	266	12	13	0	25	524
Hourly Total	12	779	0	**791**	979	10	0	**989**	34	27	0	**61**	**1841**
0800 - 0815	2	224	1	227	203	5	0	208	6	4	0	10	445
0815 - 0830	1	216	0	217	142	6	0	148	3	8	0	11	376
0830 - 0845	1	154	0	155	174	2	0	176	5	6	0	11	342
0845 - 0900	3	128	0	131	173	3	0	176	3	8	0	11	318
Hourly Total	7	722	1	**730**	692	16	0	**708**	17	26	0	**43**	**1481**
Grand Total	19	1501	1	**1521**	1671	26	0	**1697**	51	53	0	**104**	**3322**
Approach %	1.25	98.69	0.07	-	98.47	1.53	0.00	-	49.04	50.96	0.00	-	
Intersection %	0.57	45.18	0.03	45.79	50.30	0.78	0.00	51.08	1.54	1.60	0.00	3.13	
PHF	0.70	0.93	0.25	**0.93**	0.92	0.63	0.00	**0.93**	0.69	0.52	0.00	**0.60**	**0.93**

1400 - 1800 (Weekday 4h Session) (05-09-2023)
All vehicles

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
1400 - 1415	4	164	1	169	176	3	0	179	5	4	0	9	357
1415 - 1430	2	171	0	173	184	0	0	184	5	2	0	7	364
1430 - 1445	10	171	0	181	187	4	0	191	1	2	0	3	375
1445 - 1500	6	196	0	202	145	4	0	149	6	3	0	9	360
Hourly Total	22	702	1	**725**	692	11	0	**703**	17	11	0	**28**	**1456**
1500 - 1515	6	183	0	189	174	3	0	177	3	5	0	8	374
1515 - 1530	2	196	0	198	177	3	0	180	5	3	0	8	386
1530 - 1545	10	220	1	231	191	7	0	198	1	9	0	10	439
1545 - 1600	12	251	1	264	192	5	0	197	4	6	0	10	471
Hourly Total	30	850	2	**882**	734	18	0	**752**	13	23	0	**36**	**1670**
1600 - 1615	4	225	0	229	184	1	0	185	3	2	0	5	419
1615 - 1630	8	225	0	233	216	4	0	220	2	4	0	6	459
1630 - 1645	9	218	0	227	211	6	0	217	6	3	0	9	453
1645 - 1700	4	232	0	236	227	5	0	232	4	3	0	7	475
Hourly Total	25	900	0	**925**	838	16	0	**854**	15	12	0	**27**	**1806**
1700 - 1715	6	247	0	253	240	4	0	244	4	5	0	9	506
1715 - 1730	7	277	0	284	267	8	0	275	3	7	0	10	569
1730 - 1745	3	222	0	225	268	8	0	276	9	3	0	12	513
1745 - 1800	7	244	0	251	226	2	0	228	5	4	0	9	488
Hourly Total	23	990	0	**1013**	1001	22	0	**1023**	21	19	0	**40**	**2076**
Grand Total	100	3442	3	**3545**	3265	67	0	**3332**	66	65	0	**131**	**7008**
Approach %	2.82	97.09	0.08	-	97.99	2.01	0.00	-	50.38	49.62	0.00	-	
Intersection %	1.43	49.12	0.04	50.59	46.59	0.96	0.00	47.55	0.94	0.93	0.00	1.87	
PHF	0.82	0.89	0.00	**0.89**	0.93	0.69	0.00	**0.93**	0.58	0.68	0.00	**0.83**	**0.91**

Classified Turn Movement Count || Passenger Vehicles (1-3)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Weather
Fair
78°F

Lat/Long
33.535467°, -81.987902°

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
0700 - 0715	0	150	0	150	179	0	0	179	6	4	0	10	339
0715 - 0730	4	183	0	187	258	4	0	262	4	6	0	10	459
0730 - 0745	2	215	0	217	264	3	0	267	9	4	0	13	497
0745 - 0800	4	224	0	228	261	1	0	262	12	13	0	25	515
Hourly Total	10	772	0	**782**	962	8	0	**970**	31	27	0	**58**	**1810**
0800 - 0815	2	219	1	222	197	5	0	202	6	4	0	10	434
0815 - 0830	1	210	0	211	137	6	0	143	3	8	0	11	365
0830 - 0845	1	151	0	152	169	2	0	171	5	5	0	10	333
0845 - 0900	3	127	0	130	165	3	0	168	3	8	0	11	309
Hourly Total	7	707	1	**715**	668	16	0	**684**	17	25	0	**42**	**1441**
Grand Total	17	1479	1	**1497**	1630	24	0	**1654**	48	52	0	**100**	**3251**
Approach %	1.14	98.80	0.07	-	98.55	1.45	0.00	-	48.00	52.00	0.00	-	
Intersection %	0.52	45.49	0.03	46.05	50.14	0.74	0.00	50.88	1.48	1.60	0.00	3.08	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
1400 - 1415	3	160	1	164	170	3	0	173	5	4	0	9	346
1415 - 1430	2	168	0	170	180	0	0	180	4	1	0	5	355
1430 - 1445	9	168	0	177	185	3	0	188	1	2	0	3	368
1445 - 1500	6	194	0	200	143	4	0	147	6	3	0	9	356
Hourly Total	20	690	1	**711**	678	10	0	**688**	16	10	0	**26**	**1425**
1500 - 1515	6	177	0	183	167	3	0	170	3	4	0	7	360
1515 - 1530	2	194	0	196	174	3	0	177	4	3	0	7	380
1530 - 1545	10	215	1	226	188	7	0	195	1	6	0	7	428
1545 - 1600	12	248	1	261	190	4	0	194	3	6	0	9	464
Hourly Total	30	834	2	**866**	719	17	0	**736**	11	19	0	**30**	**1632**
1600 - 1615	4	223	0	227	183	1	0	184	3	2	0	5	416
1615 - 1630	8	220	0	228	213	4	0	217	2	3	0	5	450
1630 - 1645	9	215	0	224	208	5	0	213	5	3	0	8	445
1645 - 1700	4	227	0	231	225	5	0	230	4	3	0	7	468
Hourly Total	25	885	0	**910**	829	15	0	**844**	14	11	0	**25**	**1779**
1700 - 1715	6	245	0	251	238	4	0	242	4	5	0	9	502
1715 - 1730	7	276	0	283	267	8	0	275	3	7	0	10	568
1730 - 1745	3	221	0	224	268	8	0	276	9	3	0	12	512
1745 - 1800	7	242	0	249	225	2	0	227	5	4	0	9	485
Hourly Total	23	984	0	**1007**	998	22	0	**1020**	21	19	0	**40**	**2067**
Grand Total	98	3393	3	**3494**	3224	64	0	**3288**	62	59	0	**121**	**6903**
Approach %	2.80	97.11	0.09	-	98.05	1.95	0.00	-	51.24	48.76	0.00	-	
Intersection %	1.42	49.15	0.04	50.62	46.70	0.93	0.00	47.63	0.90	0.85	0.00	1.75	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Weather
Fair
78°F

Lat/Long
33.535467°, -81.987902°

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Single Unit Trucks (4-7)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
0700 - 0715	0	0	0	0	2	0	0	2	1	0	0	1	3
0715 - 0730	0	1	0	1	1	2	0	3	1	0	0	1	5
0730 - 0745	1	1	0	2	5	0	0	5	1	0	0	1	8
0745 - 0800	0	2	0	2	2	0	0	2	0	0	0	0	4
Hourly Total	1	4	0	**5**	10	2	0	**12**	3	0	0	**3**	**20**
0800 - 0815	0	3	0	3	5	0	0	5	0	0	0	0	8
0815 - 0830	0	4	0	4	3	0	0	3	0	0	0	0	7
0830 - 0845	0	2	0	2	2	0	0	2	0	1	0	1	5
0845 - 0900	0	1	0	1	6	0	0	6	0	0	0	0	7
Hourly Total	0	10	0	**10**	16	0	0	**16**	0	1	0	**1**	**27**
Grand Total	1	14	0	**15**	26	2	0	**28**	3	1	0	**4**	**47**
Approach %	6.67	93.33	0.00	-	92.86	7.14	0.00	-	75.00	25.00	0.00	-	
Intersection %	2.13	29.79	0.00	31.91	55.32	4.26	0.00	59.57	6.38	2.13	0.00	8.51	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Single Unit Trucks (4-7)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
1400 - 1415	0	2	0	2	3	0	0	3	0	0	0	0	5
1415 - 1430	0	3	0	3	3	0	0	3	1	1	0	2	8
1430 - 1445	1	2	0	3	1	1	0	2	0	0	0	0	5
1445 - 1500	0	1	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	1	8	0	**9**	8	1	0	**9**	1	1	0	**2**	**20**
1500 - 1515	0	4	0	4	5	0	0	5	0	1	0	1	10
1515 - 1530	0	1	0	1	2	0	0	2	1	0	0	1	4
1530 - 1545	0	4	0	4	1	0	0	1	0	2	0	2	7
1545 - 1600	0	3	0	3	2	1	0	3	1	0	0	1	7
Hourly Total	0	12	0	**12**	10	1	0	**11**	2	3	0	**5**	**28**
1600 - 1615	0	1	0	1	0	0	0	0	0	0	0	0	1
1615 - 1630	0	4	0	4	0	0	0	0	0	1	0	1	5
1630 - 1645	0	2	0	2	0	1	0	1	1	0	0	1	4
1645 - 1700	0	2	0	2	2	0	0	2	0	0	0	0	4
Hourly Total	0	9	0	**9**	2	1	0	**3**	1	1	0	**2**	**14**
1700 - 1715	0	1	0	1	1	0	0	1	0	0	0	0	2
1715 - 1730	0	1	0	1	0	0	0	0	0	0	0	0	1
1730 - 1745	0	1	0	1	0	0	0	0	0	0	0	0	1
1745 - 1800	0	1	0	1	0	0	0	0	0	0	0	0	1
Hourly Total	0	4	0	**4**	1	0	0	**1**	0	0	0	**0**	**5**
Grand Total	1	33	0	**34**	21	3	0	**24**	4	5	0	**9**	**67**
Approach %	2.94	97.06	0.00	-	87.50	12.50	0.00	-	44.44	55.56	0.00	-	
Intersection %	1.49	49.25	0.00	50.75	31.34	4.48	0.00	35.82	5.97	7.46	0.00	13.43	

Classified Turn Movement Count || Combination Trucks (8-13)

North Augusta, SC

Marr Traffic DATA COLLECTION
www.marrtraffic.com

Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Weather
Fair
78°F

Lat/Long
33.535467°, -81.987902°

0700 - 0900 (Weekday 2h Session) (05-09-2023)
Combination Trucks (8-13)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
0700 - 0715	0	1	0	1	2	0	0	2	0	0	0	0	3
0715 - 0730	0	0	0	0	1	0	0	1	0	0	0	0	1
0730 - 0745	0	0	0	0	2	0	0	2	0	0	0	0	2
0745 - 0800	1	2	0	3	2	0	0	2	0	0	0	0	5
Hourly Total	1	3	0	**4**	7	0	0	**7**	0	0	0	**0**	**11**
0800 - 0815	0	2	0	2	1	0	0	1	0	0	0	0	3
0815 - 0830	0	2	0	2	2	0	0	2	0	0	0	0	4
0830 - 0845	0	1	0	1	3	0	0	3	0	0	0	0	4
0845 - 0900	0	0	0	0	2	0	0	2	0	0	0	0	2
Hourly Total	0	5	0	**5**	8	0	0	**8**	0	0	0	**0**	**13**
Grand Total	1	8	0	**9**	15	0	0	**15**	0	0	0	**0**	**24**
Approach %	11.11	88.89	0.00	-	100.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	4.17	33.33	0.00	37.50	62.50	0.00	0.00	62.50	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)
Combination Trucks (8-13)

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
1400 - 1415	1	2	0	3	3	0	0	3	0	0	0	0	6
1415 - 1430	0	0	0	0	1	0	0	1	0	0	0	0	1
1430 - 1445	0	1	0	1	1	0	0	1	0	0	0	0	2
1445 - 1500	0	1	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	1	4	0	**5**	6	0	0	**6**	0	0	0	**0**	**11**
1500 - 1515	0	2	0	2	2	0	0	2	0	0	0	0	4
1515 - 1530	0	1	0	1	1	0	0	1	0	0	0	0	2
1530 - 1545	0	1	0	1	2	0	0	2	0	1	0	1	4
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	4	0	**4**	5	0	0	**5**	0	1	0	**1**	**10**
1600 - 1615	0	1	0	1	1	0	0	1	0	0	0	0	2
1615 - 1630	0	1	0	1	3	0	0	3	0	0	0	0	4
1630 - 1645	0	1	0	1	3	0	0	3	0	0	0	0	4
1645 - 1700	0	3	0	3	0	0	0	0	0	0	0	0	3
Hourly Total	0	6	0	**6**	7	0	0	**7**	0	0	0	**0**	**13**
1700 - 1715	0	1	0	1	1	0	0	1	0	0	0	0	2
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	1	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	0	2	0	**2**	2	0	0	**2**	0	0	0	**0**	**4**
Grand Total	1	16	0	**17**	20	0	0	**20**	0	1	0	**1**	**38**
Approach %	5.88	94.12	0.00	-	100.00	0.00	0.00	-	0.00	100.00	0.00	-	
Intersection %	2.63	42.11	0.00	44.74	52.63	0.00	0.00	52.63	0.00	2.63	0.00	2.63	

Classified Turn Movement Count || Bikes

North Augusta, SC

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Lat/Long
33.535467°, -81.987902°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Bikes

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Bikes

	Northbound				Southbound				Eastbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SR-2024 Old Plantation Dr				
TIME	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pedestrian Count || All vehicles

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 2 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)
SR-2024 Old Plantation Dr

Date
09 May 2023

Weather
Fair
78°F

Lat/Long
33.535467°, -81.987902°

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Pedestrians

	Northbound			Southbound			Eastbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			SR-2024 Old Plantation Dr			
TIME	EB 2a	WB 2b	App Total	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Pedestrians

	Northbound			Southbound			Eastbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			SR-2024 Old Plantation Dr			
TIME	EB 2a	WB 2b	App Total	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Start Date: 5/9/2023	SC-230 W Martintown Rd (South) Northbound			SC-230 W Martintown Rd (North) Southbound			SR-2024 Old Plantation Dr Eastbound			Westbound			
Time	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**Total**
15 Minute Totals													
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM - 01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM - 01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM - 01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM - 01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM - 02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM - 02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM - 02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM - 02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM - 03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM - 03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM - 03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM - 03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM - 04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM - 04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM - 04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM - 04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 AM - 05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM - 05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 AM - 05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM - 05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM - 06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 AM - 06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM - 06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM - 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM - 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM - 07:15 AM	0	151	0	0	183	0	7	0	4	0	0	0	345
07:15 AM - 07:30 AM	4	184	0	0	260	6	5	0	6	0	0	0	465
07:30 AM - 07:45 AM	3	216	0	0	271	3	10	0	4	0	0	0	507
07:45 AM - 08:00 AM	5	228	0	0	265	1	12	0	13	0	0	0	524
08:00 AM - 08:15 AM	2	224	0	0	203	5	6	0	4	0	0	0	445
08:15 AM - 08:30 AM	1	216	0	0	142	6	3	0	8	0	0	0	376
08:30 AM - 08:45 AM	1	154	0	0	174	2	5	0	6	0	0	0	342
08:45 AM - 09:00 AM	3	128	0	0	173	3	3	0	8	0	0	0	318
09:00 AM - 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM - 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM - 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM - 01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM - 01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM - 01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM - 01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM - 02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM - 02:15 PM	4	164	0	0	176	3	5	0	4	0	0	0	357
02:15 PM - 02:30 PM	2	171	0	0	184	0	5	0	2	0	0	0	364
02:30 PM - 02:45 PM	10	171	0	0	187	4	1	0	2	0	0	0	375
02:45 PM - 03:00 PM	6	196	0	0	145	4	6	0	3	0	0	0	360
03:00 PM - 03:15 PM	6	183	0	0	174	3	3	0	5	0	0	0	374
03:15 PM - 03:30 PM	2	196	0	0	177	3	5	0	3	0	0	0	386
03:30 PM - 03:45 PM	10	220	0	0	191	7	1	0	9	0	0	0	439
03:45 PM - 04:00 PM	12	251	0	0	192	5	4	0	6	0	0	0	471
04:00 PM - 04:15 PM	4	225	0	0	184	1	3	0	2	0	0	0	419
04:15 PM - 04:30 PM	8	225	0	0	216	4	2	0	4	0	0	0	459
04:30 PM - 04:45 PM	9	218	0	0	211	6	6	0	3	0	0	0	453
04:45 PM - 05:00 PM	4	232	0	0	227	5	4	0	3	0	0	0	475
05:00 PM - 05:15 PM	6	247	0	0	240	4	4	0	5	0	0	0	506
05:15 PM - 05:30 PM	7	277	0	0	267	8	3	0	7	0	0	0	569
05:30 PM - 05:45 PM	3	222	0	0	268	8	9	0	3	0	0	0	513
05:45 PM - 06:00 PM	7	244	0	0	226	2	5	0	4	0	0	0	488
06:00 PM - 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM - 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM - 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM - 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM - 07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM - 07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM - 07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM - 08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM - 08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM - 08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM - 08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM - 09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 PM - 09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 PM - 09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 PM - 09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 PM - 10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM - 10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM - 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM - 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM - 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM - 11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM - 11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM - 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM - 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Turning Movement Count

North Augusta, SC

Click here for Map

Marr Traffic DATA COLLECTION

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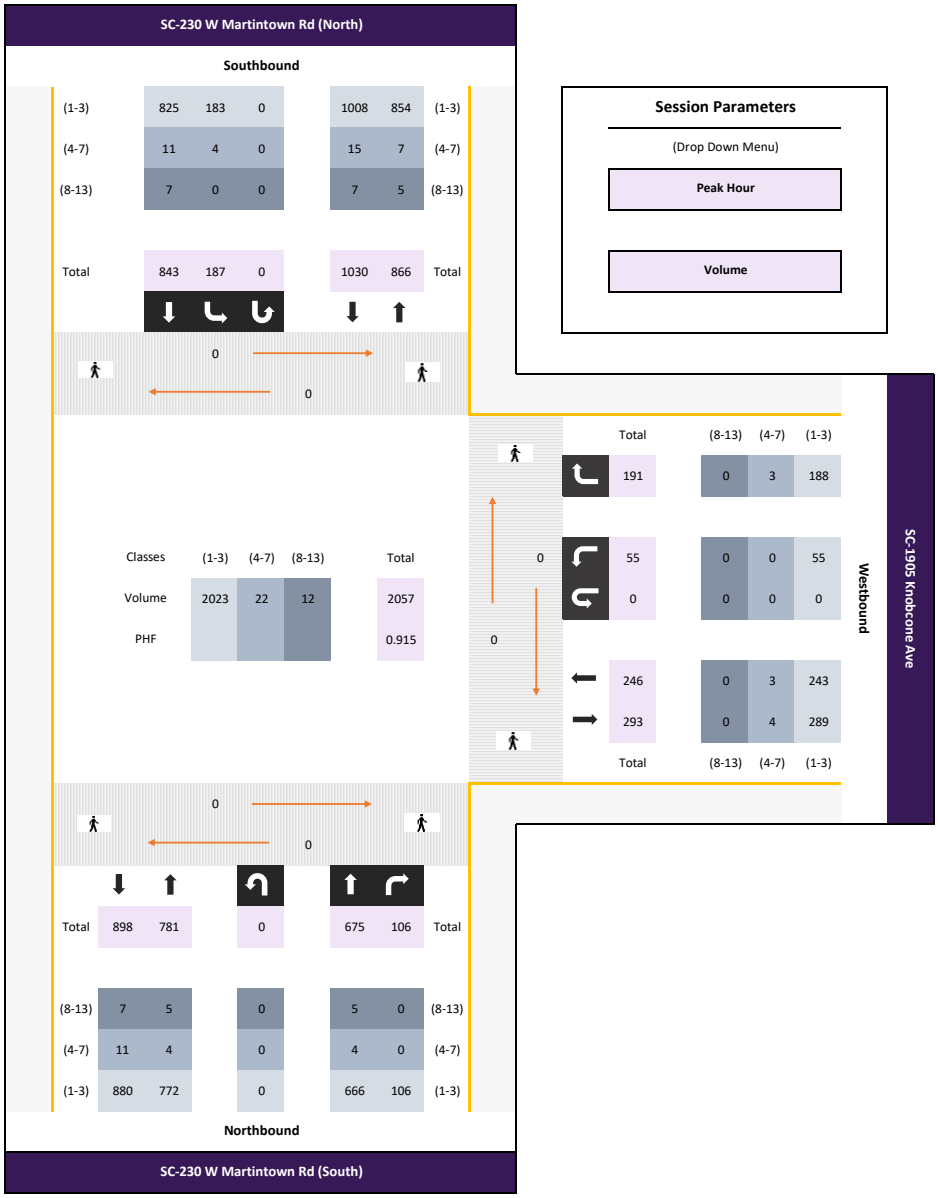
09 May 2023	
Period	0700 - 0900
Peak Hour	0715 - 0815

* the Peak Hour Diagram does not include Bikes



Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
0715 - 0730	-	162	12	0	174	28	235	-	0	263	-	-	-	-	0	4	-	28	0	32	469
0730 - 0745	-	183	26	0	209	47	228	-	0	275	-	-	-	-	0	7	-	36	0	43	527
0745 - 0800	-	170	34	0	204	61	219	-	0	280	-	-	-	-	0	15	-	63	0	78	562
0800 - 0815	-	160	34	0	194	51	161	-	0	212	-	-	-	-	0	29	-	64	0	93	499
Total	0	675	106	0	781	187	843	0	0	1030	0	0	0	0	0	55	0	191	0	246	2057
Approach %	0.00	86.43	13.57	0.00	-	18.16	81.84	0.00	0.00	-	0.00	0.00	0.00	0.00	-	22.36	0.00	77.64	0.00	-	
PHF	0.00	0.92	0.78	0.00	**0.93**	0.77	0.90	0.00	0.00	**0.92**	0.00	0.00	0.00	0.00	**0.00**	0.47	0.00	0.75	0.00	**0.66**	**0.92**

Passenger Vehicles (1-3)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
0715 - 0730	-	160	12	0	172	28	233	-	0	261	-	-	-	-	0	4	-	28	0	32	465
0730 - 0745	-	182	26	0	208	45	223	-	0	268	-	-	-	-	0	7	-	35	0	42	518
0745 - 0800	-	166	34	0	200	61	215	-	0	276	-	-	-	-	0	15	-	63	0	78	554
0800 - 0815	-	158	34	0	192	49	154	-	0	203	-	-	-	-	0	29	-	62	0	91	486
Total	0	666	106	0	772	183	825	0	0	1008	0	0	0	0	0	55	0	188	0	243	2023
Approach %	0.00	86.27	13.73	0.00	-	18.15	81.85	0.00	0.00	-	0.00	0.00	0.00	0.00	-	22.63	0.00	77.37	0.00	-	
PHF	0.00	0.91	0.78	0.00	**0.93**	0.75	0.89	0.00	0.00	**0.91**	0.00	0.00	0.00	0.00	**0.00**	0.47	0.00	0.75	0.00	**0.67**	**0.91**

Single Unit Trucks (4-7)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
0715 - 0730	-	2	0	0	2	0	1	-	0	1	-	-	-	-	0	0	-	0	0	0	3
0730 - 0745	-	1	0	0	1	2	3	-	0	5	-	-	-	-	0	0	-	1	0	1	7
0745 - 0800	-	1	0	0	1	0	2	-	0	2	-	-	-	-	0	0	-	0	0	0	3
0800 - 0815	-	0	0	0	0	2	5	-	0	7	-	-	-	-	0	0	-	2	0	2	9
Total	0	4	0	0	4	4	11	0	0	15	0	0	0	0	0	0	0	3	0	3	22
Approach %	0.00	100.00	0.00	0.00	-	26.67	73.33	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	
PHF	0.00	0.50	0.00	0.00	**0.50**	0.50	0.55	0.00	0.00	**0.54**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.38	0.00	**0.38**	**0.61**

Combination Trucks (8-13)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
0715 - 0730	-	0	0	0	0	0	1	-	0	1	-	-	-	-	0	0	-	0	0	0	1
0730 - 0745	-	0	0	0	0	0	2	-	0	2	-	-	-	-	0	0	-	0	0	0	2
0745 - 0800	-	3	0	0	3	0	2	-	0	2	-	-	-	-	0	0	-	0	0	0	5
0800 - 0815	-	2	0	0	2	0	2	-	0	2	-	-	-	-	0	0	-	0	0	0	4
Total	0	5	0	0	5	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	12
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.42	0.00	0.00	**0.42**	0.00	0.88	0.00	0.00	**0.88**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.60**

Bikes

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
0715 - 0730	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
0730 - 0745	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
0745 - 0800	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
0800 - 0815	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Click here for Map

Peak Hour Turning Movement Count

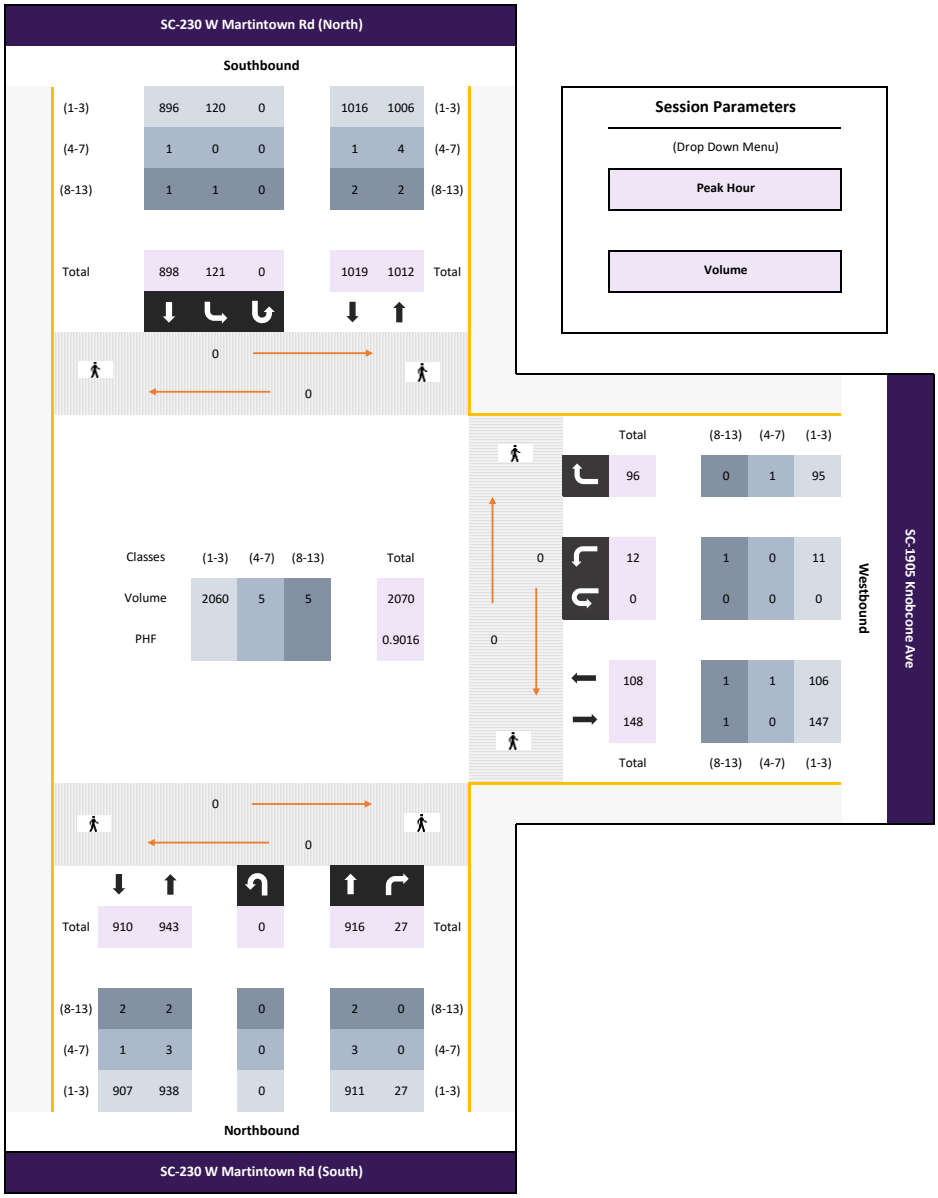
North Augusta, SC

Marr Traffic DATA COLLECTION

www.marrtraffic.com

09 May 2023	
Period	1400 - 1800
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes



Session Parameters

(Drop Down Menu)

Peak Hour

Volume

All vehicles

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
1700 - 1715	-	229	6	0	235	27	214	-	0	241	-	-	-	-	0	5	-	23	0	28	504
1715 - 1730	-	256	12	0	268	37	239	-	0	276	-	-	-	-	0	3	-	27	0	30	574
1730 - 1745	-	206	2	0	208	21	249	-	0	270	-	-	-	-	0	1	-	19	0	20	498
1745 - 1800	-	225	7	0	232	36	196	-	0	232	-	-	-	-	0	3	-	27	0	30	494
Total	0	916	27	0	943	121	898	0	0	1019	0	0	0	0	0	12	0	96	0	108	2070
Approach %	0.00	97.14	2.86	0.00	-	11.87	88.13	0.00	0.00	-	0.00	0.00	0.00	0.00	-	11.11	0.00	88.89	0.00	-	
PHF	0.00	0.89	0.56	0.00	**0.88**	0.82	0.90	0.00	0.00	**0.92**	0.00	0.00	0.00	0.00	**0.00**	0.60	0.00	0.89	0.00	**0.90**	**0.90**

Passenger Vehicles (1-3)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
1700 - 1715	-	228	6	0	234	27	212	-	0	239	-	-	-	-	0	4	-	22	0	26	499
1715 - 1730	-	255	12	0	267	37	239	-	0	276	-	-	-	-	0	3	-	27	0	30	573
1730 - 1745	-	205	2	0	207	21	249	-	0	270	-	-	-	-	0	1	-	19	0	20	497
1745 - 1800	-	223	7	0	230	35	196	-	0	231	-	-	-	-	0	3	-	27	0	30	491
Total	0	911	27	0	938	120	896	0	0	1016	0	0	0	0	0	11	0	95	0	106	2060
Approach %	0.00	97.12	2.88	0.00	-	11.81	88.19	0.00	0.00	-	0.00	0.00	0.00	0.00	-	10.38	0.00	89.62	0.00	-	
PHF	0.00	0.89	0.56	0.00	**0.88**	0.81	0.90	0.00	0.00	**0.92**	0.00	0.00	0.00	0.00	**0.00**	0.69	0.00	0.88	0.00	**0.88**	**0.90**

Single Unit Trucks (4-7)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
1700 - 1715	-	0	0	0	0	0	1	-	0	1	-	-	-	-	0	0	-	1	0	1	2
1715 - 1730	-	1	0	0	1	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	1
1730 - 1745	-	1	0	0	1	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	1
1745 - 1800	-	1	0	0	1	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	1
Total	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	5
Approach %	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	
PHF	0.00	0.75	0.00	0.00	**0.75**	0.00	0.25	0.00	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.25	0.00	**0.25**	**0.63**

Combination Trucks (8-13)

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
1700 - 1715	-	1	0	0	1	0	1	-	0	1	-	-	-	-	0	1	-	0	0	1	3
1715 - 1730	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
1730 - 1745	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
1745 - 1800	-	1	0	0	1	1	0	-	0	1	-	-	-	-	0	0	-	0	0	0	2
Total	0	2	0	0	2	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	5
Approach %	0.00	100.00	0.00	0.00	-	50.00	50.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	
PHF	0.00	0.50	0.00	0.00	**0.50**	0.25	0.25	0.00	0.00	**0.50**	0.00	0.00	0.00	0.00	**0.00**	0.25	0.00	0.00	0.00	**0.25**	**0.42**

Bikes

	Northbound					Southbound										Westbound					
	SC-230 W Martintown Rd (South)					SC-230 W Martintown Rd (North)										SC-1905 Knobcone Ave					
Time		Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5		U-Turn 3.6	App Total					App Total	Left 3.7		Right 3.8	U-Turn 3.9	App Total	Int Total
1700 - 1715	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
1715 - 1730	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
1730 - 1745	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
1745 - 1800	-	0	0	0	0	0	0	-	0	0	-	-	-	-	0	0	-	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Classified Turn Movement Count || All vehicles

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 3 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)

SC-1905 Knobcone Ave

Date
09 May 2023

Lat/Long
33.534197°, -81.987036°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)
All vehicles

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0700 - 0715	130	7	0	137	17	173	0	190	3	20	0	23	350
0715 - 0730	162	12	0	174	28	235	0	263	4	28	0	32	469
0730 - 0745	183	26	0	209	47	228	0	275	7	36	0	43	527
0745 - 0800	170	34	0	204	61	219	0	280	15	63	0	78	562
Hourly Total	645	79	0	**724**	153	855	0	**1008**	29	147	0	**176**	**1908**
0800 - 0815	160	34	0	194	51	161	0	212	29	64	0	93	499
0815 - 0830	152	9	0	161	21	130	0	151	19	66	0	85	397
0830 - 0845	137	3	0	140	12	165	0	177	5	20	0	25	342
0845 - 0900	113	2	0	115	20	162	0	182	1	18	0	19	316
Hourly Total	562	48	0	**610**	104	618	0	**722**	54	168	0	**222**	**1554**
Grand Total	1207	127	0	**1334**	257	1473	0	**1730**	83	315	0	**398**	**3462**
Approach %	90.48	9.52	0.00	-	14.86	85.14	0.00	-	20.85	79.15	0.00	-	
Intersection %	34.86	3.67	0.00	38.53	7.42	42.55	0.00	49.97	2.40	9.10	0.00	11.50	
PHF	0.92	0.78	0.00	**0.93**	0.77	0.90	0.00	**0.92**	0.47	0.75	0.00	**0.66**	**0.92**

1400 - 1800 (Weekday 4h Session) (05-09-2023)
All vehicles

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
1400 - 1415	145	2	0	147	17	157	0	174	4	22	0	26	347
1415 - 1430	156	4	0	160	30	158	0	188	2	19	0	21	369
1430 - 1445	158	7	0	165	13	179	0	192	3	21	0	24	381
1445 - 1500	176	9	0	185	15	136	0	151	3	27	0	30	366
Hourly Total	635	22	0	**657**	75	630	0	**705**	12	89	0	**101**	**1463**
1500 - 1515	171	16	0	187	26	149	0	175	4	18	0	22	384
1515 - 1530	183	18	0	201	35	145	0	180	4	16	0	20	401
1530 - 1545	147	13	0	160	33	173	0	206	45	86	0	131	497
1545 - 1600	185	16	0	201	23	179	0	202	33	74	0	107	510
Hourly Total	686	63	0	**749**	117	646	0	**763**	86	194	0	**280**	**1792**
1600 - 1615	201	3	0	204	30	159	0	189	8	29	0	37	430
1615 - 1630	210	7	0	217	25	192	0	217	4	26	0	30	464
1630 - 1645	201	4	0	205	31	185	0	216	5	24	0	29	450
1645 - 1700	221	8	0	229	29	201	0	230	0	19	0	19	478
Hourly Total	833	22	0	**855**	115	737	0	**852**	17	98	0	**115**	**1822**
1700 - 1715	229	6	0	235	27	214	0	241	5	23	0	28	504
1715 - 1730	256	12	0	268	37	239	0	276	3	27	0	30	574
1730 - 1745	206	2	0	208	21	249	0	270	1	19	0	20	498
1745 - 1800	225	7	0	232	36	196	0	232	3	27	0	30	494
Hourly Total	916	27	0	**943**	121	898	0	**1019**	12	96	0	**108**	**2070**
Grand Total	3070	134	0	**3204**	428	2911	0	**3339**	127	477	0	**604**	**7147**
Approach %	95.82	4.18	0.00	-	12.82	87.18	0.00	-	21.03	78.97	0.00	-	
Intersection %	42.96	1.87	0.00	44.83	5.99	40.73	0.00	46.72	1.78	6.67	0.00	8.45	
PHF	0.89	0.56	0.00	**0.88**	0.82	0.90	0.00	**0.92**	0.60	0.89	0.00	**0.90**	**0.90**

Classified Turn Movement Count || Passenger Vehicles (1-3)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 3 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)

SC-1905 Knobcone Ave

Date
09 May 2023

Lat/Long
33.534197°, -81.987036°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0700 - 0715	129	7	0	136	17	169	0	186	3	20	0	23	345
0715 - 0730	160	12	0	172	28	233	0	261	4	28	0	32	465
0730 - 0745	182	26	0	208	45	223	0	268	7	35	0	42	518
0745 - 0800	166	34	0	200	61	215	0	276	15	63	0	78	554
Hourly Total	637	79	0	**716**	151	840	0	**991**	29	146	0	**175**	**1882**
0800 - 0815	158	34	0	192	49	154	0	203	29	62	0	91	486
0815 - 0830	146	9	0	155	21	127	0	148	19	66	0	85	388
0830 - 0845	133	3	0	136	12	160	0	172	5	20	0	25	333
0845 - 0900	112	2	0	114	17	157	0	174	1	18	0	19	307
Hourly Total	549	48	0	**597**	99	598	0	**697**	54	166	0	**220**	**1514**
Grand Total	1186	127	0	**1313**	250	1438	0	**1688**	83	312	0	**395**	**3396**
Approach %	90.33	9.67	0.00	-	14.81	85.19	0.00	-	21.01	78.99	0.00	-	
Intersection %	34.92	3.74	0.00	38.66	7.36	42.34	0.00	49.71	2.44	9.19	0.00	11.63	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Passenger Vehicles (1-3)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
1400 - 1415	142	2	0	144	16	153	0	169	4	20	0	24	337
1415 - 1430	153	4	0	157	28	154	0	182	2	19	0	21	360
1430 - 1445	155	7	0	162	13	177	0	190	2	20	0	22	374
1445 - 1500	174	9	0	183	15	134	0	149	3	27	0	30	362
Hourly Total	624	22	0	**646**	72	618	0	**690**	11	86	0	**97**	**1433**
1500 - 1515	165	16	0	181	23	144	0	167	2	18	0	20	368
1515 - 1530	179	18	0	197	35	142	0	177	4	16	0	20	394
1530 - 1545	142	13	0	155	32	168	0	200	44	86	0	130	485
1545 - 1600	184	16	0	200	23	177	0	200	33	74	0	107	507
Hourly Total	670	63	0	**733**	113	631	0	**744**	83	194	0	**277**	**1754**
1600 - 1615	199	3	0	202	30	158	0	188	7	29	0	36	426
1615 - 1630	207	6	0	213	25	188	0	213	4	24	0	28	454
1630 - 1645	198	4	0	202	31	182	0	213	5	24	0	29	444
1645 - 1700	216	8	0	224	28	200	0	228	0	19	0	19	471
Hourly Total	820	21	0	**841**	114	728	0	**842**	16	96	0	**112**	**1795**
1700 - 1715	228	6	0	234	27	212	0	239	4	22	0	26	499
1715 - 1730	255	12	0	267	37	239	0	276	3	27	0	30	573
1730 - 1745	205	2	0	207	21	249	0	270	1	19	0	20	497
1745 - 1800	223	7	0	230	35	196	0	231	3	27	0	30	491
Hourly Total	911	27	0	**938**	120	896	0	**1016**	11	95	0	**106**	**2060**
Grand Total	3025	133	0	**3158**	419	2873	0	**3292**	121	471	0	**592**	**7042**
Approach %	95.79	4.21	0.00	-	12.73	87.27	0.00	-	20.44	79.56	0.00	-	
Intersection %	42.96	1.89	0.00	44.85	5.95	40.80	0.00	46.75	1.72	6.69	0.00	8.41	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Marr Traffic DATA COLLECTION

North Augusta, SC

www.marrtraffic.com

Site 3 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)

SC-1905 Knobcone Ave

Date
09 May 2023

Lat/Long
33.534197°, -81.987036°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Single Unit Trucks (4-7)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0700 - 0715	0	0	0	0	0	2	0	2	0	0	0	0	2
0715 - 0730	2	0	0	2	0	1	0	1	0	0	0	0	3
0730 - 0745	1	0	0	1	2	3	0	5	0	1	0	1	7
0745 - 0800	1	0	0	1	0	2	0	2	0	0	0	0	3
Hourly Total	4	0	0	**4**	2	8	0	**10**	0	1	0	**1**	**15**
0800 - 0815	0	0	0	0	2	5	0	7	0	2	0	2	9
0815 - 0830	4	0	0	4	0	1	0	1	0	0	0	0	5
0830 - 0845	3	0	0	3	0	3	0	3	0	0	0	0	6
0845 - 0900	1	0	0	1	3	3	0	6	0	0	0	0	7
Hourly Total	8	0	0	**8**	5	12	0	**17**	0	2	0	**2**	**27**
Grand Total	12	0	0	**12**	7	20	0	**27**	0	3	0	**3**	**42**
Approach %	100.00	0.00	0.00	-	25.93	74.07	0.00	-	0.00	100.00	0.00	-	
Intersection %	28.57	0.00	0.00	28.57	16.67	47.62	0.00	64.29	0.00	7.14	0.00	7.14	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Single Unit Trucks (4-7)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
1400 - 1415	1	0	0	1	0	2	0	2	0	1	0	1	4
1415 - 1430	3	0	0	3	2	3	0	5	0	0	0	0	8
1430 - 1445	2	0	0	2	0	1	0	1	0	1	0	1	4
1445 - 1500	1	0	0	1	0	1	0	1	0	0	0	0	2
Hourly Total	7	0	0	**7**	2	7	0	**9**	0	2	0	**2**	**18**
1500 - 1515	4	0	0	4	3	3	0	6	2	0	0	2	12
1515 - 1530	3	0	0	3	0	2	0	2	0	0	0	0	5
1530 - 1545	4	0	0	4	0	3	0	3	1	0	0	1	8
1545 - 1600	1	0	0	1	0	2	0	2	0	0	0	0	3
Hourly Total	12	0	0	**12**	3	10	0	**13**	3	0	0	**3**	**28**
1600 - 1615	1	0	0	1	0	0	0	0	1	0	0	1	2
1615 - 1630	3	0	0	3	0	1	0	1	0	1	0	1	5
1630 - 1645	2	0	0	2	0	0	0	0	0	0	0	0	2
1645 - 1700	2	0	0	2	1	1	0	2	0	0	0	0	4
Hourly Total	8	0	0	**8**	1	2	0	**3**	1	1	0	**2**	**13**
1700 - 1715	0	0	0	0	0	1	0	1	0	1	0	1	2
1715 - 1730	1	0	0	1	0	0	0	0	0	0	0	0	1
1730 - 1745	1	0	0	1	0	0	0	0	0	0	0	0	1
1745 - 1800	1	0	0	1	0	0	0	0	0	0	0	0	1
Hourly Total	3	0	0	**3**	0	1	0	**1**	0	1	0	**1**	**5**
Grand Total	30	0	0	**30**	6	20	0	**26**	4	4	0	**8**	**64**
Approach %	100.00	0.00	0.00	-	23.08	76.92	0.00	-	50.00	50.00	0.00	-	
Intersection %	46.88	0.00	0.00	46.88	9.38	31.25	0.00	40.63	6.25	6.25	0.00	12.50	

Classified Turn Movement Count || Combination Trucks (8-13)

Marr Traffic DATA COLLECTION

North Augusta, SC

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SC-1905 Knobcone Ave

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Combination Trucks (8-13)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0700 - 0715	1	0	0	1	0	2	0	2	0	0	0	0	3
0715 - 0730	0	0	0	0	0	1	0	1	0	0	0	0	1
0730 - 0745	0	0	0	0	0	2	0	2	0	0	0	0	2
0745 - 0800	3	0	0	3	0	2	0	2	0	0	0	0	5
Hourly Total	4	0	0	**4**	0	7	0	**7**	0	0	0	**0**	**11**
0800 - 0815	2	0	0	2	0	2	0	2	0	0	0	0	4
0815 - 0830	2	0	0	2	0	2	0	2	0	0	0	0	4
0830 - 0845	1	0	0	1	0	2	0	2	0	0	0	0	3
0845 - 0900	0	0	0	0	0	2	0	2	0	0	0	0	2
Hourly Total	5	0	0	**5**	0	8	0	**8**	0	0	0	**0**	**13**
Grand Total	9	0	0	**9**	0	15	0	**15**	0	0	0	**0**	**24**
Approach %	100.00	0.00	0.00	-	0.00	100.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	37.50	0.00	0.00	37.50	0.00	62.50	0.00	62.50	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Combination Trucks (8-13)

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
1400 - 1415	2	0	0	2	1	2	0	3	0	1	0	1	6
1415 - 1430	0	0	0	0	0	1	0	1	0	0	0	0	1
1430 - 1445	1	0	0	1	0	1	0	1	1	0	0	1	3
1445 - 1500	1	0	0	1	0	1	0	1	0	0	0	0	2
Hourly Total	4	0	0	**4**	1	5	0	**6**	1	1	0	**2**	**12**
1500 - 1515	2	0	0	2	0	2	0	2	0	0	0	0	4
1515 - 1530	1	0	0	1	0	1	0	1	0	0	0	0	2
1530 - 1545	1	0	0	1	1	2	0	3	0	0	0	0	4
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	4	0	0	**4**	1	5	0	**6**	0	0	0	**0**	**10**
1600 - 1615	1	0	0	1	0	1	0	1	0	0	0	0	2
1615 - 1630	0	1	0	1	0	3	0	3	0	1	0	1	5
1630 - 1645	1	0	0	1	0	3	0	3	0	0	0	0	4
1645 - 1700	3	0	0	3	0	0	0	0	0	0	0	0	3
Hourly Total	5	1	0	**6**	0	7	0	**7**	0	1	0	**1**	**14**
1700 - 1715	1	0	0	1	0	1	0	1	1	0	0	1	3
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	1	0	0	1	1	0	0	1	0	0	0	0	2
Hourly Total	2	0	0	**2**	1	1	0	**2**	1	0	0	**1**	**5**
Grand Total	15	1	0	**16**	3	18	0	**21**	2	2	0	**4**	**41**
Approach %	93.75	6.25	0.00	-	14.29	85.71	0.00	-	50.00	50.00	0.00	-	
Intersection %	36.59	2.44	0.00	39.02	7.32	43.90	0.00	51.22	4.88	4.88	0.00	9.76	

Classified Turn Movement Count || Bikes

North Augusta, SC

Marr Traffic DATA COLLECTION
www.marrtraffic.com

Site 3 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)

SC-1905 Knobcone Ave

Date
09 May 2023

Lat/Long
33.534197°, -81.987036°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Bikes

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Bikes

	Northbound				Southbound				Westbound				
	SC-230 W Martintown Rd (South)				SC-230 W Martintown Rd (North)				SC-1905 Knobcone Ave				
TIME	Thru 3.1	Right 3.2	U-Turn 3.3	App Total	Left 3.4	Thru 3.5	U-Turn 3.6	App Total	Left 3.7	Right 3.8	U-Turn 3.9	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pedestrian Count || All vehicles

North Augusta, SC

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 3 of 3
SC-230 W Martintown Rd (South)
SC-230 W Martintown Rd (North)

SC-1905 Knobcone Ave

Date
09 May 2023

Lat/Long
33.534197°, -81.987036°

Weather
Fair
78°F

0700 - 0900 (Weekday 2h Session) (05-09-2023)

Pedestrians

	Northbound			Southbound			Westbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			SC-1905 Knobcone Ave			
TIME	EB 3a	WB 3b	App Total	EB 3c	WB 3d	App Total	NB 3g	SB 3h	App Total	Int Total
0700 - 0715	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

1400 - 1800 (Weekday 4h Session) (05-09-2023)

Pedestrians

	Northbound			Southbound			Westbound			
	SC-230 W Martintown Rd (South)			SC-230 W Martintown Rd (North)			SC-1905 Knobcone Ave			
TIME	EB 3a	WB 3b	App Total	EB 3c	WB 3d	App Total	NB 3g	SB 3h	App Total	Int Total
1400 - 1415	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Start Date: 5/9/2023	SC-230 W Martintown Rd (South) Northbound			SC-230 W Martintown Rd (North) Southbound			Eastbound			SC-1905 Knobcone Ave Westbound			
Time	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**Total**
15 Minute Totals													
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM - 01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM - 01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM - 01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM - 01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM - 02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM - 02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM - 02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 AM - 02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM - 03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 AM - 03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 AM - 03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 AM - 03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 AM - 04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM - 04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 AM - 04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 AM - 04:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 AM - 05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 AM - 05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 AM - 05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 AM - 05:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 AM - 06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 AM - 06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM - 06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM - 06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM - 07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM - 07:15 AM	0	130	7	17	173	0	0	0	0	3	0	20	350
07:15 AM - 07:30 AM	0	162	12	28	235	0	0	0	0	4	0	28	469
07:30 AM - 07:45 AM	0	183	26	47	228	0	0	0	0	7	0	36	527
07:45 AM - 08:00 AM	0	170	34	61	219	0	0	0	0	15	0	63	562
08:00 AM - 08:15 AM	0	160	34	51	161	0	0	0	0	29	0	64	499
08:15 AM - 08:30 AM	0	152	9	21	130	0	0	0	0	19	0	66	397
08:30 AM - 08:45 AM	0	137	3	12	165	0	0	0	0	5	0	20	342
08:45 AM - 09:00 AM	0	113	2	20	162	0	0	0	0	1	0	18	316
09:00 AM - 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM - 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM - 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM - 10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM - 12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM - 12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM - 12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM - 01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM - 01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM - 01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM - 01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM - 02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM - 02:15 PM	0	145	2	17	157	0	0	0	0	4	0	22	347
02:15 PM - 02:30 PM	0	156	4	30	158	0	0	0	0	2	0	19	369
02:30 PM - 02:45 PM	0	158	7	13	179	0	0	0	0	3	0	21	381
02:45 PM - 03:00 PM	0	176	9	15	136	0	0	0	0	3	0	27	366
03:00 PM - 03:15 PM	0	171	16	26	149	0	0	0	0	4	0	18	384
03:15 PM - 03:30 PM	0	183	18	35	145	0	0	0	0	4	0	16	401
03:30 PM - 03:45 PM	0	147	13	33	173	0	0	0	0	45	0	86	497
03:45 PM - 04:00 PM	0	185	16	23	179	0	0	0	0	33	0	74	510
04:00 PM - 04:15 PM	0	201	3	30	159	0	0	0	0	8	0	29	430
04:15 PM - 04:30 PM	0	210	7	25	192	0	0	0	0	4	0	26	464
04:30 PM - 04:45 PM	0	201	4	31	185	0	0	0	0	5	0	24	450
04:45 PM - 05:00 PM	0	221	8	29	201	0	0	0	0	0	0	19	478
05:00 PM - 05:15 PM	0	229	6	27	214	0	0	0	0	5	0	23	504
05:15 PM - 05:30 PM	0	256	12	37	239	0	0	0	0	3	0	27	574
05:30 PM - 05:45 PM	0	206	2	21	249	0	0	0	0	1	0	19	498
05:45 PM - 06:00 PM	0	225	7	36	196	0	0	0	0	3	0	27	494
06:00 PM - 06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM - 06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM - 06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM - 07:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 PM - 07:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 PM - 07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 PM - 07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 PM - 08:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 PM - 08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 PM - 08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 PM - 08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 PM - 09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 PM - 09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 PM - 09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 PM - 09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 PM - 10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM - 10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM - 10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM - 10:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM - 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM - 11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM - 11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM - 11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM - 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix B – Background Information

NORTH AUGUSTA EXIT 1
MIXED-USE DEVELOPMENT

W. MARTINTOWN ROAD (SC-230) @ I-20 EXIT 1
TRAFFIC ENGINEERING STUDY

Prepared for:
Cranston Engineering Group, LLC
452 ELLIS STREET
AUGUSTA, GA 30901

Prepared by:

CLEARCOURSE
KEEPING COMMUNITIES IN MOTION
410 PEACHTREE PKWY, SUITE 4245
CUMMING, GA 30041

REVISED: OCTOBER 2022

CTS #: 22009

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Item Page

Appendices

Executive Summary

Project Description

The proposed NA Exit 1 development is located off Martintown Road in between Knobcone Avenue and I-20 in North Augusta, South Carolina. According to the developer, the proposed development will include 343 multi-family residential units, 250k SF of retail/commercial, a 50k SF supermarket, 24k SF of sit down/high turnover restaurants, 17k SF of fast food restaurants, and a 4k SF gas station with a convenience market. Access to the site will be provided in a staged approach with a total of four driveways total – three along Martintown Road with the main entrance at the signalized intersection across from the I-20 eastbound offramp and one access to Knobcone Avenue. The purpose of this study is to analyze the traffic impacts associated with the proposed development at the new access drives and the surrounding intersections at each of the four phases of development (Open Year-2023, Build Year-2024, Build Year-2026, Build Year-2028).

Study Limits

The study area for this report was deemed to include five existing intersections. Traffic data was collected at these locations, including 48-hr ADTs and peak hour counts (PHC) during the AM and PM weekday rush hours (7 am – 9 am and 4 pm – 6 pm). Those intersections are:

1. Martintown Road @ I-20 westbound offramp
2. Martintown Road @ I-20 eastbound offramp
3. Martintown Road @ Frontage Road
4. Martintown Road @ Plantation Drive
5. Martintown Road @ Knobcone Avenue

Trip Generation and Traffic Analysis

In order to model the future conditions, the existing traffic data was given a growth factor at each phase to establish the background traffic volumes outside of the development. Trip generations were calculated using the ITE Trip Generation Manual, 11th Edition, and these volumes were combined with the projected background traffic volumes.

Conclusions and Recommended Mitigation

Several intersections are at or worse than the LOS D under the No-Build Scenario and should not be the responsibility of the developer, per North Augusta's Development. See Table i below for the summary of LOS at each intersection through the phases.

Table i
Intersection Operations Executive Summary

Intersection	A.M. Peak Hour LOS						P.M. Peak Hour LOS					
	2023 No Build	2023 -PH 1	2024 -PH 2	2026 -PH 3	2028 -PH 4	2028- Impr	2023 No Build	2023- PH 1	2024 -PH 2	2026 -PH 3	2028 -PH 4	2028- Impr
2023 Build Year - Phase 1												
#1 W. Martintown Road @ I-20 WB Off-ramp						**A**						**A**
- northbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- southbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- westbound left-turn	D	D	**E**	**F**	**F**	B	**F**	**F**	**F**	**F**	**F**	B
- westbound right-turn	B	B	B	B	B	A	C	C	C	C	C	B
#2 W. Martintown Road @ I-20 EB Off-ramp/ Site Entrance #1	**B**	**B**	**B**	**C**	**D**	**B**	**E**	**E**	**E**	**F**	**F**	B
- northbound thru movement	A	A	A	A	B	B	C	C	D	**F**	**F**	B
- southbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- southbound left-turn	N/A	A	B	**E**	**F**	C	N/A	C	C	D	D	C
- eastbound left-turn	B	B	B	B	B	B	B	B	C	**F**	**F**	B
- eastbound right-turn	C	C	C	C	C	B	**F**	**F**	**F**	**F**	**F**	C
- westbound left-turn	N/A	A	B	B	B	B	N/A	A	B	B	B	C
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3												
- northbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- northbound left-turn	B	B	B	B	B	B	B	B	B	B	B	B
- southbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- eastbound approach	**E**	**E**	**F**	**F**	**F**	B	**F**	**F**	**F**	**F**	**F**	C
- westbound approach	N/A	N/A	N/A	N/A	B	B	N/A	N/A	N/A	N/A	C	C
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4												
- northbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- northbound left-turn	B	B	B	B	B	B	B	B	B	B	C	C
- southbound thru movement	A	A	A	A	A	A	A	A	A	A	A	A
- eastbound approach	D	D	**E**	**F**	**F**	C	D	**E**	**E**	**F**	**F**	C
- westbound approach	N/A	N/A	N/A	N/A	C	C	N/A	N/A	N/A	N/A	C	C
#5 W. Martintown Road @ Knobcone Ave						**B**						
- northbound thru movement	A	A	A	A	A	B	A	A	A	A	A	A
- southbound thru movement	A	A	A	A	A	B	A	A	A	A	A	A
- southbound left-turn	B	B	B	C	C	D	C	C	C	D	**E**	C
- westbound left-turn	**E**	**F**	**F**	**F**	**F**	B	**F**	**F**	**F**	**F**	**F**	D
- westbound right-turn	C	C	C	D	**E**	B	C	C	C	D	**E**	D
-												
#6 Site Entrance #2 @ Knobcone Ave												
- eastbound left-turn	A	A	A	A	A	A	A	A	A	A	A	A
- westbound approach	A	A	A	A	A	A	A	A	A	A	A	A
- southbound approach	N/A	B	B	C	C	C	N/A	B	B	B	B	C

A summary of all improvements for each phase are listed below:

- Existing Conditions:
  - The AM peak hour has an LOS E at both the Frontage Road approach and the Knobcone Ave left-turn. The PM peak hour has an LOS E or worse at the I-20 WB offramp left-turn, the I-20 EB offramp right-turn, the Frontage Road approach, and the Knobcone Ave left-turn. Signal warrant analyses performed for both the I-20 WB offramp and the Knobcone Ave intersection supported the need for a signal at the Knobcone Ave intersection under existing conditions. The I-20 WB ramp did not warrant a signal under existing conditions.

- Phase 1 Open:
  - A traffic signal installation will be required at the I-20 WB offramp intersection to allow the offramp traffic to make a left onto Martintown Rd. The existing lane configurations are sufficient for the traffic volumes. (This work should be coordinated with the proposed developments ongoing on the NW corner of the I-20 interchange)

  - Construct the full access driveway opposite the EB off-ramp to include a single entrance lane and a dedicated WB right and left turn lane to exit the site, including sufficient storage length for both. Pavement for a future dual left turn lane should be included and striped if not utilized immediately for ease of construction. A SB left turn lane should be striped utilizing the existing at-grade median. The EB offramp dual left-turn should be restriped to turn the striped shoulder into a through lane into the site. A NB right turn deceleration lane should be constructed into the site. A traffic signal modification will be required along with these roadway improvements.

  - Frontage Road should be converted to a right-in/left-in/right-out. Widening should be provided at the Knobcone Ave intersection to allow for the u-turn movement for the traffic desiring to head north on Martintown Rd. (This work is currently proposed by others)

  - The Knobcone Avenue intersection will require a traffic signal installed before the Phase 1 opening. The SB left-turn lane will need to be converted to a left-turn/ u-turn lane. The NB right turn deceleration lane should be constructed to improve safety for the increased turning traffic volumes.

  - The Knobcone Avenue entrance will be constructed in Phase 1. Auxiliary lanes are not required for Phase 1 but could be constructed with the entrance to reduce the need for future mobilizations.

- Phase 2 Open:
    - Plantation Drive should be converted to a right-in/left-in/right-out.

    - The left turn auxiliary lane at the Knobcone Ave site access is required with the opening of Phase 2 (if it was not already constructed during Phase 1 Improvements).

- Phase 3 Open:
    - The WB dual right turn lanes at the I-20 EB offramp across from the main entrance are required with the opening of Phase 3.
    - An additional SB left turn lane for the main entrance is required.

- Phase 4 Open:
    - The remaining RI/RO access driveways (2) onto Martintown Road will be added for the final phase completion.

    - The WB right turn deceleration lane into the Knobcone Ave site entrance is required with the opening of Phase 4 (if it was not already constructed during prior phase improvements).

INTRODUCTION

This report analyzes the existing and projected traffic volumes associated with the North Augusta Exit 1 development (the Development) located southeast of the Interstate 20 (I-20) interchange at Exit 1 with W. Martintown Road (SC-230) in North Augusta, South Carolina. The Development is situated on multiple tracts totaling 178-acres that extends east from Martintown Road along the interstate. However, only 81.6 acres is currently planned for this development. The Development will be comprised of a mixed use of apartment and retail. The site is located in the western corner of Aiken County, within the North Augusta city limits. It falls within the City's Traffic Impact Tier 2 and is just south of I-20 Exit 1. See Figure 1 for the Vicinity Map and Figure 2 shows the project Conceptual Site Layout. This report is submitted to the South Carolina Department of Transportation (SCDOT) and North Augusta Engineering & Planning Departments for review on behalf of the developer, McKnight Properties, Inc.

Existing traffic conditions were analyzed at five surrounding intersections to determine the need for potential improvements to accommodate the future traffic volumes and allow efficient ingress and egress to the site. The methodology to assess operations and the study findings are summarized in the sections that follow.

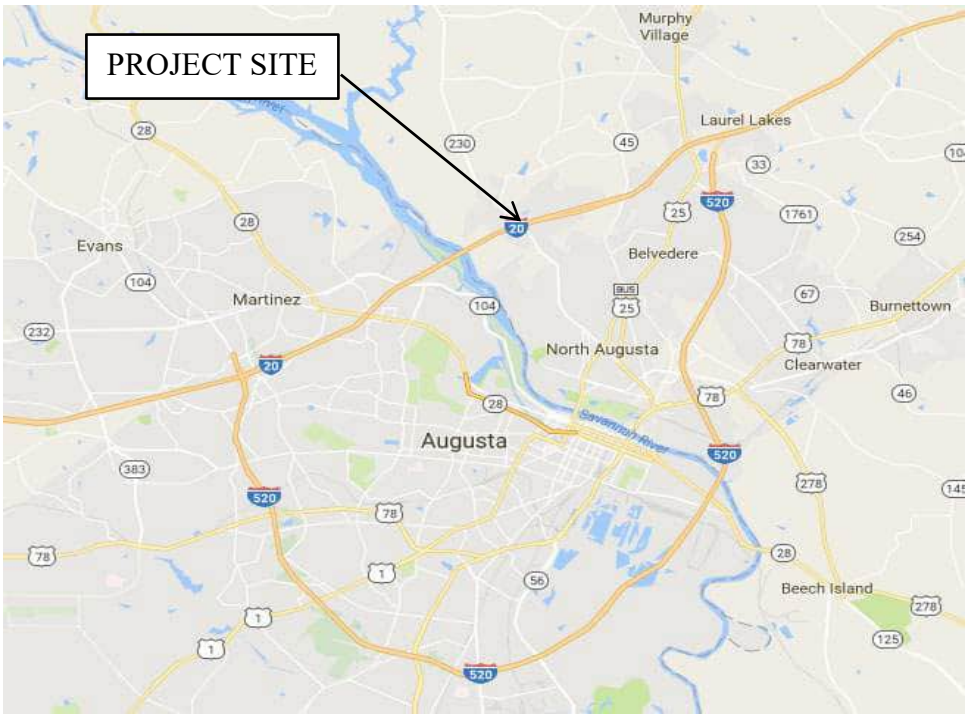

Figure 1: Vicinity Map

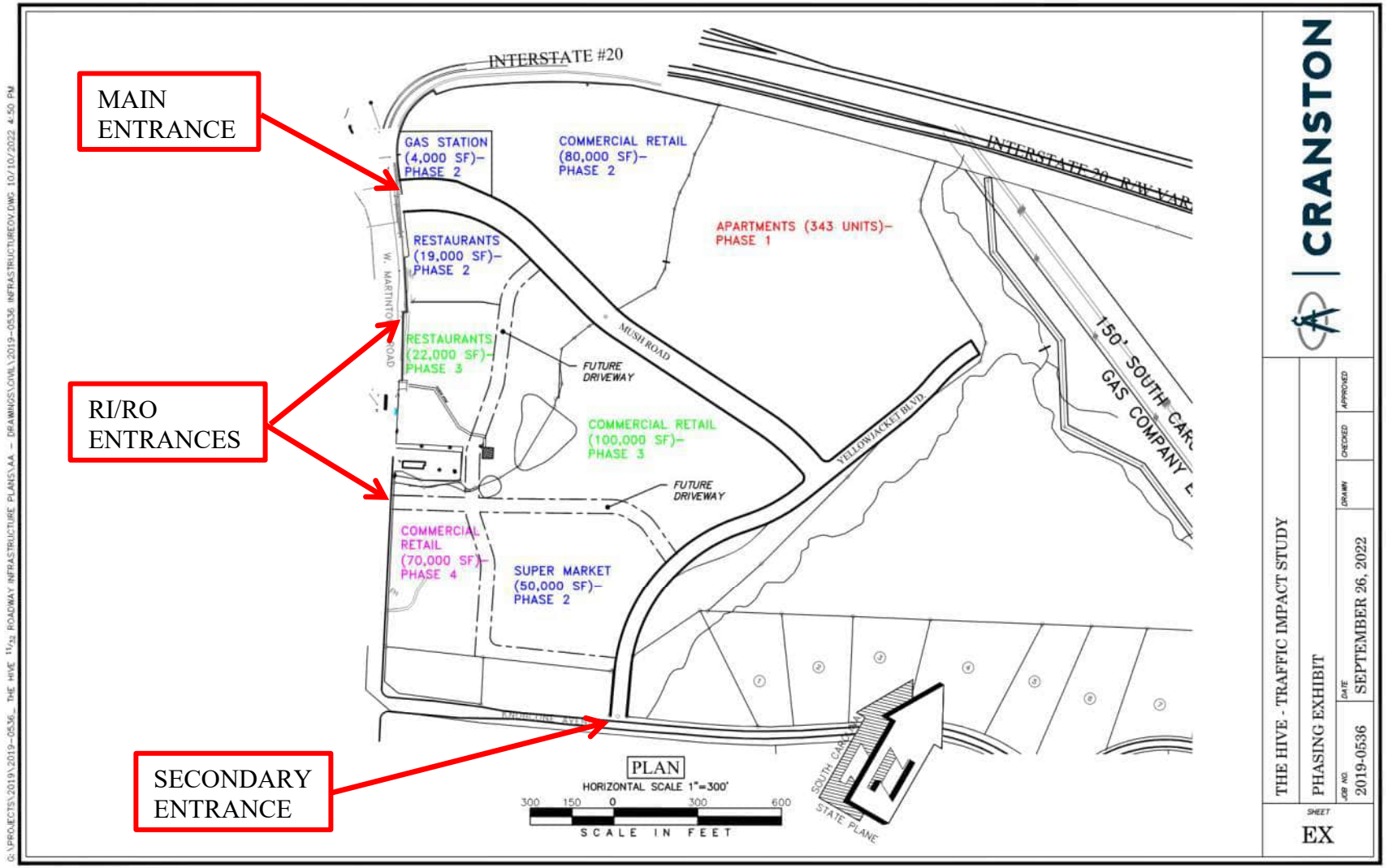

Figure 2: Project Conceptual Site Map

CAPACITY ANALYSIS METHODOLOGY

The methodology used for evaluating intersection traffic operations is based on criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th Edition (HCM). The capacity of an intersection is described in terms of Level of Service (LOS), which ranges from A to F and corresponds to average control delay per vehicle.

In general, the LOS may be defined as a measure of operating conditions within a traffic stream and the perception of the conditions by the general motoring public. The six levels of service are briefly described, as follows:

- LOS A – Little or no traffic delays;
- LOS B – Minimal to short traffic delays;
- LOS C – Average traffic delays;
- LOS D – Relatively long traffic delays;
- LOS E – Intersections are at or near the maximum capacity and traffic experiences long delays; and
- LOS F – Intersections are operating above their maximum capacity and traffic delays are long and unstable.

For signalized intersections, one overall intersection LOS is reported. At unsignalized intersections, the LOS for each controlled approach or movement (side-streets and main-street left-turns) is reported. Table 1 presents LOS criteria for signalized and unsignalized intersections.

Table 1
Level of Service Criteria

LOS	Average Control Delay (sec / veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤10
B	> 10 and ≤20	> 10 and ≤ 15
C	> 20 and ≤35	> 15 and ≤ 25
D	> 35 and ≤55	> 25 and ≤ 35
E	> 55 and ≤80	> 35 and ≤ 50
F	> 80	> 50

A volume-to-capacity ratio (v/c) is also computed for each lane group and at signalized intersections an overall v/c ratio is reported. The capacity of the intersection is calculated based on the geometry and traffic control. Intersection capacity is then compared to the volumes entering the intersection. A v/c ratio of less than 1.0 indicates that there is sufficient capacity for the traffic demand. A v/c ratio of 1.0 or more generally indicates the need for intersection improvements.

EXISTING CONDITIONS ANALYSIS

An evaluation of existing conditions was performed to document existing operations and provide a basis for relative comparison of future conditions. The following paragraphs describe the existing roadway facilities, traffic volumes, and intersection operations.

Existing Conditions

The study area for this project includes the W. Martintown Road corridor from the I-20 westbound on/off-ramps south through the intersection with Knobcone Avenue. W. Martintown Road is a state route (SC-230) that connects Edgefield County to North Augusta's Central Business District. Frontage Road, Old Plantation Road, and Knobcone Avenue all intersect W. Martintown Road just south of the I-20 interchange (Exit 1). W. Martintown Road is classified as the major movement while the above-mentioned roads will be the minor movements. W. Martintown Road is a 5-lane section that includes a center two-way left turn lane. The Frontage Road and Old Plantation Road approaches are each a single lane with a shared left and right turn lane with a stop condition. Knobcone Avenue is a 3-lane section with a dedicated left-turn lane that provides approximately 150 feet of storage. There is currently one traffic signal at the intersections with W. Martintown Road and the eastbound I-20 exit ramp. This signal will be evaluated under the existing conditions of the study area. For the purposes of this study, Martintown Road is the north/south movement and all the minor streets/driveways are east/west.

Existing Traffic Volumes

Turning movement counts were performed for the 2-hour peak times in March of 2020 from 7:00 am to 9:00 am and from 4:00 pm to 6:00 pm. The four consecutive 15-minute interval volumes that summed to the highest volume during the morning and evening peak periods were determined at each intersection. Per the SCDOT COVID-19 policy guidance, traffic volumes counted in 2020 were increased by 12% to account for the decrease in traffic due to travel restrictions and stay at home orders. Tube count data was used to establish the average daily traffic (ADT) volume, as shown in Table 2. The adjusted existing traffic volumes used for the base traffic volumes can be found in Figure 3.

Table 2
Traffic in the Study Area

Route	Location	2020* ADT	Average Annual Growth	2023 ADT (Opening Year)	2028 ADT (Design Year)
W. Martintown Road	@ Frontage Road	22,716	2.00%	24,107	26,616
W. Martintown Road	@ Bergen Road	11,983	2.00%	12,717	14,040

* Adjusted for SCDOT COVID Policy

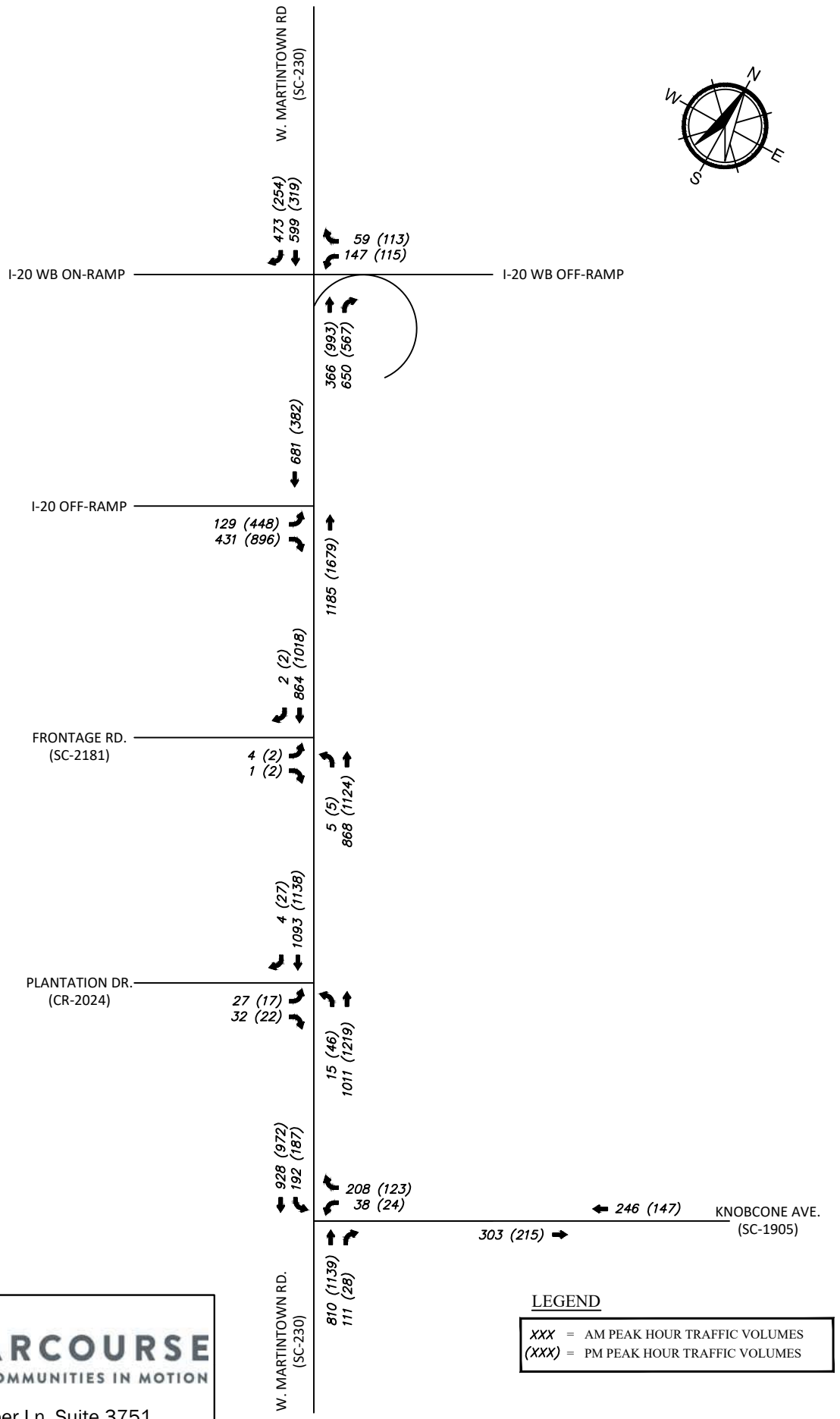

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Figure 3: EXISTING TRAFFIC VOLUMES (2020)

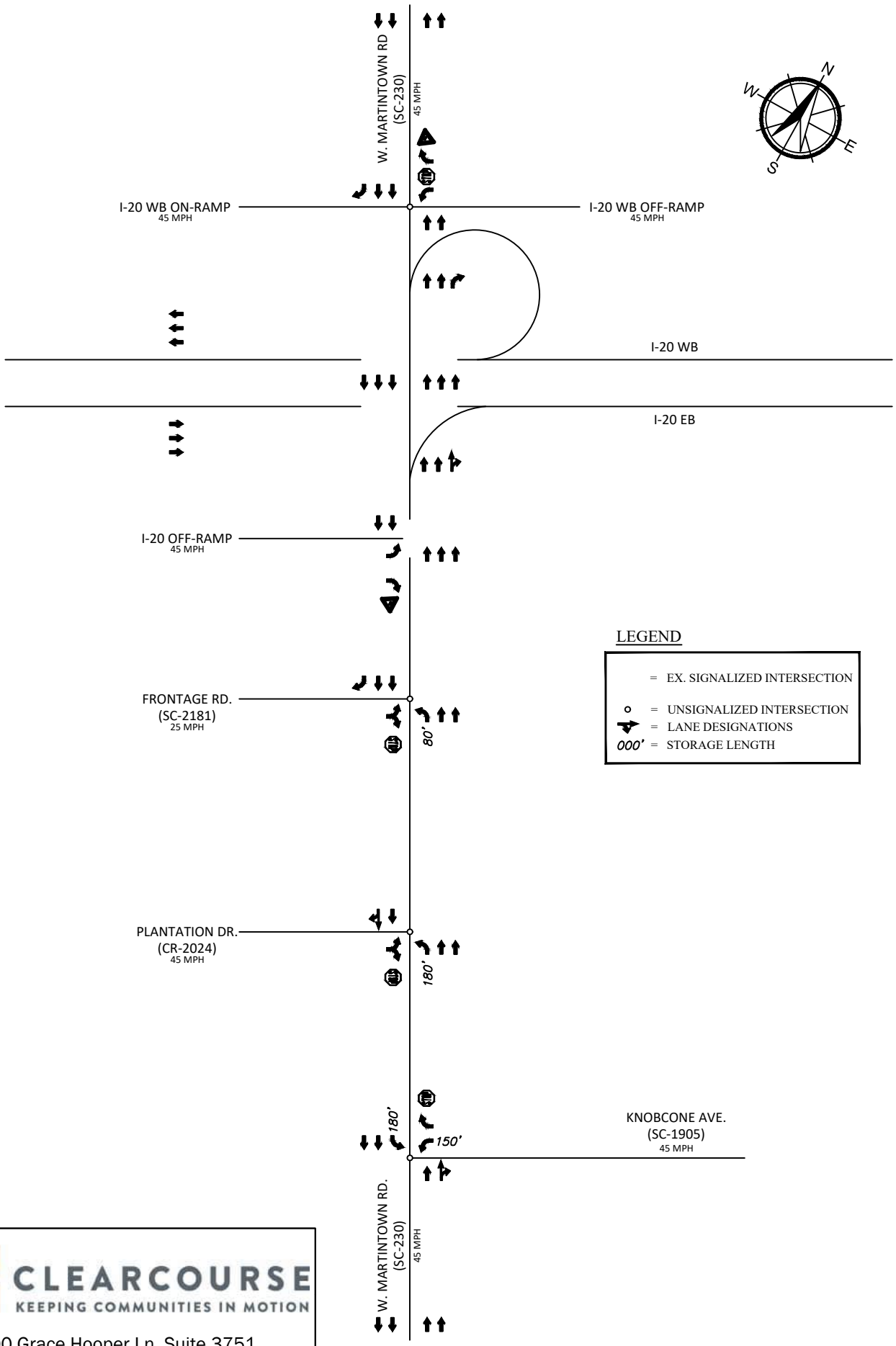

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Figure 4: EXISTING LANE GEOMETRY

Traffic Growth Factor

Historical traffic data from SCDOT line counts show a 2.0% growth rate in the study area. The traffic study done for the I-20 project showed growth rates from 1.2% - 1.83% at the interchange. The historical line count data was used for this report as it was the more conservative estimate. The growth rate was applied to the existing volumes to calculate the 2023 (Phase 1 open year), 2024 (Phase 2), 2026 (Phase 3) and 2028 (Phase 4) traffic volume projections. The existing volumes were analyzed to determine the trip volume distributions during the peak hour for each approach.

Existing Intersection Operations

Existing intersection operations were analyzed to establish current traffic conditions and identify areas of existing deficiencies that are not the result of the proposed development. The existing geometry and traffic controls are shown in Figure 4. The opening year peak hour intersection counts and existing intersection geometries were used in the analysis to establish base traffic conditions. The results are summarized in Table 3 and the associated traffic volumes are shown in Figure 5.

There are several movements that are failing under the existing conditions. Both the I-20 WB off-ramp and the Frontage Road approach at W. Martintown Road operate at LOS F during the evening peak hours. The westbound left turn from Knobcone Avenue at Martintown Road also operates at LOS E in the AM and LOS F in the PM peak hours. Almost all approaches are below capacity for the total traffic volume carried and do not warrant additional capacity. The westbound off-ramp, the northbound through movement at the eastbound off-ramp intersection are over 75% capacity and approaching their current maximum capacity. The I-20 EB off-ramp has already been shown with the signal in service. Due to the already failing LOS E/F for the left turn on Knobcone Avenue, a signal may be warranted for this intersection as well. This signal warrant analysis can be found in a later section of this report.

Table 3
Existing Intersection Operations "No Build" – Base Year (2023)

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Delay (sec)	LOS	v/c	Delay (sec)	LOS	v/c
#1 W. Martintown Road @ I-20 WB Off-ramp						
- northbound thru movement	0.0	A	0.12	0.0	A	0.31
- southbound thru movement	0.0	A	0.19	0.0	A	0.10
- westbound left-turn	25.9	D	0.50	113.3	**F**	0.92
- westbound right-turn	10.0	B	0.09	15.8	C	0.28
#2 W. Martintown Road @ I-20 EB Off-ramp	4.5	B	0.79	19.1	**E**	**1.31**
- northbound thru movement	4.2	A	0.52	22.2	C	0.94
- southbound thru movement	3.8	A	0.30	8.8	A	0.21
- eastbound left-turn	11.1	B	0.32	16.2	B	0.72
- eastbound right-turn	21.2	C	0.79	166.4	**F**	1.31
#3 W. Martintown Road @ Frontage Rd						
- northbound thru movement	0.0	A	0.26	0.0	A	0.34
- northbound left-turn	10.3	B	0.01	11.2	B	0.01
- southbound thru movement	0.0	A	0.26	0.0	A	0.31
- eastbound approach	41.2	**E**	0.07	50.8	**F**	0.08
#4 W. Martintown Road @ Plantation Dr						
- northbound thru movement	0.0	A	0.32	0.0	A	0.39
- northbound left-turn	11.8	B	0.03	12.9	B	0.10
- southbound thru movement	0.0	A	0.34	0.0	A	0.36
- eastbound approach	31.1	D	0.33	33.6	D	0.27
#5 W. Martintown Road @ Knobcone Ave						
- northbound thru movement	0.0	A	0.26	0.0	A	0.36
- southbound thru movement	0.0	A	0.29	0.0	A	0.30
- southbound left-turn	13.4	B	0.34	17.3	C	0.43
- westbound left-turn	45.6	**E**	0.34	56.7	**F**	0.30
- westbound right-turn	19.1	C	0.49	19.1	C	0.36

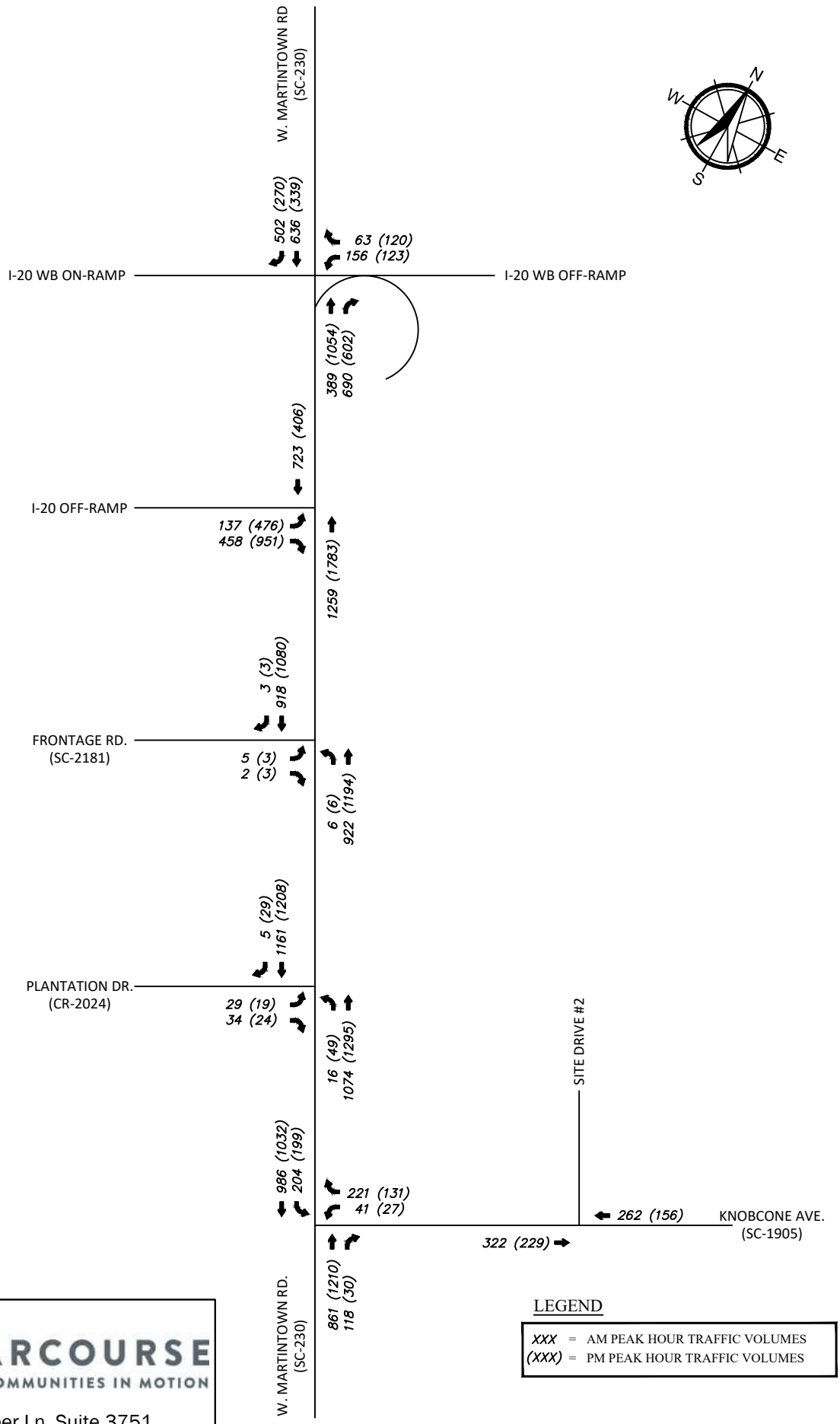

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Figure 5: 2023 NO-BUILD TRAFFIC VOLUMES

SIGNAL WARRANT ANALYSIS

In order to determine if a traffic signal is warranted under existing conditions, hourly volumes were collected on Martintown Road at the intersections of the I-20 westbound off-ramp and at Knobcone Avenue. These volumes were compared to the criteria for signalization as described in the Manual on Uniform Traffic Control Devices (MUTCD) 2009 edition. Warrants 4-9 were deemed infeasible and therefore are not included in this report. The existing traffic volumes scenario were used for the analysis. The following sections outline the signal warrant analyses for these intersections.

Methodology

The following paragraphs provide descriptions and criteria for the three volume-based signal warrants that were evaluated for these intersections. Due to the higher volume of southbound left-turns than westbound left-turns at the Knobcone intersection, the southbound left-turns were used as the minor movement for the signal analysis at that location.

Warrant 1, Eight-Hour Vehicular Volume (MUTCD Section 4C.02)

Standard 1

The Eight-Hour Vehicular Volume warrant is applied where there is a large volume of intersecting traffic (Condition A: Minimum Vehicular Volume) or where traffic on the main street is heavy enough that traffic on a minor intersecting street suffers excessive delay or conflict entering or crossing the major street (Condition B: Interruption of Continuous Flow). The volume criteria vary depending on the major street and minor street geometries and may be adjusted to 70% on the major street to account for high-speed roadways (considered > 40 mph) or in communities with populations less than 10,000. A signal may be warranted if either Condition A or B exist for any 8 hours of an average day. Since the posted speed limit on Martintown Road is 45 mph, the 70% criteria will be applied at both locations.

Standard 2

Where neither Condition A nor Condition B is met individually, the combination of Conditions A and B may be analyzed after alternative solutions have failed to resolve the traffic congestion with less delay and inconvenience to the traffic. A signal may be considered if the 80% capacities for both Condition A and Condition B exist for any 8 hours of an average day. Similarly to Standard 1, the capacities may be adjusted to 56% on each approach to account for high speed roadways (considered > 40 mph) or in communities with populations less than 10,000. Due to the posted speed limit on Martintown Road of 45 mph, the 56% criteria were used for these analyses.

Table 4: Eight Hour Volume Criteria

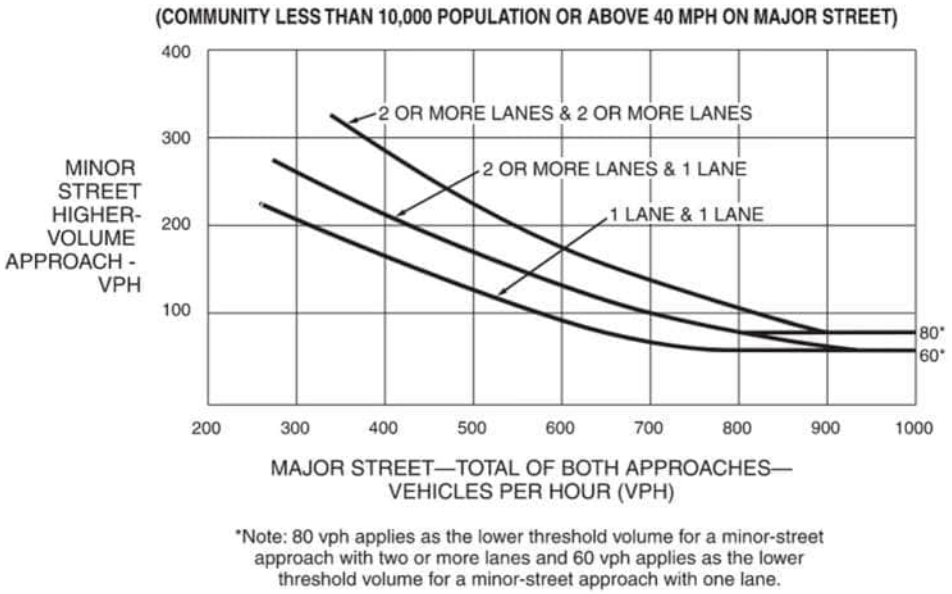
Standard 1 (Individual)					
	Existing Geometry	Condition A		Condition B	
		(100%)	**(70%)**	(100%)	**(70%)**
Major Approach	2+ Lanes	600	**420**	900	**630**
Minor Approach	1 Lane	150	**105**	75	**53**
Standard 2 (Combined)					
	Existing Geometry	80%		56%	
		Condition A	Condition B	**Condition A**	**Condition B**
Major Approach	2+ Lanes	480	720	**336**	**504**
Minor Approach	1 Lane	120	60	**84**	**42**

The full results from both Standard 1 and Standard 2 can be found in Appendix E and are summarized in Table 5.

Warrant 2, Four-Hour Vehicular Volume (MUTCD Section 4C.03)

The Four-Hour Vehicular Volume signal warrant is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The volume criteria is based on the relationship of main street traffic volumes to minor street traffic volumes, as indicated in Figure 4C-2 of the MUTCD and included in Appendix E.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Warrant 3, Peak Hour (MUTCD Section 4C.04)

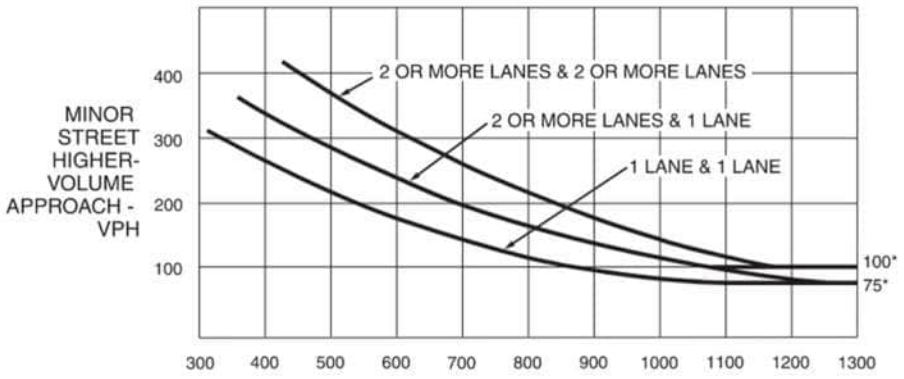
The Peak Hour signal warrant is applied where traffic conditions are heavy during a minimum of one hour for an average day, causing undue delay during this time period to side street volumes entering or crossing the major street. The MUTCD states that this warrant should be applied in cases such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short period of time.

Warrant 3 is met if all the following statements are true during the same peak hour:

1. The total stopped-time delay on any stop-controlled approach exceeds 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach; and
2. The volume on the same approach (one direction) equals or exceeds 100 vehicles for a one-lane approach or 150 vehicles for a two-lane approach; and
3. The total entering volume serviced during the hour equals or exceeds 650 vehicles per hour for intersections with three approaches and 800 vehicles per hour for intersections with four approaches.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Alternatively, Warrant 3 can also be met if a plotted point falls above the curve in Figure 4C-4 of the MUTCD, which is also included in Appendix E of this report.

The analysis shows that signalization is warranted based on all three of the volume-based criteria. As a result, the intersection was analyzed with a traffic signal in place to see if this change in traffic control would adequately serve the site.

Table 5: Volume Based Signal Warrants Summary		
	Martintown Rd @ I-20 WB Off-ramp	**Martintown Rd @ Knobcone Ave**
Warrant 1: Eight-Hour		
Standard 1 (Individual)	70% Criteria	70% Criteria
Number of hours required traffic is present for Condition A (Minimum Vehicular Volume):	4 hours met	6 hours met
Number of hours required traffic is present for Condition B (Interruption of Continuous Flow):	7 hours met	8 hours met
Standard 2 (Combined)	56% Criteria	56% Criteria
Number of hours required traffic is present for Condition A (Minimum Vehicular Volume):	5 hours met	7 hours met
Number of hours required traffic is present for Condition B (Interruption of Continuous Flow):	6 hours met	8 hours met
Warrant 1 is:	**Satisfied**	**Satisfied**
Warrant 2: Four-Hour		
	100% Criteria	100% Criteria
Number of hours required traffic present:	2 hours met	6 hours met
Warrant 2 is:	**Satisfied**	**Satisfied**
Warrant 3: Peak Hour		
	100% Criteria	100% Criteria
Number of hours required traffic is present in Figure 4C-3	0 hours met	3 hours met
Warrant 3 (Part B) is:	**Not Satisfied**	**Satisfied**

PROPOSED BUILD TRAFFIC CONDITIONS

The proposed Development main access will utilize the traffic signal at the I-20 EB off ramp at Martintown Road. A secondary entrance will also be provided on Knobcone Avenue. The development will include 343 apartment units and 250,000 sf of retail space in addition to a gas station, supermarket and restaurants. For the purposes of this report, several phases were analyzed to stage the addition of the new development.

The Development is projected for the apartments to begin coming available in 2023 therefore this was determined to be the "Open Year" traffic analysis scenario. The current traffic volumes were given a 2.0% growth rate projection for the proposed traffic analysis. Trip generations were calculated based on the use of the proposed building and the unit of measure listed above. The source of these volumes is described in more detail in the Trip Generation section below.

Proposed Traffic Volumes

Proposed traffic volumes used in this analysis are made up of the projected 2023, 2024, 2026 and 2028 traffic volumes plus the addition of projected site-generated traffic. Projections for trip generation and traffic assignment are discussed in the following sections.

Trip Generation

Traffic that will be generated by the Development is projected based on trip generation characteristics for similar land uses nationwide. The trip generation rates used in this study were taken from the 11th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual report. Trip generations were based on the following ITE Land Uses: *221 – Multi-Family Housing (Mid-Rise); 821 – Shopping Plaza (40-150k); 850 – Supermarket; 932 – Restaurant (High Turnover Sit Down); 934 – Restaurant (Fast Food w/ Drive Thru); 945 – Gas Station/ Convenience Store.*

Due to the mixed-use nature of the Development, internal capture trips and pass-by trips have both been calculated and incorporated into the total trips generated. Internal capture includes trips that start and end within the Development. These trips are internal to the site and therefore, they are subtracted from the trips generated that are incorporated into the external network volumes. Pass-by trips refer to vehicles that are already on the surrounding road network and are attracted by the retail uses and enter or exit the Development during the same peak hour. Using industry standards, the percentage of pass-by trips are 0% in the AM peak hour and 40% pass-by in the PM peak hour for the shopping plaza and 0% in the AM peak hour and 24% pass-by in the PM peak for the supermarket land uses. For the sit-down high turn-over restaurant, the pass-by trips are 0% in the AM peak hour and 43% in the PM peak hour. The fast-food w/ a drive thru restaurant estimates to be 50% in the AM peak hour and 55% in the PM peak hour. And the gas station with a convenience store use is 60% pass-by trips in the AM peak hour and 56% pass-by trips in the PM peak hour. The pass-by tips are also subtracted from the total trips generated by the site since they already exist in the current traffic volumes. The internal capture trip calculations and the pass-by trip rate for the land uses are shown in Appendix B.

The Development anticipates a phased construction with the land uses staging their progress over the next 6 years. Table 6 shows the land uses and their projected units for each individual phase and are not accumulative. The proposed development's trips are generated based on the accumulation of the additional development at the start of each phase. The trip generations for each phase are presented in Table 7a-7d. 100% of each phase total is projected at the opening of

each phase as a conservative estimate.

Table 6
Development Land Use – Phasing Projection

	Units per Phase				
	Phase 1 (2023)	Phase 2 (2024)	Phase 3 (2026)	Phase 4 (2028)	**Total Units**
221 – Apartments (Occupied Units)	343	0	0	0	**343**
821 – Shopping Plaza (40-150k)) - (1000 GSF)	0	80	100	70	**250**
850 – Supermarket (1000 GSF)	0	50	0	0	**50**
932 – Restaurant (High-turnover) - (1000 GSF)	0	10	14	0	**24**
934 – Restaurant (Fast Food w/ DT) - (1000 GSF)	0	9	8	0	**17**
945 – Gas Station/Convenience Store (Fueling Stations)	0	4	0	0	**4**

Table 7a
Trip Generation – Phase 1 (Build 2023)

Land Use	A.M. Peak Hour			P.M. Peak Hour			Average Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
221 – Apartments (Mid-Rise) (343 Units)	32	107	139	82	52	134	795	795	1590
821 – Shopping Plaza (40-150k) (0k SF)	0	0	0	0	0	0	0	0	0
850 – Supermarket (0k SF)	0	0	0	0	0	0	0	0	0
932 – Restaurant (High-turnover) (0k SF)	0	0	0	0	0	0	0	0	0
932 – Restaurant (Fast Food w/ Drive Thru) (0k SF)	0	0	0	0	0	0	0	0	0
945 – Gas Station/Convenience Store (0k SF / 0 VFS)	0	0	0	0	0	0	0	0	0
Unadjusted Volumes	32	107	139	82	52	134	795	795	1590
Internal Capture Trips	0	0	0	0	0	0	0	0	0
Pass-by Reductions	0	0	0	0	0	0	0	0	0
New Site Volumes	**32**	**107**	**139**	**82**	**52**	**134**	**795**	**795**	**1590**

Table 7b
Trip Generation – Phase 2 (Build 2024)

Land Use	A.M. Peak Hour			P.M. Peak Hour			Average Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
221 – Apartments (Mid-Rise) (343 Units)	32	107	139	82	52	134	795	795	1590
821 – Shopping Plaza (40-150k) (80k SF)	175	107	282	347	375	722	3780	3779	7559
850 – Supermarket (50k SF)	84	59	143	224	223	447	2346	2346	4692
932 – Restaurant (High-turnover) (10k SF)	53	43	96	56	35	91	536	536	1072
934 – Restaurant (Fast Food w/ Drive Thru) (9k SF)	205	196	401	154	143	297	2104	2103	4207
945 – Gas Station/Convenience Store (4k SF / 8 VFS)	64	64	128	74	73	147	1061	1060	2121
Unadjusted Volumes	612	577	1189	935	902	1838	10622	10619	21241
Internal Capture Trips	81	81	162	218	218	436	1940	2030	3970
Pass-by Reductions	141	137	278	342	338	680	2873	2871	5744
New Site Volumes	**391**	**359**	**750**	**375**	**346**	**721**	**5809**	**5718**	**11527**

Table 7c
Trip Generation – Phase 3 (Build 2026)

Land Use	A.M. Peak Hour			P.M. Peak Hour			Average Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
221 – Apartments (Mid-Rise) (343 Units)	32	107	139	82	52	134	795	795	1590
821 – Shopping Plaza (40-150k) (180k SF)	393	241	634	780	845	1625	8504	8503	17007
850 – Supermarket (50k SF)	84	59	143	224	223	447	2346	2346	4692
932 – Restaurant (High-turnover) (24k SF)	127	104	230	133	85	218	1286	1286	2572
934 – Restaurant (Fast Food w/ Drive Thru) (17k SF)	386	371	757	292	269	561	3974	3973	7947
945 – Gas Station/Convenience Store (4k SF / 8 VFS)	64	64	128	74	73	147	1061	1060	2121
Unadjusted Volumes	1087	946	2032	1583	1547	3132	17966	17963	35930
Internal Capture Trips	115	115	230	352	352	704	2947	3135	6082
Pass-by Reductions	232	224	456	624	617	1241	4961	4959	9920
New Site Volumes	**740**	**607**	**1347**	**607**	**578**	**1187**	**10059**	**9870**	**19929**

Table 7d
Trip Generation – Phase 4 (Build 2028)

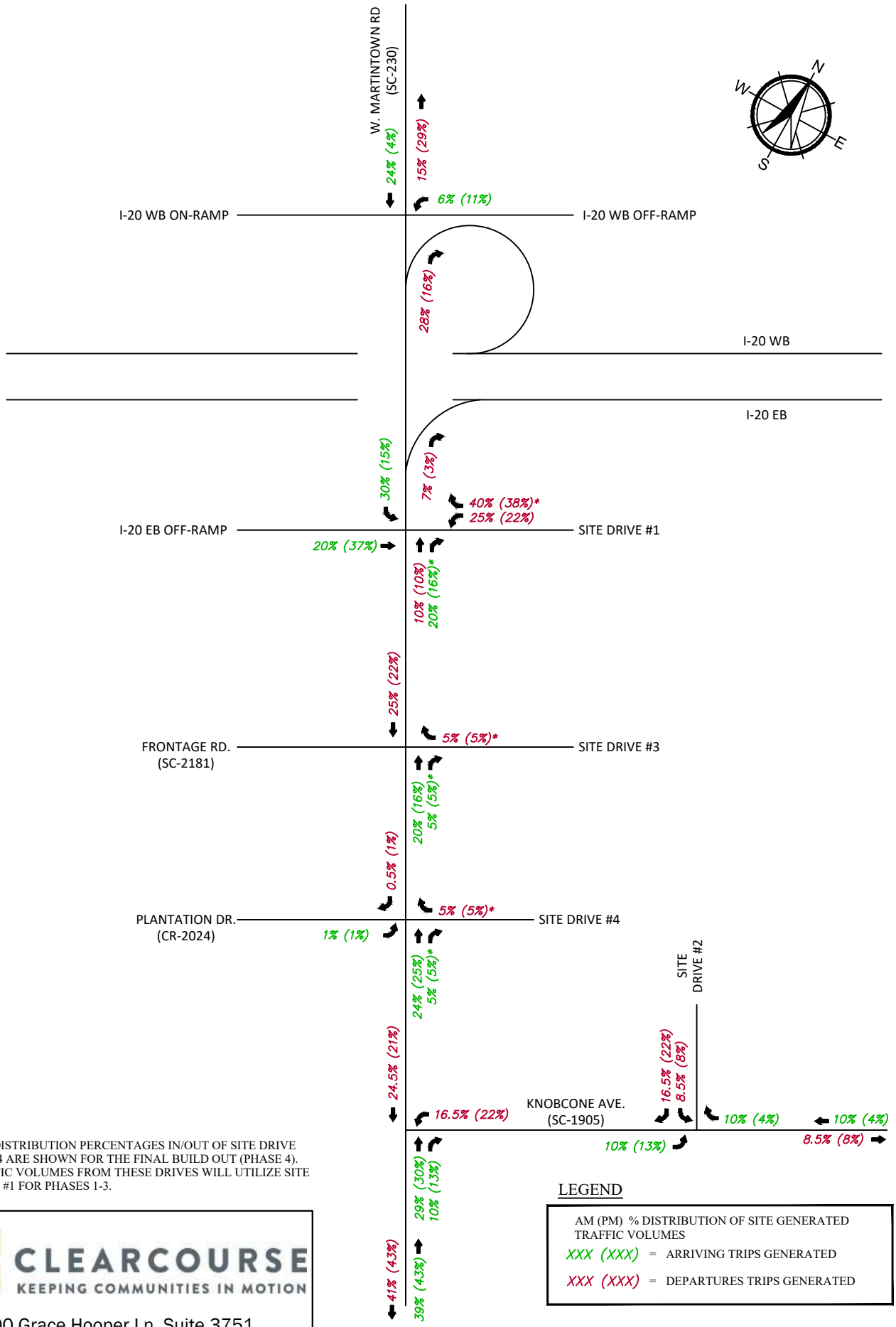
Land Use	A.M. Peak Hour			P.M. Peak Hour			Average Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
221 – Apartments (Mid-Rise) (343 Units)	32	107	139	82	52	134	795	795	1590
821 – Shopping Plaza (40-150k) (250k SF)	546	335	881	1083	1173	2256	11811	11810	23621
850 – Supermarket (50k SF)	84	59	143	224	223	447	2346	2346	4692
932 – Restaurant (High-turnover) (24k SF)	127	104	230	133	85	218	1286	1286	2572
934 – Restaurant (Fast Food w/ Drive Thru) (17k SF)	386	371	757	292	269	561	3974	3973	7947
945 – Gas Station/Convenience Store (4k SF / 8 VFS)	64	64	128	74	73	147	1061	1060	2121
Unadjusted Volumes	1240	1039	2279	1887	1876	3764	21273	21270	42544
Internal Capture Trips	141	141	282	352	352	704	3194	3438	6632
Pass-by Reductions	232	224	456	746	749	1495	5622	5621	11243
New Site Volumes	**868**	**675**	**1542**	**789**	**776**	**1565**	**12458**	**12213**	**24670**

Traffic Assignment and Trip Distribution

The arriving/departing percentages for Trip Distribution were determined by the proposed building uses based on the historical data of the building uses, per the Trip Generation Manual. Traffic Assignment describes the direction drivers will be coming from/going to when they turn into and depart from the site. The breakdown of the assigned trips generated by the site is shown in Table 8. The percentages for trip distribution of the arrivals and departures for this site onto Martintown Road is presented in Figure 6. Both the arriving and departing trips were calculated based on the existing volumes on Martintown Road. The resulting traffic that will be generated by these calculations was added to the study area based on these distributions.

Table 8
Trip Generation Percentages

Building Use	A.M. Peak Hour		P.M. Peak Hour	
	Arrivals	Departures	Arrivals	Departures
221 – Apartments (Mid-Rise)	23%	77%	61%	39%
821 – Shopping Plaza (40-150k)	62%	38%	48%	52%
850 – Supermarket	59%	41%	50%	50%
932 – Restaurant (High-turnover)	55%	45%	61%	39%
934 – Restaurant (FF w/ DT)	51%	49%	52%	48%
945 – Gas Station/Convenience Store	50%	50%	50%	50%



* TRIP DISTRIBUTION PERCENTAGES IN/OUT OF SITE DRIVE #3 & #4 ARE SHOWN FOR THE FINAL BUILD OUT (PHASE 4). TRAFFIC VOLUMES FROM THESE DRIVES WILL UTILIZE SITE DRIVE #1 FOR PHASES 1-3.

LEGEND

AM (PM) % DISTRIBUTION OF SITE GENERATED TRAFFIC VOLUMES

XXX (XXX) = ARRIVING TRIPS GENERATED

XXX (XXX) = DEPARTURES TRIPS GENERATED

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Figure 6: TRAFFIC ASSIGNMENT & TRIP DISTRIBUTION

Site Access

The site will have three driveways connected to Martintown Road and one driveway accessing Knobcone Avenue. Most traffic will flow through the main entrance on the northwest corner of the site, where the newly installed SCDOT signal is in operation. This driveway location is best suited for the main entrance due to the high volume of left turn traffic. Based on the projected volumes generated by the site, a main entrance onto Martintown Road would not be feasible without a traffic signal. This driveway location would have to contend with the right turn traffic exiting the site within the I-20 eastbound entrance ramp's auxiliary lane limits. However, with the addition of the traffic signal, this conflicting movement would be controlled. The other two Martintown Road entrances will be constructed opposite of the existing roads (Frontage Road and Plantation Drive) along the west side of the site. These entrances are anticipated to be right-in/right-out driveways. The Knobcone Avenue access will be constructed and open during the opening phase along with the mulit-family home construction. The existing roadway geometry will be used in the initial analysis of the intersection to determine if auxiliary storage lengths are adequate and if signalization is needed for acceptable traffic operations.

Proposed Build Intersection Operations

Using the proposed traffic volumes (shown in Figures 7, 8, 9, and 10) a capacity analysis was performed for the peak hours at the study area intersections. Results of the analysis for Phase 1, 2, 3 and 4 Build conditions are presented below in Table 9.

Table 9 Build Intersection Operations				
	A.M. Peak Hour		P.M. Peak Hour	
Intersection	LOS	v/c	LOS	v/c
2023 Build Year - Phase 1				
#1 W. Martintown Road @ I-20 WB Off-ramp				
- northbound thru movement	A	0.13	A	0.37
- southbound thru movement	A	0.22	A	0.17
- westbound left-turn	D	0.52	**F**	**1.01**
- westbound right-turn	B	0.09	C	0.28
#2 W. Martintown Road @ I-20 EB Off-ramp/ Site Entrance #1	B	0.79	**E**	**1.31**
- northbound thru movement	A	0.53	C	**0.93**
- southbound thru movement	A	0.45	A	0.31
- southbound left-turn	A	0.03	C	0.08
- eastbound left-turn	B	0.30	B	0.72
- eastbound right-turn	C	0.79	**F**	**1.31**
- westbound left-turn	A	0.06	A	0.02
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3				
- northbound thru movement	A	0.27	A	0.35
- northbound left-turn	B	0.01	B	0.01
- southbound thru movement	A	0.27	A	0.32
- eastbound approach	**E**	0.08	**F**	0.08
- westbound approach	N/A		N/A	
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4				
- northbound thru movement	A	0.32	A	0.38
- northbound left-turn	B	0.03	B	0.11
- southbound thru movement	A	0.34	A	0.36
- eastbound approach	D	0.31	**E**	0.29
- westbound approach	N/A		N/A	
#5 W. Martintown Road @ Knobcone Ave				
- northbound thru movement	A	0.33	A	0.35
- southbound thru movement	A	0.32	**A**	0.30
- southbound left-turn	B	0.34	C	0.44
- westbound left-turn	**F**	0.50	**F**	0.44
- westbound right-turn	C	0.49	C	0.37
-				
#6 Site Entrance #2 @ Knobcone Ave				
- eastbound left-turn	A	0.01	A	0.01
- westbound approach	A	0.12	A	0.12
- southbound approach	B	0.05	B	0.02

Table 9 (cont.) Build Intersection Operations				
	A.M. Peak Hour		P.M. Peak Hour	
Intersection	LOS	v/c	LOS	v/c
2024 Open Year – Phase 2				
#1 W. Martintown Road @ I-20 WB Off-ramp				
- northbound thru movement	A	0.13	A	0.33
- southbound thru movement	A	0.21	A	0.10
- westbound left-turn	**E**	0.71	**F**	**1.53**
- westbound right-turn	B	0.09	C	0.32
#2 W. Martintown Road @ I-20 EB Off-ramp / Site Entrance #1	B	0.81	**E**	**1.34**
- northbound thru movement	A	0.55	D	**0.99**
- southbound thru movement	A	0.42	A	0.22
- southbound left-turn	B	0.38	C	0.38
- eastbound left-turn	B	0.34	C	0.82
- eastbound right-turn	C	0.81	**F**	**1.34**
- westbound left-turn	B	0.23	B	0.14
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3				
- northbound thru movement	A	0.29	A	0.37
- northbound left-turn	B	0.01	B	0.01
- southbound thru movement	A	0.29	A	0.33
- eastbound approach	**F**	0.10	**F**	0.10
- westbound approach	N/A		N/A	
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4				
- northbound thru movement	A	0.34	A	0.40
- northbound left-turn	B	0.04	B	0.12
- southbound thru movement	A	0.36	A	0.37
- eastbound approach	**E**	0.45	**E**	0.37
- westbound approach	N/A		N/A	
#5 W. Martintown Road @ Knobcone Ave				
- northbound thru movement	A	0.29	A	0.38
- southbound thru movement	A	0.31	A	0.32
- southbound left-turn	C	0.41	C	0.52
- westbound left-turn	**F**	**1.04**	**F**	**1.48**
- westbound right-turn	C	0.57	C	0.43
#6 Site Entrance #2 @ Knobcone Ave				
- eastbound left-turn	A	0.04	A	0.04
- westbound approach	A	0.02	A	0.13
- southbound approach	B	0.18	B	0.17

Table 9 (cont.) Build Intersection Operations				
	A.M. Peak Hour		P.M. Peak Hour	
Intersection	LOS	v/c	LOS	v/c
2026 Open Year – Phase 3				
#1 W. Martintown Road @ I-20 WB Off-ramp				
- northbound thru movement	A	0.14	A	0.36
- southbound thru movement	A	0.24	A	0.11
- westbound left-turn	**F**	**0.97**	**F**	**2.23**
- westbound right-turn	B	0.10	C	0.36
#2 W. Martintown Road @ I-20 EB Off-ramp / Site Entrance #1	C	**1.41**	**F**	**1.42**
- northbound thru movement	A	0.68	**F**	**1.07**
- southbound thru movement	A	0.49	A	0.33
- southbound left-turn	**E**	**0.93**	D	**0.93**
- eastbound left-turn	B	0.33	**F**	**1.59**
- eastbound right-turn	C	0.83	**F**	**1.42**
- westbound left-turn	B	0.37	B	0.27
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3				
- northbound thru movement	A	0.33	A	0.39
- northbound left-turn	B	0.01	B	0.01
- southbound thru movement	A	0.32	A	0.36
- eastbound approach	**F**	0.13	**F**	0.13
- westbound approach	N/A		N/A	
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4				
- northbound thru movement	A	0.38	A	0.44
- northbound left-turn	B	0.04	B	0.14
- southbound thru movement	A	0.39	A	0.40
- eastbound approach	**F**	0.58	**F**	0.48
- westbound approach	N/A		N/A	
#5 W. Martintown Road @ Knobcone Ave				
- northbound thru movement	A	0.33	A	0.42
- southbound thru movement	A	0.34	A	0.34
- southbound left-turn	C	0.51	D	0.63
- westbound left-turn	**F**	**1.94**	**F**	**2.96**
- westbound right-turn	D	0.69	D	0.50
#6 Site Entrance #2 @ Knobcone Ave				
- eastbound left-turn	A	0.07	A	0.06
- westbound approach	A	0.19	A	0.10
- southbound approach	C	0.33	B	0.28

Table 9 (cont.) Build Intersection Operations				
	A.M. Peak Hour		P.M. Peak Hour	
Intersection	LOS	v/c	LOS	v/c
2028 Open Year – Phase 4				
#1 W. Martintown Road @ I-20 WB Off-ramp				
- northbound thru movement	A	0.15	A	0.39
- southbound thru movement	A	0.26	A	0.11
- westbound left-turn	**F**	**1.13**	**F**	**3.05**
- westbound right-turn	B	0.11	C	0.41
#2 W. Martintown Road @ I-20 EB Off-ramp / Site Entrance #1	D	**1.57**	**F**	**1.49**
- northbound thru movement	B	0.74	**F**	**1.13**
- southbound thru movement	A	0.53	A	0.34
- southbound left-turn	**F**	**1.20**	D	0.80
- eastbound left-turn	B	0.33	**F**	**1.03**
- eastbound right-turn	C	0.86	**F**	**1.49**
- westbound left-turn	B	0.40	B	0.41
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3				
- northbound thru movement	A	0.34	A	0.42
- northbound left-turn	B	0.01	B	0.01
- southbound thru movement	A	0.33	A	0.38
- eastbound approach	**F**	0.16	**F**	0.19
- westbound approach	B	0.09	C	0.13
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4				
- northbound thru movement	A	0.40	A	0.46
- northbound left-turn	B	0.05	C	0.18
- southbound thru movement	A	0.41	A	0.42
- eastbound approach	**F**	0.70	**F**	0.62
- westbound approach	C	0.11	C	0.15
#5 W. Martintown Road @ Knobcone Ave				
- northbound thru movement	A	0.36	A	0.45
- southbound thru movement	A	0.36	A	0.37
- southbound left-turn	C	0.57	**E**	0.74
- westbound left-turn	**F**	**2.53**	**F**	**5.44**
- westbound right-turn	**E**	0.77	**E**	0.59
#6 Site Entrance #2 @ Knobcone Ave				
- eastbound left-turn	A	0.08	A	0.08
- westbound approach	A	0.20	A	0.11
- southbound approach	C	0.38	B	0.40

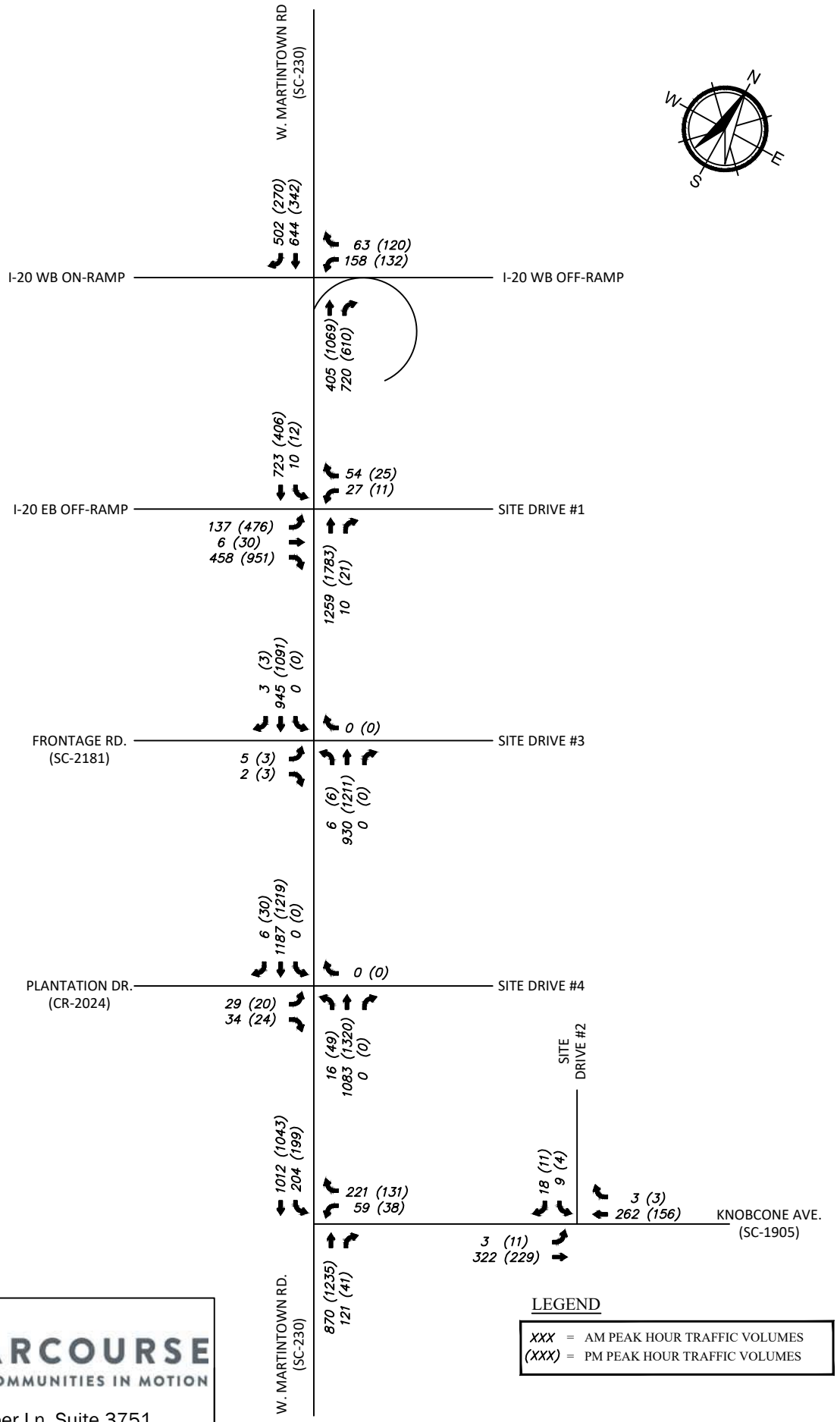

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Figure 7: 2023 PHASE 1 - BUILD TRAFFIC VOLUMES

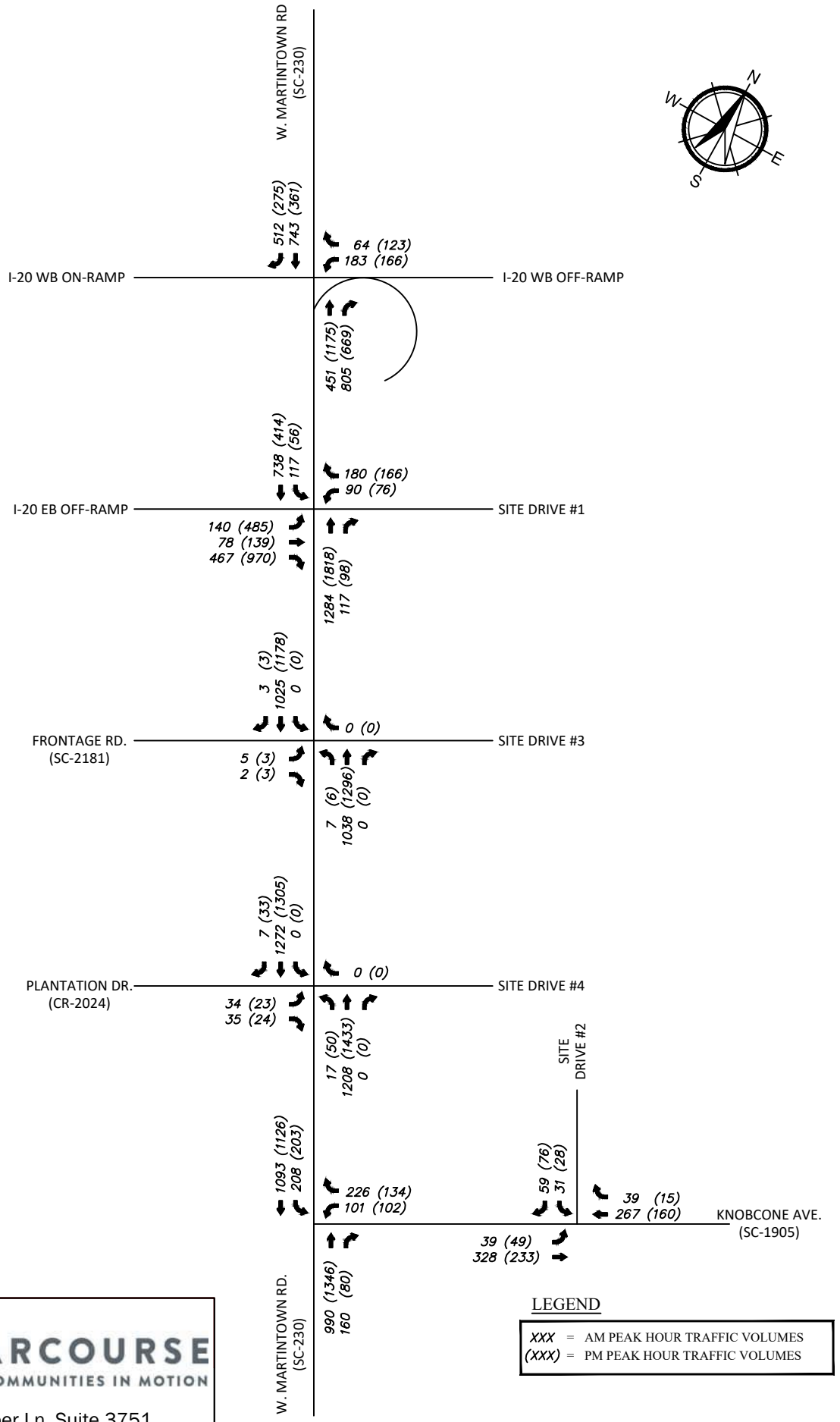

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Figure 8: 2024 PHASE 2 - BUILD TRAFFIC VOLUMES

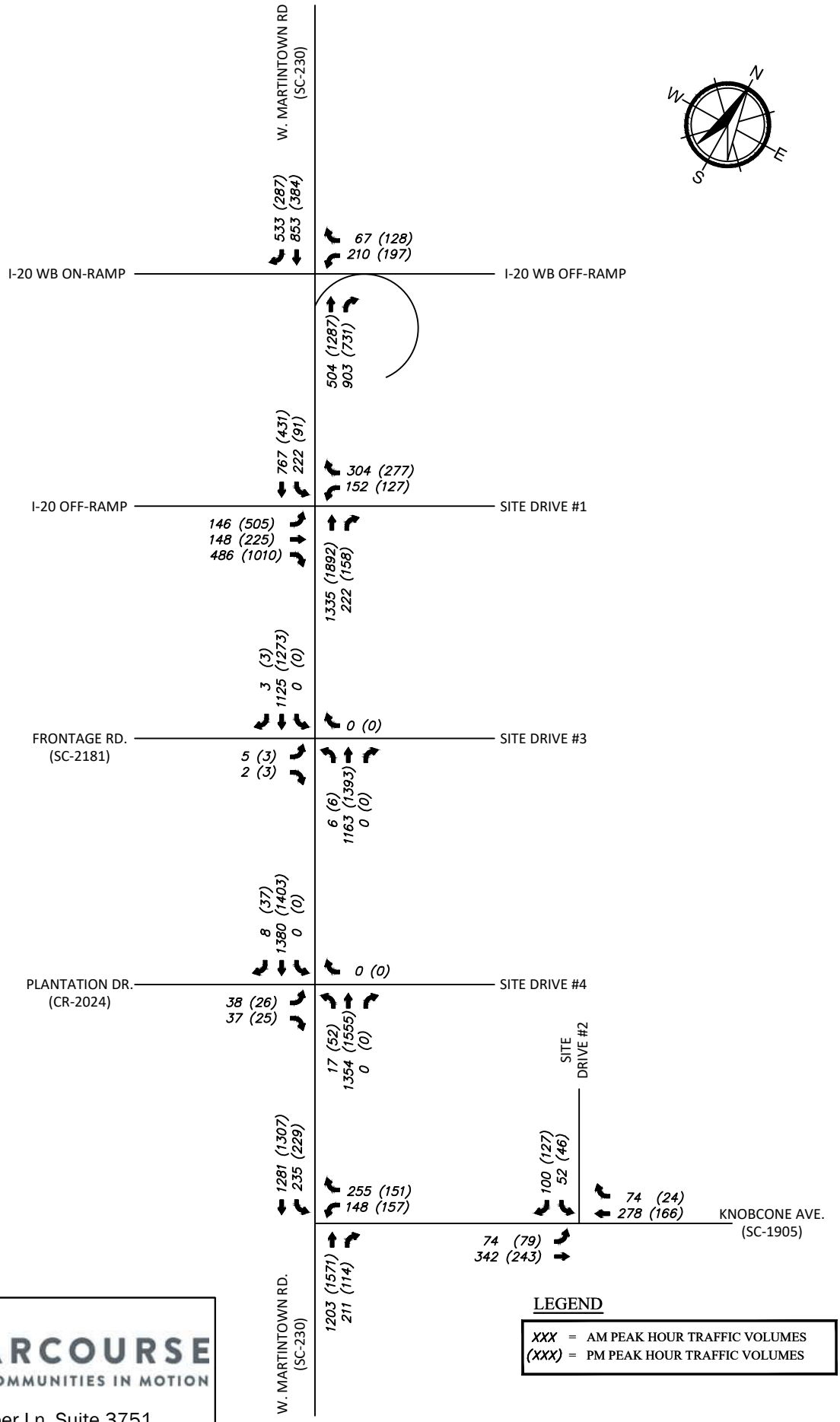

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Figure 9: 2026 PHASE 3 - BUILD TRAFFIC VOLUMES

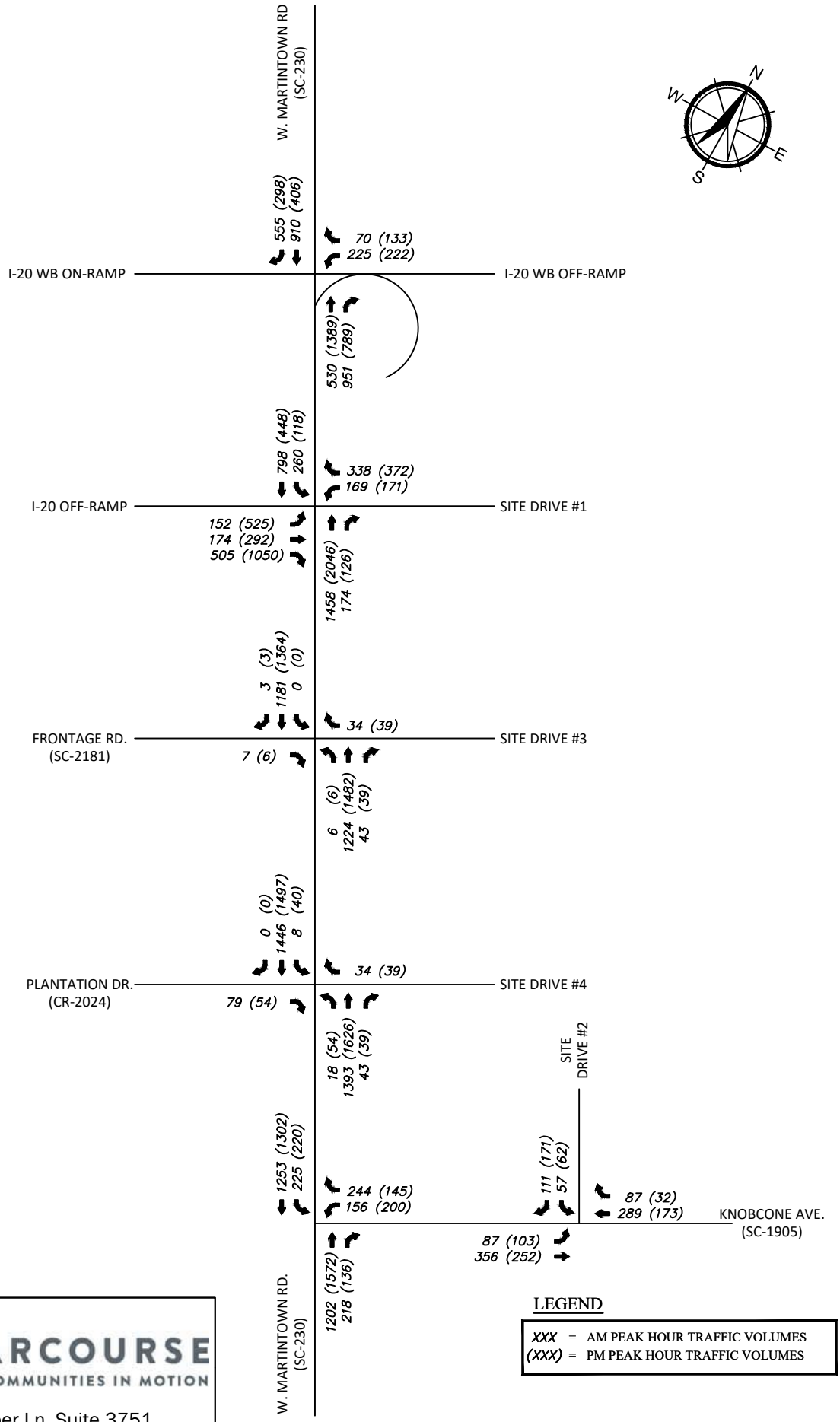

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Figure 10: 2028 PHASE 4 - BUILD TRAFFIC VOLUMES

Proposed Traffic Condition with Improvements

The modeled intersections along the study corridor were given recommended improvements (right turn deceleration lanes, dual turn lanes, etc.) to assess the degree to which the road network could be upgraded and alleviate the substandard traffic movements. Signals were also added at the westbound I-20 off-ramp and Knobcone Avenue intersections. The ultimate build year volumes were used to evaluate the entrances to the site under the most challenging conditions.

The Synchro analysis results are summarized in Table 10 and can be found in Appendix F. The recommended improvements and the Phase that they are required is shown in Figure 11. Although the analysis was only performed on the 2028 Phase 4 Build volumes, the improvements are recommended in the Phase in which the intersection approach/lanes fall below LOS D.

Table 10 Improved Intersection Operations (2028)				
	A.M. Peak Hour		P.M. Peak Hour	
Intersection	LOS	v/c	LOS	v/c
2028 Open Year – Phase 4				
#1 W. Martintown Road @ I-20 WB Off-ramp (Signalized)	**A**	**0.77**	**A**	**0.72**
- northbound thru movement	A	0.36	A	0.73
- southbound thru movement	A	0.62	A	0.21
- westbound left-turn	B	0.42	B	0.52
- westbound right-turn	A	0.28	B	0.35
#2 W. Martintown Road @ I-20 EB Off-ramp / Site Entrance #1 (Signalized)	**B**	**0.79**	**B**	**0.91**
- northbound thru movement	B	0.73	B	0.88
- southbound thru movement	A	0.52	A	0.27
- southbound left-turn	C	0.60	C	0.44
- eastbound left-turn	B	0.17	B	0.65
- eastbound right-turn	B	0.56	C	0.89
- westbound left-turn	B	0.21	C	0.29
#3 W. Martintown Road @ Frontage Rd / Site Entrance #3				
- northbound thru movement	A	0.35	A	0.39
- northbound left-turn	B	0.01	B	0.01
- southbound thru movement	A	0.33	A	0.38
- eastbound approach	B	0.02	C	0.02
- westbound approach	B	0.09	C	0.13
#4 W. Martintown Road @ Plantation Dr / Site Entrance #4				
- northbound thru movement	A	0.39	A	0.46
- northbound left-turn	B	0.05	C	0.15
- southbound thru movement	A	0.41	A	0.42
- eastbound approach	C	0.26	C	0.19
- westbound approach	C	0.11	C	0.15
#5 W. Martintown Road @ Knobcone Ave (Signalized)	**B**	**0.85**	**B**	**1.00**
- northbound thru movement	B	0.74	A	0.63
- southbound thru movement	B	0.77	A	0.52
- southbound left-turn	D	0.85	C	0.66
- westbound left-turn	B	0.34	D	0.84
- westbound right-turn	B	0.58	D	0.69
#6 Site Entrance #2 @ Knobcone Ave				
- eastbound left-turn	A	0.09	A	0.09
- westbound approach	A	0.19	A	0.14
- southbound approach	C	0.40	C	0.42

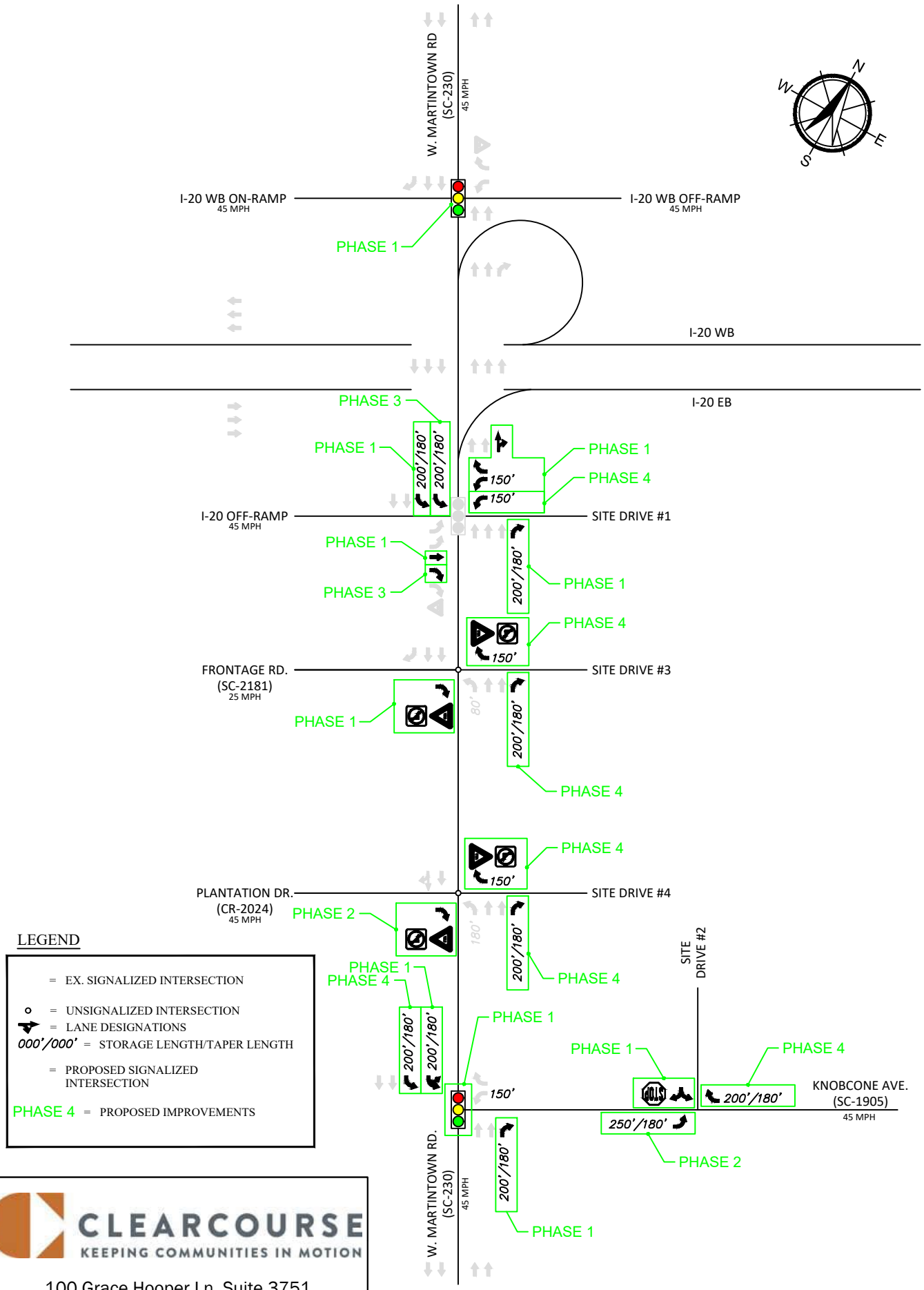

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Figure 11: RECOMMENDED IMPROVEMENTS

STUDY FINDINGS

Existing Conditions

The following points summarize analysis of the existing conditions within the study area:

- Several existing intersections will be operating in LOS of E or F in 2023 regardless of the Development's traffic volumes (I-20 WB exit ramp, Frontage Road approach, Knobcone Avenue approach) and Old Plantation Road approach is projected to experience LOS D in the No-Build Scenarios. Capacity is acceptable with the exception of the I-20 off-ramps in the PM peak hour (WB off-ramp and NB Martintown Rd at the EB off-ramp).
- A full signal warrant for Knobcone Avenue and the I-20 Westbound off-ramp were conducted to determine if a traffic signal is necessary under the existing conditions. A summary of the warrants can be found in Appendix E.

Proposed Development

The traffic impacts of the proposed Development are summarized below:

- The proposed Development off Martintown Road has been broken into several phases for the different uses to open. This phasing can be found in the report and distributes the proposed traffic out over a 5 year period.
- Phase 1 is projected to introduce 1,590 trips per day (795 in/795 out). Phase 4 (Full Build out) is projected to introduce 24,670 trips per day (12,458 in/12,213 out).
- Trip distribution was based on travel patterns associated with the existing traffic volumes. This data indicates that there is a 50/50 split of traffic arriving/departing in the morning and a 52/48 split in the afternoon to the site. There is also an equal amount of traffic arriving from the north (I-20) and the south (North Augusta).
- There are three access drives from the site to Martintown Road and one along Knobcone Avenue. The majority of traffic (~65%) will utilize the main entrance with the new signalized intersection opposite the I-20 off-ramp. The existing lane geometry will eventually need improvements at the I-20 off-ramp to handle the anticipated volumes generated by the Development. The main driveway (Site Drive #1) will include dual left-turn only lanes and a right-turn only lane. The remaining driveways onto Martintown Road will be a right in/right out access only. The Knobcone Avenue driveway was modeled with a shared right and left turn lane with acceptable delay and capacity.

Future Traffic Operations

Future build condition analyses were prepared for the Development. Results of these analyses are summarized as follows:

- The westbound I-20 off-ramp experiences failing LOS and capacity for the off-ramp approach. The installation of a traffic signal resolves the minor approach delay and successfully manages the increased traffic volume.

- The capacity issues under the build year scenario at the eastbound I-20 off-ramp are resolved with the addition of dual right turn lanes.
- Capacity issues along Martintown Rd are resolved with the addition of deceleration right turn lanes into each of the site driveways and restriping Martintown Road north of the eastbound onramp to allow three through travel lanes across the I-20 overpass bridge.
- Coordination with the Martintown Rd Corridor Study and the I-20 widening project will be needed to provide a solution for the future development of this interchange's intersections. Future raised median work, access management, and road realignment are not necessary for this development, but may be requested by the City of North Augusta to comply with the corridor study recommendations.

Recommended Mitigation

Several intersections are in need of improvements under the No-Build Scenario and should not be the responsibility of the developer, per North Augusta's Development. A list of all improvements for each phase are summarized below:

Phase 1 Open:

- Intersection 1 – Martintown Rd @ I-20 WB Off-ramp
    1. A traffic signal will be needed. No additional lane improvements are necessary for the Development.
- Intersection 2 – Martintown Rd @ I-20 EB Off-ramp/Site Entrance #1
    1. Improvements to this intersection will include construction of the main entrance. The entrance only requires a single left turn and right turn lane exiting the site for Phase 1.
    2. A through lane will be required to be restriped on the offramp.
    3. A southbound left turn lane will also need to be restriped in the existing paved median.
    4. The northbound right turn lane will also need to be constructed for the main entrance.
    5. The three northbound lanes located north of the intersection will be extended through the offramp and tie into the westbound offramp lane.
    6. A signal modification will be required along with the road improvements.
- Intersection 3 – Martintown Rd @ Frontage Dr/Site Entrance #3
    1. Improvements will include revising the Frontage Road approach to a RI/LI/RO movement.
- Intersection 4 – Martintown Rd @ Plantation Dr/Site Entrance #4
    1. No improvements are necessary for Phase 1.
- Intersection 5 – Martintown Rd @ Knobcone Ave
    1. A traffic signal will be needed for Phase 1.
    2. The southbound left turn lane will be converted to a left turn/u turn lane and widening on Martintown Road will be required to allow for the u turn movement.
    3. A northbound right turn lane will be required for safety purposes due to the increased volume of right turning traffic from the high volume Martintown Road.
- Intersection 6 – Site Entrance #2 @ Knobcone Ave
    1. Required improvements for Phase 1 are for the shared right and left turn lane exiting the site and a single lane entering the site. Future required improvements on Knobcone Avenue may be installed during this phase for constructability.

Phase 2 Open:

- Intersection 1 – Martintown Rd @ I-20 WB Off-ramp
    1. No improvements are necessary for Phase 2.
- Intersection 2 – Martintown Rd @ I-20 EB Off-ramp/Site Entrance #1
    1. No improvements are necessary for Phase 2.
- Intersection 3 – Martintown Rd @ Frontage Dr/Site Entrance #3
    1. No improvements are necessary for Phase 2.
- Intersection 4 – Martintown Rd @ Plantation Dr/Site Entrance #4
    1. Improvements will include revising the Plantation Drive approach to a RI/LI/RO movement.
- Intersection 5 – Martintown Rd @ Knobcone Ave
    1. No improvements are necessary for Phase 2.
- Intersection 6 – Site Entrance #2 @ Knobcone Ave
    1. The westbound left turn lane into the site is required for Phase 2.

Phase 3 Open:

- Intersection 1 – Martintown Rd @ I-20 WB Off-ramp
    1. No improvements are necessary for Phase 3.
- Intersection 2 – Martintown Rd @ I-20 EB Off-ramp/Site Entrance #1
    1. An additional southbound left turn lane is necessary for Phase 3. Additional widening to Martintown Road will be required.
    2. An additional eastbound right turn lane is necessary for the offramp in Phase 3.
- Intersection 3 – Martintown Rd @ Frontage Dr/Site Entrance #3
    1. No improvements are necessary for Phase 3.
- Intersection 4 – Martintown Rd @ Plantation Dr/Site Entrance #4
    1. No improvements are necessary for Phase 3.
- Intersection 5 – Martintown Rd @ Knobcone Ave
    1. No improvements are necessary for Phase 3.
- Intersection 6 – Site Entrance #2 @ Knobcone Ave
    1. No improvements are necessary for Phase 3.

Phase 4 Open:

- Intersection 1 – Martintown Rd @ I-20 WB Off-ramp
    1. No improvements are necessary for Phase 4.
- Intersection 2 – Martintown Rd @ I-20 EB Off-ramp/Site Entrance #1
    1. No improvements are necessary for Phase 4.
- Intersection 3 – Martintown Rd @ Frontage Dr/Site Entrance #3
    1. Site entrance #3 will be constructed for Phase 4. This will be a RI/RO restricted drive with a decel lane for the right turns entering the site from Martintown Road.

- Intersection 4 – Martintown Rd @ Plantation Dr/Site Entrance #4
    1. Site entrance #4 will be constructed for Phase 4. This will be a RI/RO restricted drive with a decel lane for the right turns entering the site from Martintown Road.
- Intersection 5 – Martintown Rd @ Knobcone Ave
    1. Southbound dual left turn lanes are necessary for Phase 4. Additional widening to Martintown Road will be required.
- Intersection 6 – Site Entrance #2 @ Knobcone Ave
    1. Improvements required for Phase 4 include the westbound right turn lane into the site from Knobcone Avenue.

THE PARKER AUGUSTA

TRAFFIC IMPACT STUDY
FRONTAGE ROAD @ W. MARTINTOWN ROAD (SC-230)

Prepared for:

JH Cleveland
618 PONDER PLACE DR
EVANS, GA 30809

Prepared by:

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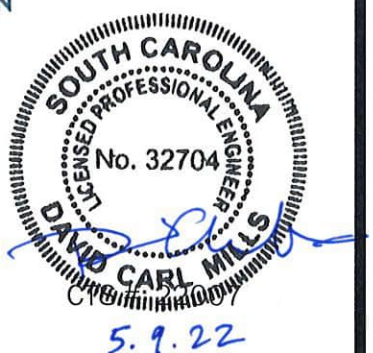
SUBMITTED: MAY 2022



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APPENDICES

EXECUTIVE SUMMARY

Introduction

The proposed development for The Parker Augusta (formerly River Falls Apartments) is located near the intersection of W. Martintown Road (SC-230) and Frontage Road in North Augusta, South Carolina. The Parker Augusta project is situated on the 16-acre tract located on Frontage Road behind Wacky Waynes Fireworks. The River Falls Apartment Traffic Impact Study for Phase 1 was submitted to the SCDOT District 7 and approved in 2021. The property has since been transferred to new ownership and the revised development plan anticipates building the entire site at once. The project proposes a single construction phase to include 18 buildings comprised of 1, 2, and 3-bedroom units totaling 264 dwelling units. Since the previous Study was already approved, we have built off that approved Phase 1 of construction and projected full occupancy by 2025. The purpose of this study is to analyze the access plan and traffic impacts associated with this full buildout of this proposed development.

Existing Conditions

The Martintown Road corridor is classified as a Tier II roadway by the City of North Augusta (CoNA) Development Plan. Per the North Augusta Development Code, a development is responsible for roadway improvements for any project that creates a Level of Service (LOS) of D or worse. The existing roadways are sufficient with the exception of the I-20 WB off-ramp left turn and the Frontage Road approach to Martintown Road. These both experience LOS F in the AM and PM peak hours and require improvements, regardless of the traffic from proposed site.

Proposed Development

The anticipated traffic generated by The Parker Augusta Apartments is approximately 1,650 trips a day. Due to the high volume of traffic on Martintown Road, left hand turns exiting the development experienced high delay times (LOS F) in both the open year-build and design year analysis scenarios. Due to the close proximity to the existing traffic signal at the eastbound I-20 off-ramp, a traffic signal was deemed to be unfeasible at this location. Therefore, all traffic exiting the development would need to exit southbound on Martintown Road and make a U-turn to get north to the I-20 interchange. Northbound traffic turning left to enter the proposed development still operates at acceptable levels.

Recommendations

ClearCourse recommends that the intersection of Martintown Road at Frontage Road be revised to a right-out only for traffic coming from Frontage Road. Road widening along northbound Martintown Road will be required at the U-turn location to allow for the design vehicle turning movement. It is anticipated that a signal will be needed at the Knobcone Avenue intersection in the near future and therefore the U-turn at this intersection is desirable. Any traffic desiring to travel north exiting the site will be required to exit south on Martintown Road and make a U-turn at the Knobcone Avenue intersections.

INTRODUCTION

This report analyzes the existing and projected traffic volumes associated with the revised layout for The Parker Augusta (formerly River Falls Apartments) development at the intersection of W. Martintown Road (SC-230) and Frontage Road in North Augusta, South Carolina. The Parker Augusta project contains a single construction phase situated on a 16-acre tract located on Frontage Road behind Wacky Waynes Fireworks. The development will be 18 buildings comprised of 1, 2, and 3-bedroom units.

LOCATION

The site is located in the western corner of Aiken County, within the North Augusta city limits. It falls within the City's Traffic Impact Tier 2 and is just south of I-20 Exit 1. See Figure 1 for the Vicinity Map and Figure 2 for the Project Site Map. This report is submitted to the South Carolina Department of Transportation (SCDOT) and North Augusta Engineering & Planning and Development Departments for review on behalf of the developer, JH Cleveland.

Existing traffic conditions were analyzed for the intersection to determine the need for potential improvements to accommodate the future traffic volumes and allow efficient ingress and egress to the site. Capacity issues are not anticipated on Frontage Road due to minimal traffic that currently utilizes Frontage Road. Therefore, the focus of this study will be on the capacity and delay associated with the additional traffic entering and exiting onto W. Martintown Rd (SC-230) during the peak hours and passing through the two I-20 Exit 1 interchange intersections. The methodology to assess operations and the study findings are summarized in the sections that follow.

Figure 1: Vicinity Map

CAPACITY ANALYSIS METHODOLOGY

The methodology used for evaluating intersection traffic operations is based on criteria set forth in the Transportation Research Board's Highway Capacity Manual, 6th Edition (HCM). The capacity of an intersection is described in terms of Level of Service (LOS), which ranges from A to F and corresponds to average control delay per vehicle.

In general, the LOS may be defined as a measure of operating conditions within a traffic stream and the perception of the conditions by the general motoring public. The six levels of service are briefly described, as follows:

- LOS A – Little or no traffic delays;
- LOS B – Minimal to short traffic delays;
- LOS C – Average traffic delays;
- LOS D – Relatively long traffic delays;
- LOS E – Intersections are at or near the maximum capacity and traffic experiences long delays; and
- LOS F – Intersections are operating above their maximum capacity and traffic delays are long and unstable.

For signalized intersections, one overall intersection LOS is reported. At unsignalized intersections, the LOS for each controlled approach or movement (side-streets and main-street left-turns) is reported. Table 1 presents LOS criteria for signalized and unsignalized intersections.

Table 1
Level of Service Criteria

LOS	Average Control Delay (sec / veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤10
B	> 10 and ≤20	> 10 and ≤ 15
C	> 20 and ≤35	> 15 and ≤ 25
D	> 35 and ≤55	> 25 and ≤ 35
E	> 55 and ≤80	> 35 and ≤ 50
F	> 80	> 50

A volume-to-capacity ratio (v/c) is also computed for each lane group and at signalized intersections an overall v/c ratio is reported. The capacity of the intersection is calculated based on the geometry and traffic control. Intersection capacity is then compared to the volumes entering the intersection. A v/c ratio of less than 1.0 indicates that there is sufficient capacity for the traffic demand. A v/c ratio of more than 1.0 generally indicates the need for intersection improvements.

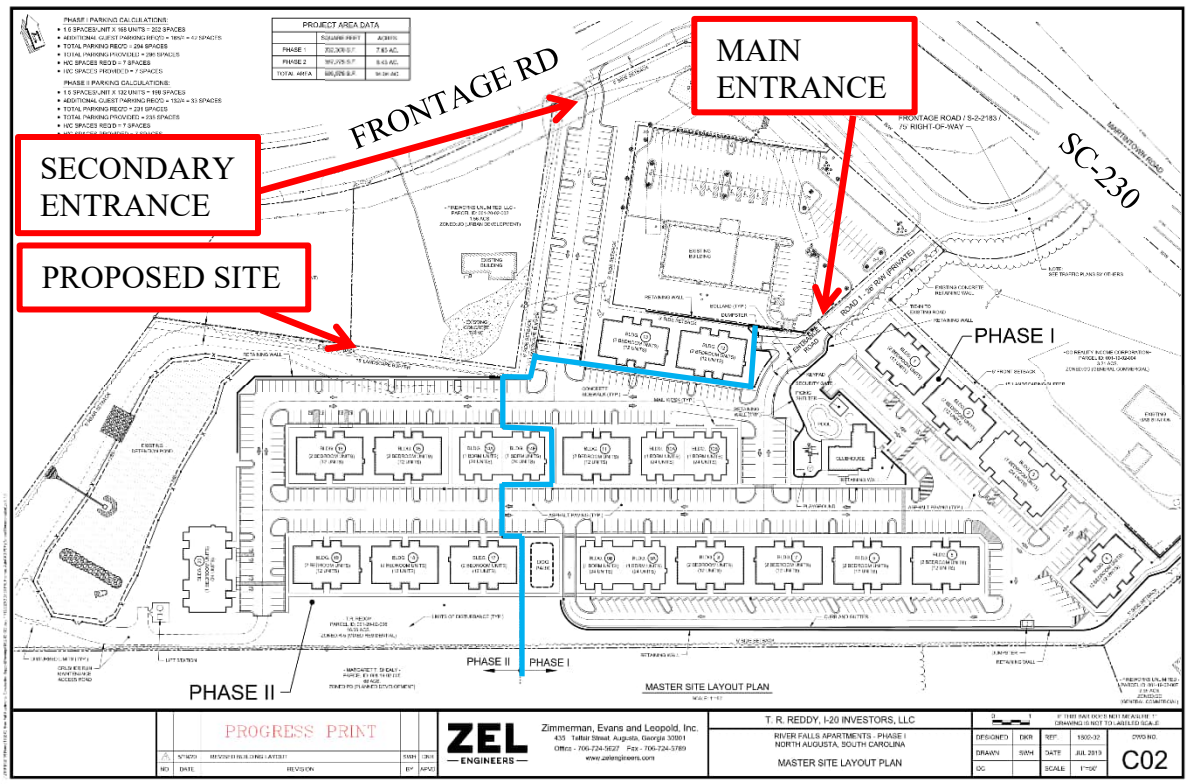

Figure 2: Project Site Map

EXISTING CONDITIONS SURVEY

An evaluation of existing conditions was performed to document existing operations and provide a basis for relative comparison of future conditions. The following paragraphs describe the existing roadway facilities, traffic volumes, and intersection operations.

The study area for this project includes Frontage Road, W. Martintown Road, and the EB and WB I-20 Exit 1 off-ramps. W. Martintown Road is a state route (SC-230) that connects Edgefield County to North Augusta's Central Business District. Frontage Road intersects W. Martintown Road just south of the I-20 interchange (Exit 1). W. Martintown Road carries the majority of traffic volume while Frontage Road is the minor side road. W. Martintown Road is a 5-lane section that includes a center two-way left turn lane. The Frontage Road approach to the intersection is a single lane with a shared left turn and right turn lane with a stop condition. A newly installed traffic signal is located at the intersection of W. Martintown Road and the eastbound I-20 off-ramp. For the purposes of this study, Frontage Road is the east/west movement and W. Martintown Road is north/south. Figure 3 shows the existing lane geometry for the intersections in the study area.

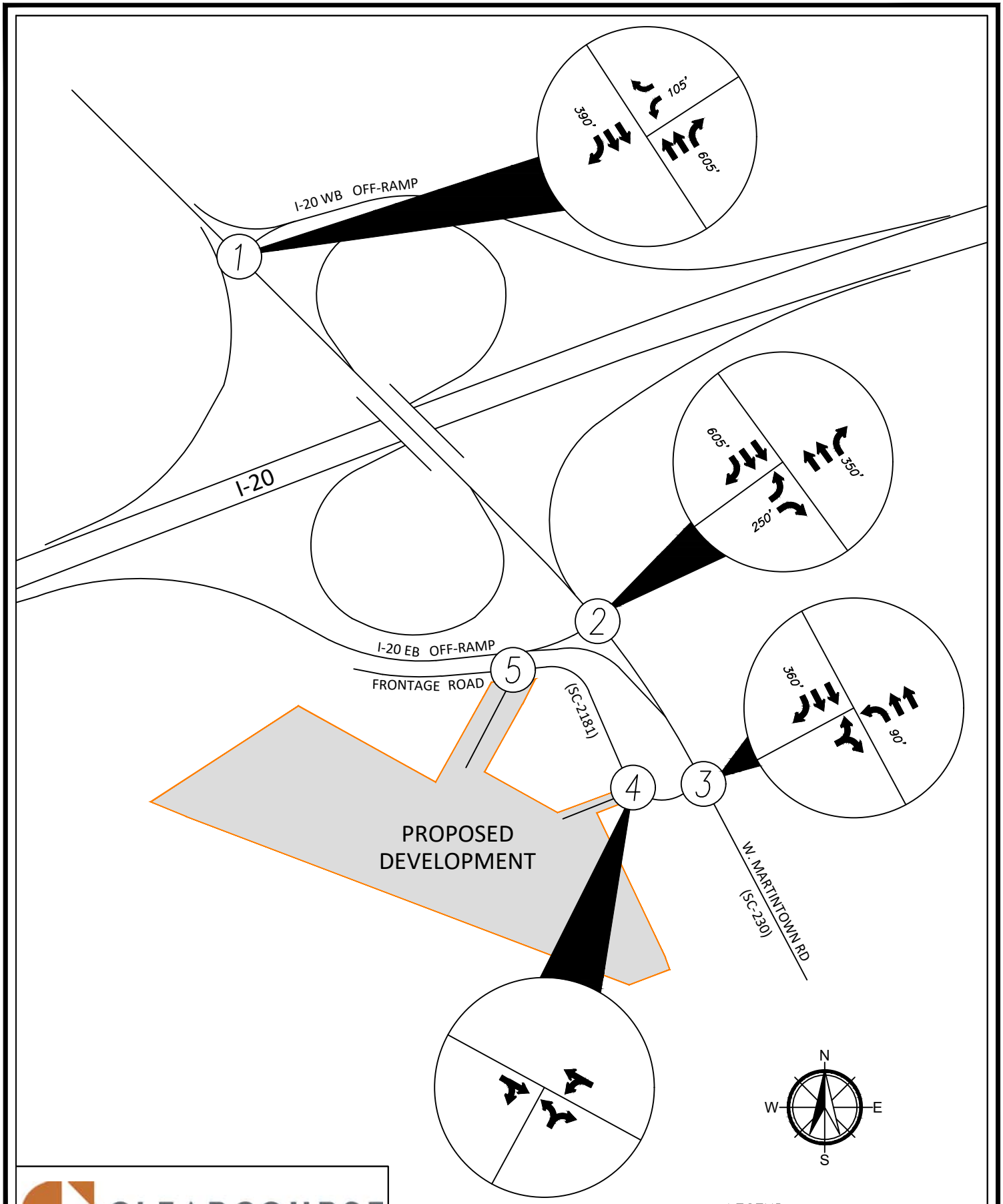

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Figure 3: EXISTING LANE GEOMETRY

Existing Conditions

This development is proposed near the I-20 Exit 1 interchange that intersects Martintown Road in North Augusta, South Carolina. The Martintown Rd corridor is largely underdeveloped at the interchange. It was observed that the existing roadways adequately maintain the existing traffic volume with several intersections experiencing a long delay for the minor approaches during the peak hours. However, there are several projects ongoing in the surrounding areas and are summarized in the West Martintown Road Corridor Study, adopted by the City of North Augusta in April 2021.

Existing Traffic Volumes

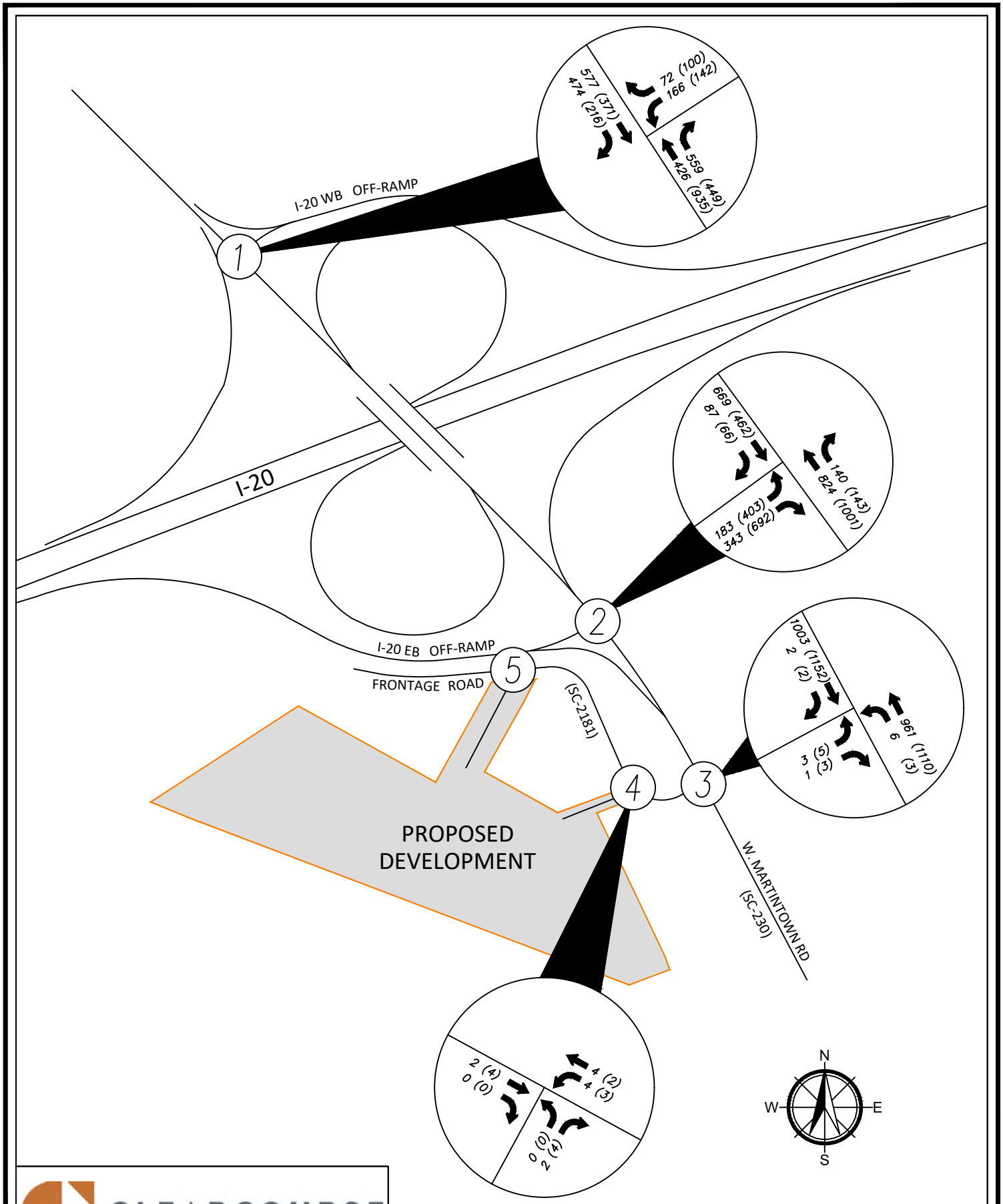
Turning movement counts were performed for the 2-hour peak times on March 22, 2022 from 7:00 am to 9:00 am and from 4:00 pm to 6:00 pm. The four consecutive 15-minute interval volumes that summed to the highest volume during the morning and evening peak periods were determined at each intersection. Tube counts were also conducted to establish the average daily traffic (ADT) volume, as shown in Table 2.

Table 2
Traffic in the Study Area

Route	Location	2022 ADT	Average Annual Growth	2025 ADT (100% Capacity)	2030 ADT (Design Year)
W. Martintown Road	North of Frontage Road	23,730	2.00%	25,182	27,803
Frontage Road	Between CSRA Pain Management driveway and W. Martintown Road	313	2.00%	332	367

Historical traffic data from SCDOT line counts show a 2.0% growth rate in the study area. The traffic study done for the I-20 project showed growth rates from 1.2% - 1.83% at the interchange. The historical line count data was used for this report as it was the more conservative estimate. The growth rate was applied to the existing volumes over three and eight years to give the 2025 (base year) and 2030 (design year) traffic volume projections.

Existing intersection operations were analyzed to establish current traffic conditions and identify areas of existing deficiencies that should be addressed. The opening year existing peak hour counts and current intersection geometries were used in the analysis. The results are summarized in Table 3 and the estimated opening year, No-Build volumes are illustrated in Figure 4.



LEGEND

XXX – AM PEAK HOUR TRAFFIC VOLUMES
(XXX) – PM PEAK HOUR TRAFFIC VOLUMES

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Figure 4: 2023 BASE TRAFFIC VOLUMES - NO BUILD

Table 3 Existing Intersection Operations – Base Year (2023)						
Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Delay (sec)	LOS	v/c	Delay (sec)	LOS	v/c
W. Martintown Road @ I-20 WB Off-ramp						
westbound left-turn	58.4	F	0.82	194.7	F	1.18
westbound right-turn	10.5	B	0.12	14.0	B	0.22
W. Martintown Road @ I-20 EB Off-ramp*	--	--	--	--	--	--
Eastbound approach	10.8	B	0.40	12.1	B	0. 57
W. Martintown Road @ Frontage Road						
northbound left-turn	10.9	B	0.01	11.2	B	0.01
eastbound approach	66.6	F	0.22	63.5	F	0.18
Site Driveway #1 @ Frontage Road						
- westbound left-turn	7.2	A	0.00	7.2	A	0.00
- northbound approach	8.3	A	0.00	8.3	A	0.00

* Denotes a signalized intersection

The westbound off-ramp experiences failing delays (LOS F) in the AM and PM peak hours for the left-turn movement. The Frontage Road approach at W. Martintown Road also operates at LOS F during the morning and evening peak hours. The northbound left-turn operates at LOS B in the AM and PM peak hours. The proposed site entrance projects to operate at LOS A for AM and PM peak hours. All approaches are below capacity for the total traffic volume carried and do not warrant additional capacity, except for the westbound off-ramp, which has a capacity over 1.0 in the PM peak hour.

Under the opening year No Build traffic conditions, the existing roadway geometry and traffic control in the study area is failing to serve existing demand with a surplus of capacity. Mitigation measures have been identified in the West Martintown Road Corridor Study for these intersections. However, there is currently no plan or ongoing design for these improvements.

Proposed Build Traffic Conditions

The proposed apartment development will access Frontage Road and move through the Martintown Road intersection. The apartment complex is proposed to have a single phase with 264 total apartments constructed by 2024. The traffic analysis is broken into the open year scenario (50% occupancy by 2023); the 100% occupancy scenario (by 2025); and the design year scenario (2030). A design period of 5 years is used to evaluate the short-term growth of the study area. The existing traffic volumes were given a 2.0% growth rate projection for the proposed traffic analysis. Trip generations were calculated for the apartments using the number of units based on the use of the proposed building. Proposed traffic volumes used in this analysis are made up of the projected 2023, 2025 and 2030 traffic volumes plus the addition of projected site-generated traffic. Projections for trip generation and traffic assignment are detailed in the following sections.

Trip Generation

Traffic that will be generated by the apartment development is projected based on trip generation characteristics for similar land uses nationwide. The trip generation rates used in this study were taken from the 10th edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual report. Trip generations were based on *ITE Land Use 220 – Multifamily Housing (Low Rise)*. Due to the nature of this site, pass-by reductions were deemed not applicable.

Gross trip generations for the proposed development are presented in Table 4.

Table 4
Trip Generation

Land Use	A.M. Peak Hour			P.M. Peak Hour			Average Daily Trips		
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220 – Multifamily Housing – 2023 50% Occupied (132 Units)	11	43	54	46	25	71	416	417	833
220 – Multifamily Housing – 2025 100% Occupied (264 Units)	20	81	101	91	49	140	833	833	1666
Pass-by Reductions	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
New Driveway Volumes (100% Occupied)	**20**	**81**	**101**	**91**	**49**	**140**	**833**	**833**	**1666**

Traffic Assignment and Trip Distribution

The arriving/departing percentages for Trip Assignment were determined by the proposed building uses based on the historical data of the building uses, per the Trip Generation Manual. Traffic Distribution describes the direction drivers will be coming from/going to when they turn into and depart from the site. The breakdown of the assigned trips generated by the site is shown in Table 5. The trip distribution volumes of the arrivals and departures for this site onto Martintown Road is presented in Figure 5. Both the arriving and departing trip percentages were calculated based on the existing turning movements due at each interchange intersection and on Frontage Road. The resulting traffic that will be generated by these calculations was added to the study area based on these distributions.

Table 5
Trip Generation Percentages

Building Use	A.M. Peak Hour		P.M. Peak Hour	
	Arrivals	Departures	Arrivals	Departures
220 – Multifamily Housing (Low-Rise)	20%	80%	65%	35%

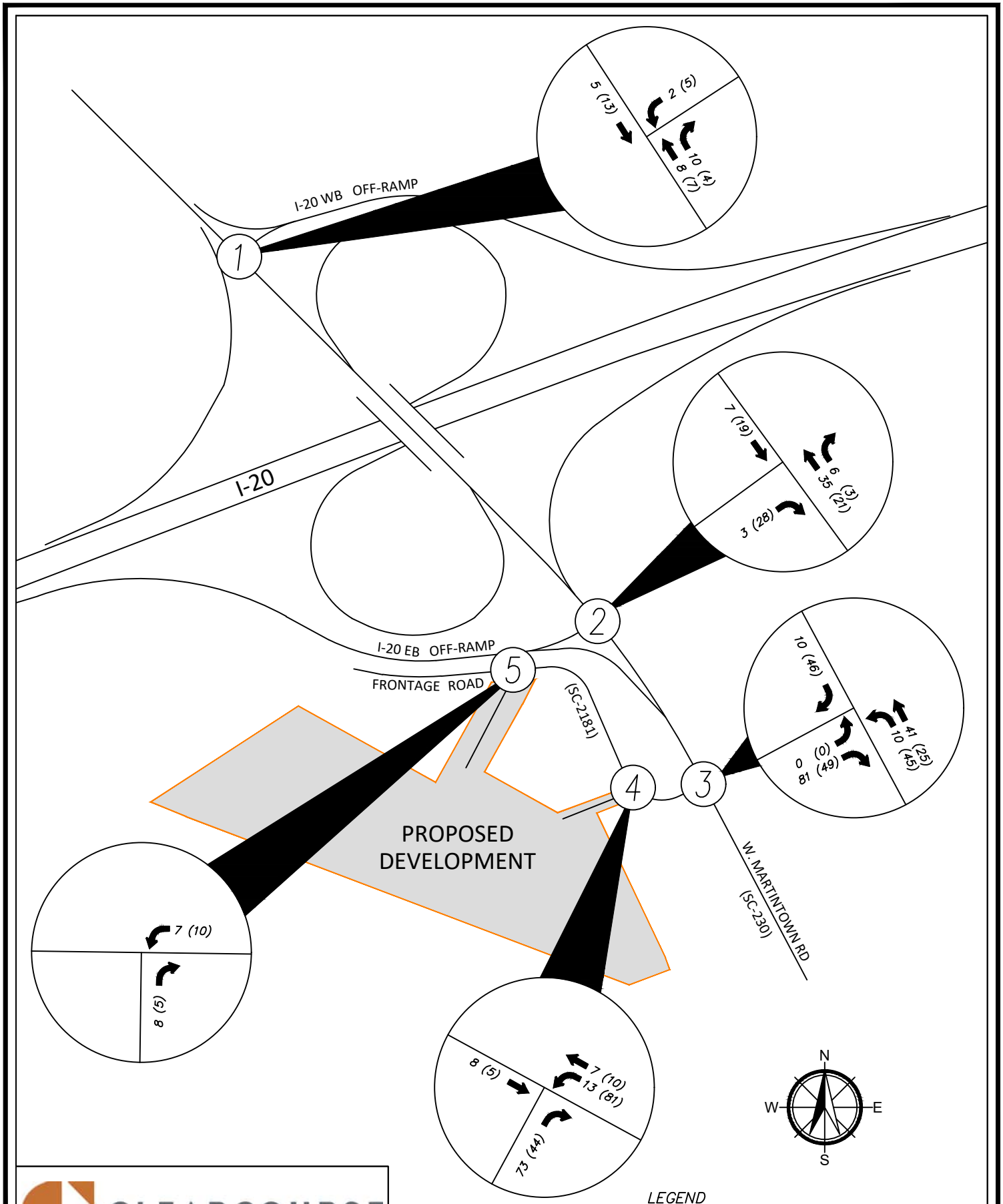

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Figure 5: SITE GENERATED TRAFFIC VOLUMES (100% BUILD)

Site Access

The site will have two driveways connected to Frontage Road. Due to the layout of the parking lot, it is assumed most traffic will flow through the main entrance on the east side of the site. The other entrance will connect to Frontage Road on the north side of the site. This second driveway has been included in the analysis of Frontage Road for this report. The existing roadway geometry will be used in the initial analysis of the intersection to determine if auxiliary storage lengths are adequate and if further improvements are needed for acceptable traffic operations.

Proposed Intersection Operations

Using the proposed traffic volumes (shown in Figures 6, 7 and 8) a capacity analysis was performed for the peak hours at the study area intersection. Results of the analysis for the 100% occupied-year and a 5-year design scenarios are presented below in Table 6.

The northbound left-turn movement from Martintown Road provides adequate capacity for all design periods analyzed and the delay is no worse than the LOS B. The storage length of the existing left-turn lane was observed to be approximately 100 feet long with a 50-foot taper length. This was adequate based on the maximum queue length remaining under 50 feet. The minor approach to the intersection experiences significant delay due to the increased exiting left-turn volumes. With the initial construction phase already approved and underway, it is recommended that Frontage Road be improved to a right out only. Making this improvement changes the approach from LOS F in both the AM and PM Build scenario to a LOS E in the AM peak and LOS C in the PM peak during the Design year scenario. The summary of each movement is provided below in Table 6.

Table 6
Intersection Operations Summary

Intersection	A.M. Peak Hour			P.M. Peak Hour		
	Delay (sec)	LOS	v/c	Delay (sec)	LOS	v/c
2025 Build						
W. Martintown Road @ I-20 WB Off-ramp						
- westbound left-turn	62.4	F	0.84	210.7	F	1.22
- westbound right-turn	10.5	B	0.13	14.0	B	0.23
W. Martintown Road @ I-20 EB Off-ramp*	5.4	**A**		**8.0**	A	
- Eastbound approach	11.0	B	0.40	12.2	B	**0.57**
W. Martintown Road @ Frontage Road						
- northbound left-turn	10.9	B	0.02	11.6	B	0.05
- eastbound approach	819.5	F	2.54	182.7	F	0.88
Site Driveway #1 @ Frontage Road						
- westbound left-turn	8.5	A	0.04	8.4	A	**0.03**
- northbound approach	7.2	A	0.01	7.3	A	0.03
Site Driveway #2 @ Frontage Road						
- westbound left-turn	0.0	A	0.00	0.0	A	0.00
- northbound approach	0.0	A	0.00	0.0	A	0.00
2030 Build w/ Improvments						
W. Martintown Road @ I-20 WB Off-ramp						
- westbound left-turn	163.1	F	1.18	164.2	F	**1.1**
- westbound right-turn	11	B	0.15	13.7	B	0.22
W. Martintown Road @ I-20 EB Off-ramp*	6.0	A		**7.8**	A	
- Eastbound approach	12.1	B	0.45	11.9	B	**0.56**
W. Martintown Road @ Frontage Road						
- northbound left-turn	12.0	B	0.04	12.6	B	**0.13**
- eastbound approach (Right Only)	41.7	E	0.81	15.8	C	**0.23**
Site Driveway #1 @ Frontage Road						
- westbound left-turn	8.6	A	0.08	8.5	A	**0.05**
- northbound approach	7.3	A	0.01	7.4	A	0.06
Site Driveway #2 @ Frontage Road						
- westbound left-turn	7.2	A	0.01	7.2	A	0.01
- northbound approach	8.4	A	0.01	8.4	A	0.01

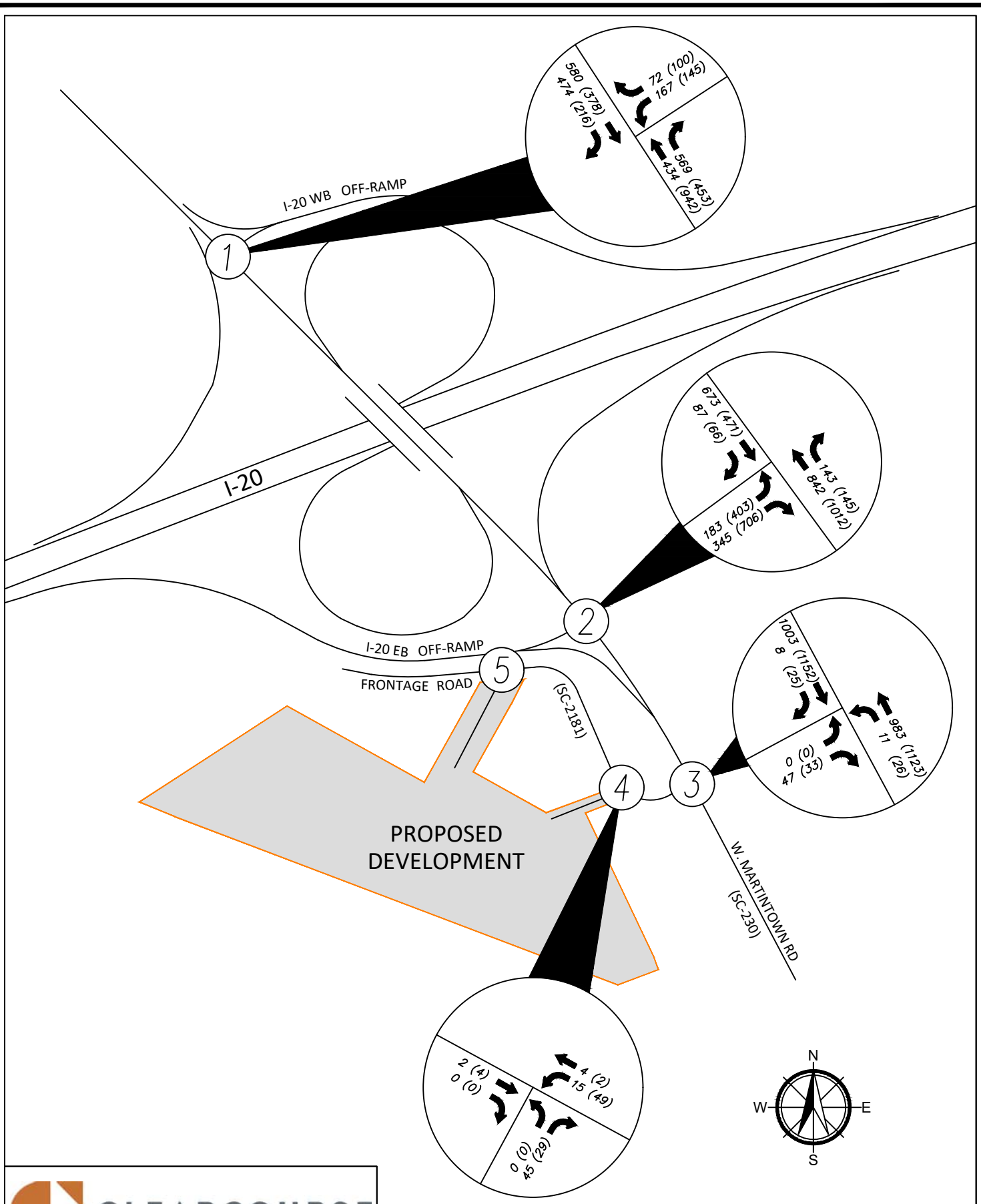

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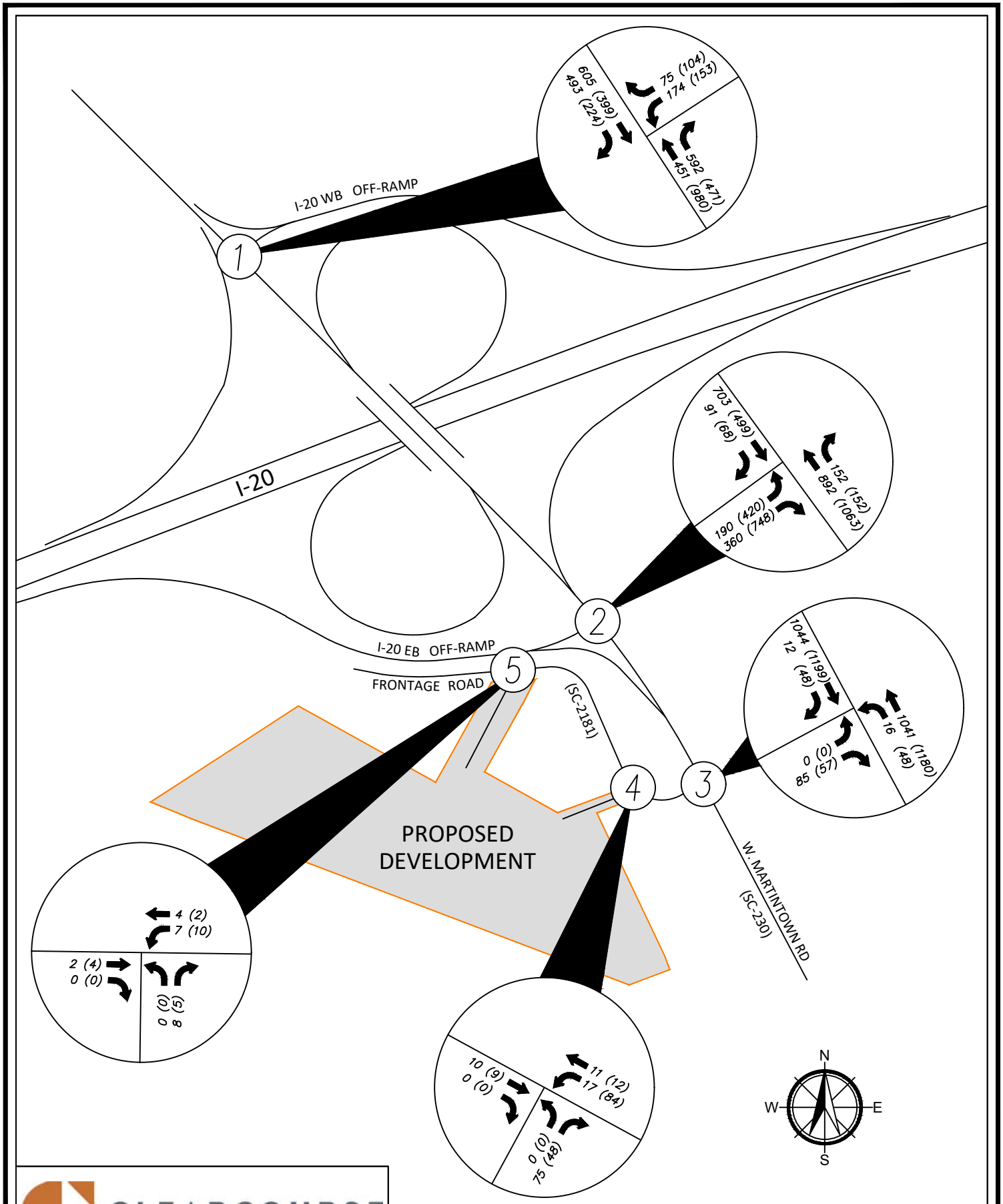
Figure 6: 2023 BUILD TRAFFIC VOLUMES



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LEGEND

XXX – AM PEAK HOUR TRAFFIC VOLUMES
(XXX) – PM PEAK HOUR TRAFFIC VOLUMES

Figure 7: 2025 100% BUILD TRAFFIC VOLUMES

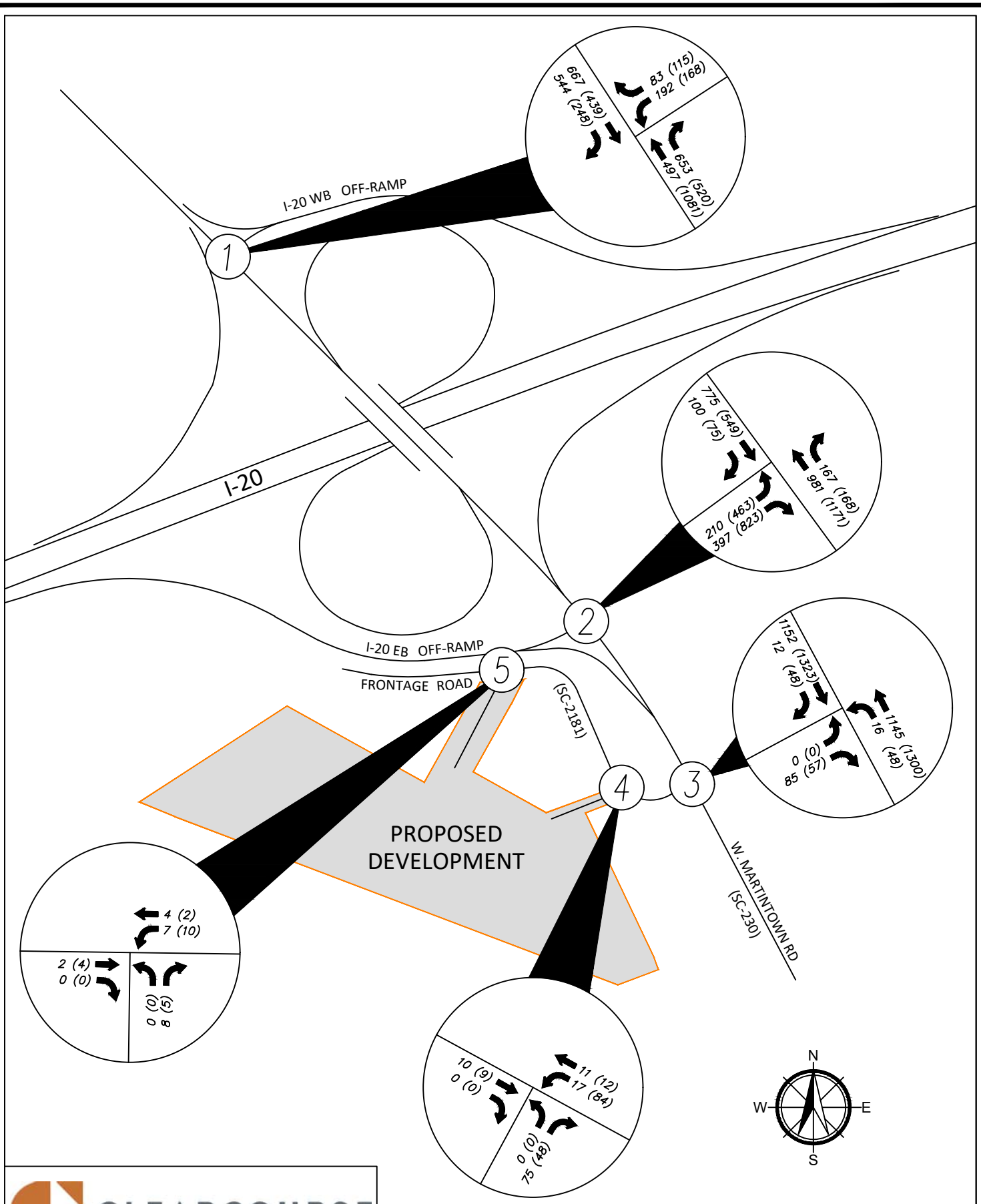

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Figure 8: 2030 DESIGN TRAFFIC VOLUMES

STUDY FINDINGS

Existing Conditions

The following points summarize analysis of the existing conditions within the study area:

- Existing operations along W. Martintown Road (SC-230) at Frontage Road are mostly within acceptable ranges of delay. However, the Frontage Road approach already experiences a long delay (LOS F) due to the high traffic volumes on Martintown Road.
- The westbound I-20 off-ramp left turn movement experiences LOS F in both the AM and PM peak hours and is over capacity in the PM peak hour.
- Improvements were identified to mitigate the current and projected traffic volumes in the West Martintown Road Corridor Study, adopted by the City of North Augusta in April 2021. There are no currently no projects programed for these improvements.

Proposed Development

The anticipated traffic impacts of The Parker Augusta Apartments are summarized below:

- The proposed Open Year (50% occupancy) for the apartment complex off Frontage Road is projected to introduce 833 new trips to W. Martintown Road on a daily basis. Approximately 54 of these new trips will occur during the morning peak hour and 71 new trips will occur during the evening peak hour.
- The proposed Open Year (100% occupancy) for the apartment complex off Frontage Road is projected to introduce 1,650 new trips to W. Martintown Road on a daily basis. Approximately 101 of these new trips will occur during the morning peak hour and 140 new trips will occur during the evening peak hour.
- Trip distribution was based on travel patterns associated with the existing traffic volumes on Martintown Road. This data indicates that there is a 53/47 split of traffic arriving from/departing to the north/south direction in both the morning and in the afternoon.
- There are two access drives from the site to Frontage Road and both will funnel the proposed traffic through the analyzed intersection at W. Martintown Road. The existing lane geometry at the proposed driveway is sufficient for the anticipated volumes generated by the apartment complex.
- The delay for traffic exiting the site at the Frontage Road intersection is failing due to the high volume of cross traffic on W. Martintown Road not allowing for gaps. A signal warrant was recommended to analyze the intersection with a signal control. However, due to the proximity of the existing signal recently installed as part of the I-20 widening project at the I-20 Exit 1 eastbound exit ramp, a signal was not deemed feasible.

STUDY FINDINGS (CONT.)

Future Traffic Operations

Future build condition analyses were prepared for The Parker Augusta Apartments. Results of these analyses are summarized as follows:

- The un-signalized intersections at Frontage Road and I-20 westbound off-ramp will operate with extended delays on the existing, stop-controlled T-intersection regardless of when the apartment complex opens.
- Requiring traffic on Frontage Road to make a right turn only onto Martintown Road will reduce the delay to allowable levels. Construction of a concrete median will help guide traffic to exit safely. Widening to allow for the U-turn movement at Knobcone Avenue intersection will be necessary to allow for the U-turns leaving the proposed site.
- Left turns onto Frontage from Martintown Road operate at acceptable levels and can remain. If a raised median is installed in the future, it is recommended that this left turn be maintained.

Appendix C – Intersection Calculation Spreadsheets

INTERSECTION VOLUME WORKSHEET

Intersection #1
Compassion Way at W Martintown Rd

AM Peak Hour

	Compassion Way						W Martintown Rd			W Martintown Rd		
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2023 Raw Traffic Count	5	0	0	0	0	0	3	870	0	0	996	8
Rerouting	-5	0	5	0	0	0	0	5	0	0	0	0
2023 Peak Hour Volume	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**875**	**0**	**0**	**996**	**8**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	0	0	0	0	0	0	54	0	0	61	0
The Hive						34		216	43		169	
The Parker Augusta (River Falls)			81				10	41				10
2027 Background Peak Hour Volume	**0**	**0**	**86**	**0**	**0**	**34**	**13**	**1,186**	**43**	**0**	**1,226**	**18**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	10	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	32	0	0	0	0
Total Residential Site Trips	0	0	0	0	0	0	0	32	0	0	10	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*50%*
Entering Site Traffic	0	0	0	0	0	0	4	0	0	0	0	4
% Exiting (Commercial)	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	6	0	0	0	0	3	0	0	0	0
Total Retail Site Trips	0	0	6	0	0	0	4	3	0	0	0	4
Pass-by Trips												
Total External Site Traffic	0	0	6	0	0	0	4	35	0	0	10	4
2027 Build Peak Hour Volume	**0**	**0**	**92**	**0**	**0**	**34**	**17**	**1,221**	**43**	**0**	**1,236**	**22**

PM Peak Hour

	Compassion Way			0			W Martintown Rd			W Martintown Rd		
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2023 Raw Traffic Count	10	0	3	0	0	0	3	953	0	0	1034	8
Rerouting	-10	0	10	0	0	0	0	10	0	0	0	0
2023 Peak Hour Volume	**0**	**0**	**13**	**0**	**0**	**0**	**3**	**963**	**0**	**0**	**1,034**	**8**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	0	1	0	0	0	0	59	0	0	63	0
The Hive						39		212	39		171	
The Parker Augusta (River Falls)			49				45	25				46
2027 Background Peak Hour Volume	**0**	**0**	**63**	**0**	**0**	**39**	**48**	**1,259**	**39**	**0**	**1,268**	**54**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	29	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	20	0	0	0	0
Total Residential Site Trips	0	0	0	0	0	0	0	20	0	0	29	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*50%*
Entering Site Traffic	0	0	0	0	0	0	6	0	0	0	0	5
% Exiting (Commercial)	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	13	0	0	0	0	7	0	0	0	0
Total Retail Site Trips	0	0	13	0	0	0	6	7	0	0	0	5
Pass-by Trips												
Total External Site Traffic	0	0	13	0	0	0	6	27	0	0	29	5
2027 Build Peak Hour Volume	**0**	**0**	**76**	**0**	**0**	**39**	**54**	**1,286**	**39**	**0**	**1,297**	**59**

INTERSECTION VOLUME WORKSHEET

Intersection #2
Old Plantation Rd at W Martintown Rd

AM Peak Hour

		Old Plantation Rd						W Martintown Rd			W Martintown Rd		
		Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2023	Raw Traffic Count	33	0	27	0	0	0	15	852	0	0	999	15
Rerouting		-33	0	33	0	0	0	0	38	0	0	5	0
2023	Peak Hour Volume	**0**	**0**	**60**	**0**	**0**	**0**	**15**	**890**	**0**	**0**	**1,004**	**15**
	Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Background Growth	0	0	4	0	0	0	1	55	0	0	62	1
	The Hive			9			34		217	43		165	3
	The Parker Augusta (River Falls)								41			81	
2027	Background Peak Hour Volume	**0**	**0**	**73**	**0**	**0**	**34**	**16**	**1,203**	**43**	**0**	**1,312**	**19**
	% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*50%*
	Entering Site Traffic	0	0	0	0	0	0	11	0	0	0	0	10
	% Exiting (Residential)	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
	Exiting Site Traffic	0	0	63	0	0	0	0	32	0	0	0	0
	Total Residential Site Trips	0	0	63	0	0	0	11	32	0	0	0	10
	% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	0	0	4	0	0	0	0
	% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*100%*	*0%*
	Exiting Site Traffic	0	0	0	0	0	0	0	3	0	0	6	0
	Total Retail Site Trips	0	0	0	0	0	0	0	7	0	0	6	0
	Pass-by Trips												
	Total External Site Traffic	0	0	63	0	0	0	11	39	0	0	6	10
2027	Build Peak Hour Volume	**0**	**0**	**136**	**0**	**0**	**34**	**27**	**1,242**	**43**	**0**	**1,318**	**29**

PM Peak Hour

		Old Plantation Rd			0			W Martintown Rd			W Martintown Rd		
		Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
		0%		0%				0%	1%			0%	0%
Balancing Adjustment		-21	0	21	0	0	0	0	31	0	0	10	0
Rerou	Peak Hour Volume	**0**	**0**	**40**	**0**	**0**	**0**	**23**	**1,021**	**0**	**0**	**1,011**	**22**
	Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Background Growth	0	0	2	0	0	0	1	63	0	0	62	1
	The Hive			8			39		205	39		163	8
	River Falls								70			49	
2027	The Parker Augusta (River Falls)	**0**	**0**	**50**	**0**	**0**	**39**	**24**	**1,359**	**39**	**0**	**1,285**	**31**
	% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*50%*
	Entering Site Traffic	0	0	0	0	0	0	29	0	0	0	0	29
	% Exiting (Residential)	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
	Exiting Site Traffic	0	0	40	0	0	0	0	20	0	0	0	0
	Total Residential Site Trips	0	0	40	0	0	0	29	20	0	0	0	29
	% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	0	0	6	0	0	0	0
	% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*100%*	*0%*
	Exiting Site Traffic	0	0	0	0	0	0	0	7	0	0	13	0
	Total Retail Site Trips	0	0	0	0	0	0	0	13	0	0	13	0
	Pass-by Trips												
	Total External Site Traffic	0	0	40	0	0	0	29	33	0	0	13	29
2027	Build Peak Hour Volume	**0**	**0**	**90**	**0**	**0**	**39**	**53**	**1,392**	**39**	**0**	**1,298**	**60**

INTERSECTION VOLUME WORKSHEET

Intersection #3
Knobcone Ave at W Martintown Rd

AM Peak Hour

					Knobcone Ave			W Martintown Rd			W Martintown Rd			
		Eastbound			**Westbound**			**Northbound**			**Southbound**			**SB**
Description		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	**U**
2023	Raw Traffic Count	0	0	0	55	0	191	0	675	106	187	843	0	
Rerouting		0	0	0	0	0	0	0	0	0	0	0	0	38
2023	Peak Hour Volume	**0**	**0**	**0**	**55**	**0**	**191**	**0**	**675**	**106**	**187**	**843**	**0**	**38**
	Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Background Growth	0	0	0	3	0	12	0	41	7	11	52	0	2
	The Hive				111				252	87		165		9
	The Parker Augusta (River Falls)								10			40		41
2027	Background Peak Hour Volume	**0**	**0**	**0**	**169**	**0**	**203**	**0**	**978**	**200**	**198**	**1,100**	**0**	**90**
	% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*10%*	*0%*	*40%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	2	0	8	0	0	0	0	0
	% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*10%*	*40%*	*0%*	*50%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	6	25	0	32
	Total Residential Site Trips	0	0	0	0	0	2	0	8	0	6	25	0	32
	% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	0	0	5	0	0	0	0	0
	% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*50%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	3	0	3
	Total Retail Site Trips	0	0	0	0	0	0	0	5	0	0	3	0	3
	Pass-by Trips													
	Total External Site Traffic	0	0	0	0	0	2	0	13	0	6	28	0	35
2027	Build Peak Hour Volume	**0**	**0**	**0**	**169**	**0**	**205**	**0**	**991**	**200**	**204**	**1,128**	**0**	**125**

PM Peak Hour

		0			Knobcone Ave			W Martintown Rd			W Martintown Rd			
		Eastbound			**Westbound**			**Northbound**			**Southbound**			**SB**
Description		Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	U
					8%		1%		1%	0%	0%	1%		
Balancing Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	31
Rerou	Peak Hour Volume	**0**	**0**	**0**	**12**	**0**	**96**	**0**	**916**	**27**	**121**	**898**	**0**	**31**
	Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Background Growth	0	0	0	1	0	6	0	56	2	7	55	0	2
	The Hive				171				237	103		163		8
	River Falls								45			24		25
2027	The Parker Augusta (River Falls)	**0**	**0**	**0**	**184**	**0**	**102**	**0**	**1,254**	**132**	**128**	**1,140**	**0**	**66**
	% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*10%*	*0%*	*40%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	6	0	23	0	0	0	0	0
	% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*10%*	*40%*	*0%*	*50%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	4	15	0	20
	Total Residential Site Trips	0	0	0	0	0	6	0	23	0	4	15	0	20
	% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*0%*	*0%*	*0%*	*0%*
	Entering Site Traffic	0	0	0	0	0	0	0	6	0	0	0	0	0
	% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*50%*	*0%*	*50%*
	Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	7	0	7
	Total Retail Site Trips	0	0	0	0	0	0	0	6	0	0	7	0	7
	Pass-by Trips													
	Total External Site Traffic	0	0	0	0	0	6	0	29	0	4	22	0	27
2027	Build Peak Hour Volume	**0**	**0**	**0**	**184**	**0**	**108**	**0**	**1,283**	**132**	**132**	**1,162**	**0**	**93**

INTERSECTION VOLUME WORKSHEET

Intersection #4
Compassion Way at Site Driveway #1

AM Peak Hour

	Compassion Way			Compassion Way			Site Driveway #1					
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2023 Raw Traffic Count												
Rerouting	0	0	0	0	0	0	0	0	0	0	0	0
2023 Peak Hour Volume	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
The Hive												
The Parker Augusta (River Falls)												
2027 Background Peak Hour Volume	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Residential Site Trips	0	0	0	0	0	0	0	0	0	0	0	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	8	0	0	0	0	0	0	0	0
% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	6	0	0	0
Total Retail Site Trips	0	0	0	8	0	0	0	0	6	0	0	0
Pass-by Trips												
Total External Site Traffic	0	0	0	8	0	0	0	0	6	0	0	0
2027 Build Peak Hour Volume	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**

PM Peak Hour

	Compassion Way			Compassion Way			Site Driveway #1			0		
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Balancing Adjustment	0	0	0	0	0	0	0	0	0	0	0	0
Rerou Peak Hour Volume	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
The Hive												
River Falls												
2027 The Parker Augusta (River Falls)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Residential Site Trips	0	0	0	0	0	0	0	0	0	0	0	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	11	0	0	0	0	0	0	0	0
% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	13	0	0	0
Total Retail Site Trips	0	0	0	11	0	0	0	0	13	0	0	0
Pass-by Trips												
Total External Site Traffic	0	0	0	11	0	0	0	0	13	0	0	0
2027 Build Peak Hour Volume	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**

INTERSECTION VOLUME WORKSHEET

Intersection #5
at Old Plantation Dr

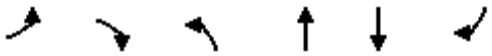
AM Peak Hour

	Old Plantation Dr			Old Plantation Dr						Site Driveway #2		
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2023 Raw Traffic Count		60			30							
Rerouting	0	0	0	0	0	0	0	0	0	0	0	0
2023 Peak Hour Volume	**0**	**60**	**0**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	4	0	0	2	0	0	0	0	0	0	0
The Hive		9			3							
The Parker Augusta (River Falls)												
2027 Background Peak Hour Volume	**0**	**73**	**0**	**0**	**35**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	21	0	0	0	0	0	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	63	0	0
Total Residential Site Trips	0	0	0	0	0	21	0	0	0	63	0	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail Site Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips												
Total External Site Traffic	0	0	0	0	0	21	0	0	0	63	0	0
2027 Build Peak Hour Volume	**0**	**73**	**0**	**0**	**35**	**21**	**0**	**0**	**0**	**63**	**0**	**0**

PM Peak Hour

	Old Plantation Dr			Old Plantation Dr			0			Site Driveway #2		
	Eastbound			**Westbound**			**Northbound**			**Southbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Balancing Adjustment	0	0	0	0	0	0	0	0	0	0	0	0
Rerou Peak Hour Volume	**0**	**40**	**0**	**0**	**45**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Annual Growth Rate	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Background Growth	0	2	0	0	3	0	0	0	0	0	0	0
The Hive		8			8							
River Falls												
2027 The Parker Augusta (River Falls)	**0**	**50**	**0**	**0**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
% Entering (Residental)	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	58	0	0	0	0	0	0
% Exiting (Residential)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*100%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	40	0	0
Total Residential Site Trips	0	0	0	0	0	58	0	0	0	40	0	0
% Entering (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Entering Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
% Exiting (Commercial)	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Exiting Site Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Retail Site Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips												
Total External Site Traffic	0	0	0	0	0	58	0	0	0	40	0	0
2027 Build Peak Hour Volume	**0**	**50**	**0**	**0**	**56**	**58**	**0**	**0**	**0**	**40**	**0**	**0**

Appendix D – Existing 2023 Synchro and SimTraffic Reports



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	3	870	996	8
Future Volume (vph)	5	0	3	870	996	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt					0.999	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1444	0	1805	3539	3502	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1444	0	1805	3539	3502	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	703			634	199	
Travel Time (s)	16.0			9.6	3.0	
Peak Hour Factor	0.42	0.42	0.92	0.92	0.89	0.89
Heavy Vehicles (%)	25%	0%	0%	2%	3%	0%
Adj. Flow (vph)	12	0	3	946	1119	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	3	946	1128	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			15	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			

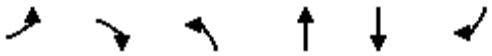
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	3	870	996	8
Future Vol, veh/h	5	0	3	870	996	8
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	92	92	89	89
Heavy Vehicles, %	25	0	0	2	3	0
Mvmt Flow	12	0	3	946	1119	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1603	564	1128	0	-	0
Stage 1	1124	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Critical Hdwy	7.3	6.9	4.1	-	-	-
Critical Hdwy Stg 1	6.3	-	-	-	-	-
Critical Hdwy Stg 2	6.3	-	-	-	-	-
Follow-up Hdwy	3.75	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	77	474	627	-	-	-
Stage 1	228	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	77	474	627	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	527	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.3	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	627	-	173	-	-
HCM Lane V/C Ratio	0.005	-	0.069	-	-
HCM Control Delay (s)	10.8	-	27.3	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	33	27	15	852	999	15
Future Volume (vph)	33	27	15	852	999	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	225			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.939				0.998	
Flt Protected	0.973		0.950			
Satd. Flow (prot)	1680	0	1583	3574	3527	0
Flt Permitted	0.973		0.950			
Satd. Flow (perm)	1680	0	1583	3574	3527	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	1428			514	634	
Travel Time (s)	38.9			7.8	9.6	
Peak Hour Factor	0.60	0.60	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	0%	14%	1%	2%	13%
Adj. Flow (vph)	55	45	16	916	1074	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	16	916	1090	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			15	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	27	15	852	999	15
Future Vol, veh/h	33	27	15	852	999	15
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	-	225	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	60	93	93	93	93
Heavy Vehicles, %	6	0	14	1	2	13
Mvmt Flow	55	45	16	916	1074	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1572	545	1090	0	-	0
Stage 1	1082	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Critical Hdwy	6.92	6.9	4.38	-	-	-
Critical Hdwy Stg 1	5.92	-	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-	-
Follow-up Hdwy	3.56	3.3	2.34	-	-	-
Pot Cap-1 Maneuver	97	488	570	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	94	488	570	-	-	-
Mov Cap-2 Maneuver	203	-	-	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	570	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	570	-	275	-	-
HCM Lane V/C Ratio	0.028	-	0.364	-	-
HCM Control Delay (s)	11.5	-	25.4	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	191	675	106	187	843
Future Volume (vph)	55	191	675	106	187	843
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	175	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				50	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.980			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1583	3507	0	1770	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1583	3507	0	1770	3539
Link Speed (mph)	35		45			45
Link Distance (ft)	644		651			514
Travel Time (s)	12.5		9.9			7.8
Peak Hour Factor	0.66	0.66	0.93	0.93	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	2%	2%
Adj. Flow (vph)	83	289	726	114	203	916
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	289	840	0	203	916
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	15		15			15
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

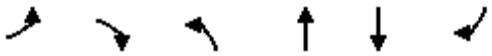
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	191	675	106	187	843
Future Vol, veh/h	55	191	675	106	187	843
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	66	66	93	93	92	92
Heavy Vehicles, %	0	2	1	0	2	2
Mvmt Flow	83	289	726	114	203	916

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1647	420	0	0	840	0
Stage 1	783	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Critical Hdwy	6.8	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	92	582	-	-	791	-
Stage 1	416	-	-	-	-	-
Stage 2	378	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 68	582	-	-	791	-
Mov Cap-2 Maneuver	183	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	281	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	183	582	791	-
HCM Lane V/C Ratio	-	-	0.455	0.497	0.257	-
HCM Control Delay (s)	-	-	40.1	17.1	11.1	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	2.1	2.8	1	-

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	3	3	953	1034	8
Future Volume (vph)	10	3	3	953	1034	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.966				0.999	
Flt Protected	0.964		0.950			
Satd. Flow (prot)	1769	0	1805	3574	3567	0
Flt Permitted	0.964		0.950			
Satd. Flow (perm)	1769	0	1805	3574	3567	0
Link Speed (mph)	30			45	45	
Link Distance (ft)	703			634	199	
Travel Time (s)	16.0			9.6	3.0	
Peak Hour Factor	0.65	0.65	0.92	0.92	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	1%	13%
Adj. Flow (vph)	15	5	3	1036	1149	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	3	1036	1158	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			15	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes	Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

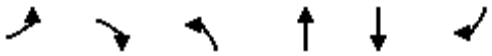
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	3	3	953	1034	8
Future Vol, veh/h	10	3	3	953	1034	8
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	65	92	92	90	90
Heavy Vehicles, %	0	0	0	1	1	13
Mvmt Flow	15	5	3	1036	1149	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1678	579	1158	0	-	0
Stage 1	1154	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	88	463	611	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	88	463	611	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	266	-	-	-	-	-
Stage 2	564	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	611	-	229	-	-
HCM Lane V/C Ratio	0.005	-	0.087	-	-
HCM Control Delay (s)	10.9	-	22.2	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	19	23	990	1001	22
Future Volume (vph)	21	19	23	990	1001	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	225			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		50			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.935				0.997	
Flt Protected	0.975		0.950			
Satd. Flow (prot)	1732	0	1805	3574	3599	0
Flt Permitted	0.975		0.950			
Satd. Flow (perm)	1732	0	1805	3574	3599	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	1428			514	634	
Travel Time (s)	38.9			7.8	9.6	
Peak Hour Factor	0.83	0.83	0.89	0.89	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	25	23	26	1112	1076	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	26	1112	1100	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			15	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

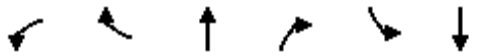
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	19	23	990	1001	22
Future Vol, veh/h	21	19	23	990	1001	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	225	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	89	89	93	93
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	25	23	26	1112	1076	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1696	550	1100	0	-	0
Stage 1	1088	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	85	484	642	-	-	-
Stage 1	289	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	484	642	-	-	-
Mov Cap-2 Maneuver	197	-	-	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.9	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	642	-	274	-	-
HCM Lane V/C Ratio	0.04	-	0.176	-	-
HCM Control Delay (s)	10.8	-	20.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	96	916	27	121	898
Future Volume (vph)	12	96	916	27	121	898
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		0	175	
Storage Lanes	1	1		0	1	
Taper Length (ft)	25				50	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.996			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1671	1599	3561	0	1805	3574
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1671	1599	3561	0	1805	3574
Link Speed (mph)	35		45			45
Link Distance (ft)	644		651			514
Travel Time (s)	12.5		9.9			7.8
Peak Hour Factor	0.90	0.90	0.88	0.88	0.92	0.92
Heavy Vehicles (%)	8%	1%	1%	0%	0%	1%
Adj. Flow (vph)	13	107	1041	31	132	976
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	107	1072	0	132	976
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	15		15			15
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	96	916	27	121	898
Future Vol, veh/h	12	96	916	27	121	898
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	150	0	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	88	88	92	92
Heavy Vehicles, %	8	1	1	0	0	1
Mvmt Flow	13	107	1041	31	132	976

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1809	536	0	0	1072	0
Stage 1	1057	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Critical Hdwy	6.96	6.92	-	-	4.1	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.31	-	-	2.2	-
Pot Cap-1 Maneuver	66	492	-	-	658	-
Stage 1	282	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	53	492	-	-	658	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	282	-	-	-	-	-
Stage 2	328	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	162	492	658	-
HCM Lane V/C Ratio	-	-	0.082	0.217	0.2	-
HCM Control Delay (s)	-	-	29.2	14.3	11.8	-
HCM Lane LOS	-	-	D	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.8	0.7	-

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2213
Vehs Exited	2212
Starting Vehs	27
Ending Vehs	28
Travel Distance (mi)	973
Travel Time (hr)	29.3
Total Delay (hr)	5.1
Total Stops	472
Fuel Used (gal)	32.5

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	2213
Vehs Exited	2212
Starting Vehs	27
Ending Vehs	28
Travel Distance (mi)	973
Travel Time (hr)	29.3
Total Delay (hr)	5.1
Total Stops	472
Fuel Used (gal)	32.5

Intersection: 1: W Martintown Rd & Compassion Way

Movement	EB
Directions Served	LR
Maximum Queue (ft)	63
Average Queue (ft)	7
95th Queue (ft)	35
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: W Martintown Rd & Old Plantation Rd

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	202	31
Average Queue (ft)	57	4
95th Queue (ft)	142	21
Link Distance (ft)	1372	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		225
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	L
Maximum Queue (ft)	154	96	22	159
Average Queue (ft)	70	53	2	48
95th Queue (ft)	149	83	13	96
Link Distance (ft)		597	616	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150			175
Storage Blk Time (%)	2			0
Queuing Penalty (veh)	4			0

Network Summary

Network wide Queuing Penalty: 4

Summary of All Intervals

Start Time	4:50
End Time	6:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	2139
Vehs Exited	2139
Starting Vehs	24
Ending Vehs	24
Travel Distance (mi)	964
Travel Time (hr)	25.1
Total Delay (hr)	2.1
Total Stops	265
Fuel Used (gal)	29.3

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	2139
Vehs Exited	2139
Starting Vehs	24
Ending Vehs	24
Travel Distance (mi)	964
Travel Time (hr)	25.1
Total Delay (hr)	2.1
Total Stops	265
Fuel Used (gal)	29.3

Intersection: 1: W Martintown Rd & Compassion Way

Movement	EB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	13
95th Queue (ft)	34
Link Distance (ft)	650
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: W Martintown Rd & Old Plantation Rd

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	67	50
Average Queue (ft)	22	15
95th Queue (ft)	51	40
Link Distance (ft)	1372	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		225
Storage Blk Time (%)		
Queuing Penalty (veh)		

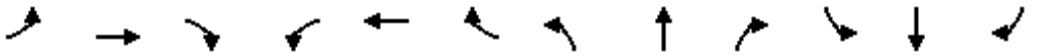
Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	SB
Directions Served	L	R	L
Maximum Queue (ft)	31	100	91
Average Queue (ft)	6	36	40
95th Queue (ft)	24	61	77
Link Distance (ft)		597	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		175
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Appendix E – Background 2027 Synchro and SimTraffic Reports



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	86	0	0	34	13	1186	43	0	1226	18
Future Volume (vph)	0	0	86	0	0	34	13	1186	43	0	1226	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.998	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1611	1805	3539	1583	0	3499	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1611	1805	3539	1583	0	3499	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		703			298			634			199	
Travel Time (s)		16.0			6.8			9.6			3.0	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.89
Heavy Vehicles (%)	25%	2%	0%	2%	2%	2%	0%	2%	2%	2%	3%	0%
Adj. Flow (vph)	0	0	96	0	0	37	14	1289	47	0	1378	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	96	0	0	37	14	1289	47	0	1398	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			15			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

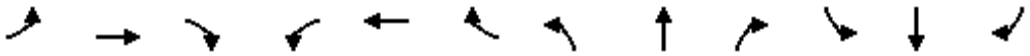
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	86	0	0	34	13	1186	43	0	1226	18
Future Vol, veh/h	0	0	86	0	0	34	13	1186	43	0	1226	18
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	-	-	0	-	-	0	100	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	92	92	92	92	89	89
Heavy Vehicles, %	25	2	0	2	2	2	0	2	2	2	3	0
Mvmt Flow	0	0	96	0	0	37	14	1289	47	0	1378	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	699	-	-	645	1398	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.94	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.32	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	387	0	0	415	495	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	387	-	-	415	495	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.3	14.5	0.1	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	495	-	-	387	415	-	-
HCM Lane V/C Ratio	0.029	-	-	0.247	0.089	-	-
HCM Control Delay (s)	12.5	-	-	17.3	14.5	-	-
HCM Lane LOS	B	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	0.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	73	0	0	34	16	1203	43	0	1312	19
Future Volume (vph)	0	0	73	0	0	34	16	1203	43	0	1312	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.998	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1611	1583	3574	1583	0	3527	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1611	1583	3574	1583	0	3527	0
Link Speed (mph)		25			30			45			45	
Link Distance (ft)		1428			326			514			634	
Travel Time (s)		38.9			7.4			7.8			9.6	
Peak Hour Factor	0.60	0.92	0.60	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Heavy Vehicles (%)	6%	2%	0%	2%	2%	2%	14%	1%	2%	2%	2%	13%
Adj. Flow (vph)	0	0	122	0	0	37	17	1294	47	0	1411	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	122	0	0	37	17	1294	47	0	1431	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			25			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	73	0	0	34	16	1203	43	0	1312	19
Future Vol, veh/h	0	0	73	0	0	34	16	1203	43	0	1312	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	-	-	0	-	-	0	150	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	60	92	60	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	6	2	0	2	2	2	14	1	2	2	2	13
Mvmt Flow	0	0	122	0	0	37	17	1294	47	0	1411	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	716	-	-	647	1431	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.94	4.38	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.32	2.34	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	377	0	0	414	414	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	377	-	-	414	414	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19	14.5	0.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	414	-	-	377	414	-	-
HCM Lane V/C Ratio	0.042	-	-	0.323	0.089	-	-
HCM Control Delay (s)	14.1	-	-	19	14.5	-	-
HCM Lane LOS	B	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	169	203	978	200	90	198	1100
Future Volume (vph)	169	203	978	200	90	198	1100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		200		200	
Storage Lanes	1	1		1		2	
Taper Length (ft)	25					100	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.97	0.95
Frt		0.850		0.850			
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1805	1583	3574	1615	0	3433	3539
Flt Permitted	0.950					0.950	
Satd. Flow (perm)	1805	1583	3574	1615	0	3433	3539
Right Turn on Red		No		Yes			
Satd. Flow (RTOR)				215			
Link Speed (mph)	35		45				45
Link Distance (ft)	644		651				514
Travel Time (s)	12.5		9.9				7.8
Peak Hour Factor	0.90	0.90	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	2%	2%	2%
Adj. Flow (vph)	188	226	1052	215	98	215	1196
Shared Lane Traffic (%)							
Lane Group Flow (vph)	188	226	1052	215	0	313	1196
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	15		15				25
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Number of Detectors	1	1	2	1	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Left	Thru
Leading Detector (ft)	20	20	100	20	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94
Detector 2 Size(ft)			6				6
Detector 2 Type			Cl+Ex				Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)			0.0				0.0
Turn Type	Prot	Perm	NA	pm+ov	Prot	Prot	NA
Protected Phases	4		6	4	5	5	2

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Permitted Phases		4		6			
Detector Phase	4	4	6	4	5	5	2
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.0	15.0	22.0	15.0	15.0	15.0	22.0
Total Split (s)	35.0	35.0	53.0	35.0	32.0	32.0	85.0
Total Split (%)	29.2%	29.2%	44.2%	29.2%	26.7%	26.7%	70.8%
Maximum Green (s)	29.0	29.0	47.0	29.0	26.0	26.0	79.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	Min	Min	Min	None
Act Effct Green (s)	18.6	18.6	32.9	57.8		13.9	53.2
Actuated g/C Ratio	0.22	0.22	0.39	0.68		0.16	0.63
v/c Ratio	0.47	0.65	0.76	0.18		0.55	0.54
Control Delay	35.0	41.5	27.0	1.0		39.0	10.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	35.0	41.5	27.0	1.0		39.0	10.1
LOS	D	D	C	A		D	B
Approach Delay	38.5		22.6				16.1
Approach LOS	D		C				B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 84.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 62.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: W Martintown Rd & Knobcone Ave

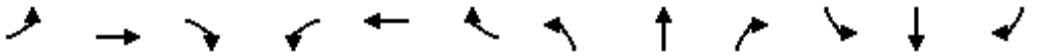
Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	169	203	978	200	90	198	1100
Future Volume (veh/h)	169	203	978	200	90	198	1100
Initial Q (Qb), veh	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No		No				No
Adj Sat Flow, veh/h/ln	1900	1870	1885	1900		1870	1870
Adj Flow Rate, veh/h	188	226	1052	215		215	1196
Peak Hour Factor	0.90	0.90	0.93	0.93		0.92	0.92
Percent Heavy Veh, %	0	2	1	0		2	2
Cap, veh/h	335	294	1477	962		428	2235
Arrive On Green	0.19	0.19	0.41	0.41		0.12	0.63
Sat Flow, veh/h	1810	1585	3676	1610		3456	3647
Grp Volume(v), veh/h	188	226	1052	215		215	1196
Grp Sat Flow(s),veh/h/ln	1810	1585	1791	1610		1728	1777
Q Serve(g_s), s	6.1	8.8	15.8	4.0		3.8	12.2
Cycle Q Clear(g_c), s	6.1	8.8	15.8	4.0		3.8	12.2
Prop In Lane	1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	335	294	1477	962		428	2235
V/C Ratio(X)	0.56	0.77	0.71	0.22		0.50	0.54
Avail Cap(c_a), veh/h	812	711	2605	1469		1390	4344
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	23.9	25.0	15.8	6.0		26.5	6.7
Incr Delay (d2), s/veh	1.5	4.2	0.6	0.1		0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.3	5.3	1.8		1.4	2.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.4	29.3	16.4	6.2		27.4	6.9
LnGrp LOS	C	C	B	A		C	A
Approach Vol, veh/h	414		1267				1411
Approach Delay, s/veh	27.5		14.7				10.0
Approach LOS	C		B				B

Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		46.7		18.0	14.0	32.7	
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	
Max Green Setting (Gmax), s		79.0		29.0	26.0	47.0	
Max Q Clear Time (g_c+I1), s		14.2		10.8	5.8	17.8	
Green Ext Time (p_c), s		10.8		1.2	0.6	8.9	

Intersection Summary	
HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	63	0	0	39	48	1259	39	0	1268	54
Future Volume (vph)	0	0	63	0	0	39	48	1259	39	0	1268	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.994	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1644	1805	3574	1615	0	3536	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1644	1805	3574	1615	0	3536	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		703			298			634			199	
Travel Time (s)		16.0			6.8			9.6			3.0	
Peak Hour Factor	0.65	0.65	0.65	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	13%
Adj. Flow (vph)	0	0	97	0	0	42	52	1368	42	0	1409	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	97	0	0	42	52	1368	42	0	1469	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			15			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	60		60	15		60	60		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

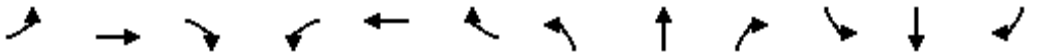
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	63	0	0	39	48	1259	39	0	1268	54
Future Vol, veh/h	0	0	63	0	0	39	48	1259	39	0	1268	54
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	-	-	0	-	-	0	100	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	92	92	92	92	92	92	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	13
Mvmt Flow	0	0	97	0	0	42	52	1368	42	0	1409	60

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	735	-	-	684	1469	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	367	0	0	396	465	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	367	-	-	396	465	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.3	15.2	0.5	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	465	-	-	367	396	-	-
HCM Lane V/C Ratio	0.112	-	-	0.264	0.107	-	-
HCM Control Delay (s)	13.7	-	-	18.3	15.2	-	-
HCM Lane LOS	B	-	-	C	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	50	0	0	39	24	1359	39	0	1285	31
Future Volume (vph)	0	0	50	0	0	39	24	1359	39	0	1285	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.997	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1644	1805	3574	1615	0	3599	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1644	1805	3574	1615	0	3599	0
Link Speed (mph)		25			30			45			45	
Link Distance (ft)		1428			326			514			634	
Travel Time (s)		38.9			7.4			7.8			9.6	
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.89	0.89	0.89	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	60	0	0	42	27	1527	44	0	1382	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	60	0	0	42	27	1527	44	0	1415	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			25			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	60		60	15		60	60		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	50	0	0	39	24	1359	39	0	1285	31
Future Vol, veh/h	0	0	50	0	0	39	24	1359	39	0	1285	31
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	-	-	0	-	-	0	150	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	92	92	92	89	89	89	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	0	0
Mvmt Flow	0	0	60	0	0	42	27	1527	44	0	1382	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	708	-	-	764	1415	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	382	0	0	351	488	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	382	-	-	351	488	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	16.7	0.2	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	488	-	-	382	351	-	-
HCM Lane V/C Ratio	0.055	-	-	0.158	0.121	-	-
HCM Control Delay (s)	12.8	-	-	16.2	16.7	-	-
HCM Lane LOS	B	-	-	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	184	102	1254	132	66	128	1140
Future Volume (vph)	184	102	1254	132	66	128	1140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		200		200	
Storage Lanes	1	1		1		2	
Taper Length (ft)	25					100	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.97	0.95
Frt		0.850		0.850			
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1671	1599	3574	1615	0	3502	3574
Flt Permitted	0.950					0.950	
Satd. Flow (perm)	1671	1599	3574	1615	0	3502	3574
Right Turn on Red		No		Yes			
Satd. Flow (RTOR)				150			
Link Speed (mph)	35		45				45
Link Distance (ft)	644		651				514
Travel Time (s)	12.5		9.9				7.8
Peak Hour Factor	0.90	0.90	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	8%	1%	1%	0%	0%	0%	1%
Adj. Flow (vph)	204	113	1425	150	72	139	1239
Shared Lane Traffic (%)							
Lane Group Flow (vph)	204	113	1425	150	0	211	1239
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	15		15				25
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Number of Detectors	1	1	2	1	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Left	Thru
Leading Detector (ft)	20	20	100	20	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94
Detector 2 Size(ft)			6				6
Detector 2 Type			Cl+Ex				Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)			0.0				0.0
Turn Type	Prot	Perm	NA	pm+ov	Prot	Prot	NA
Protected Phases	4		6	4	5	5	2

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Permitted Phases		4		6			
Detector Phase	4	4	6	4	5	5	2
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.0	15.0	22.0	15.0	15.0	15.0	22.0
Total Split (s)	35.0	35.0	53.0	35.0	32.0	32.0	85.0
Total Split (%)	29.2%	29.2%	44.2%	29.2%	26.7%	26.7%	70.8%
Maximum Green (s)	29.0	29.0	47.0	29.0	26.0	26.0	79.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	16.5	16.5	47.2	69.8		11.0	64.3
Actuated g/C Ratio	0.18	0.18	0.51	0.75		0.12	0.69
v/c Ratio	0.69	0.40	0.78	0.12		0.51	0.50
Control Delay	48.4	38.1	23.9	0.8		43.6	8.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	48.4	38.1	23.9	0.8		43.6	8.1
LOS	D	D	C	A		D	A
Approach Delay	44.7		21.7				13.3
Approach LOS	D		C				B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 92.9			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: W Martintown Rd & Knobcone Ave

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	184	102	1254	132	66	128	1140
Future Volume (veh/h)	184	102	1254	132	66	128	1140
Initial Q (Qb), veh	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No		No				No
Adj Sat Flow, veh/h/ln	1781	1885	1885	1900		1900	1885
Adj Flow Rate, veh/h	204	113	1425	150		139	1239
Peak Hour Factor	0.90	0.90	0.88	0.88		0.92	0.92
Percent Heavy Veh, %	8	1	1	0		0	1
Cap, veh/h	262	247	1794	1055		357	2449
Arrive On Green	0.15	0.15	0.50	0.50		0.10	0.68
Sat Flow, veh/h	1697	1598	3676	1610		3510	3676
Grp Volume(v), veh/h	204	113	1425	150		139	1239
Grp Sat Flow(s),veh/h/ln	1697	1598	1791	1610		1755	1791
Q Serve(g_s), s	8.6	4.8	24.4	2.6		2.7	12.4
Cycle Q Clear(g_c), s	8.6	4.8	24.4	2.6		2.7	12.4
Prop In Lane	1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	262	247	1794	1055		357	2449
V/C Ratio(X)	0.78	0.46	0.79	0.14		0.39	0.51
Avail Cap(c_a), veh/h	664	625	2271	1270		1231	3818
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	30.1	28.5	15.3	4.9		31.1	5.7
Incr Delay (d2), s/veh	5.0	1.3	1.6	0.1		0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.1	8.3	1.1		1.1	2.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	35.1	29.8	16.9	4.9		31.8	5.8
LnGrp LOS	D	C	B	A		C	A
Approach Vol, veh/h	317		1575				1378
Approach Delay, s/veh	33.2		15.8				8.5
Approach LOS	C		B				A

Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		56.7		17.4	13.5	43.1	
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	
Max Green Setting (Gmax), s		79.0		29.0	26.0	47.0	
Max Q Clear Time (g_c+I1), s		14.4		10.6	4.7	26.4	
Green Ext Time (p_c), s		11.5		0.9	0.4	10.7	

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3081
Vehs Exited	3091
Starting Vehs	60
Ending Vehs	50
Travel Distance (mi)	1401
Travel Time (hr)	58.3
Total Delay (hr)	21.8
Total Stops	1814
Fuel Used (gal)	57.2

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3081
Vehs Exited	3091
Starting Vehs	60
Ending Vehs	50
Travel Distance (mi)	1401
Travel Time (hr)	58.3
Total Delay (hr)	21.8
Total Stops	1814
Fuel Used (gal)	57.2

Intersection: 1: W Martintown Rd & Compassion Way

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	70	44	25
Average Queue (ft)	31	16	9
95th Queue (ft)	53	38	27
Link Distance (ft)	651	236	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: W Martintown Rd & Old Plantation Rd

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	55	36	26
Average Queue (ft)	29	12	7
95th Queue (ft)	51	30	25
Link Distance (ft)	1374	256	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	R	UL	L	T	T
Maximum Queue (ft)	175	347	392	346	225	212	217	172	182
Average Queue (ft)	114	139	227	190	47	126	88	109	108
95th Queue (ft)	181	270	321	310	110	197	169	169	165
Link Distance (ft)		556	604	604				447	447
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150				200	200	200		
Storage Blk Time (%)	2	7		3		1	0		
Queuing Penalty (veh)	4	12		6		5	0		

Network Summary

Network wide Queuing Penalty: 28

Summary of All Intervals

Start Time	4:50
End Time	6:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3181
Vehs Exited	3199
Starting Vehs	57
Ending Vehs	39
Travel Distance (mi)	1411
Travel Time (hr)	54.2
Total Delay (hr)	18.8
Total Stops	1540
Fuel Used (gal)	56.2

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3181
Vehs Exited	3199
Starting Vehs	57
Ending Vehs	39
Travel Distance (mi)	1411
Travel Time (hr)	54.2
Total Delay (hr)	18.8
Total Stops	1540
Fuel Used (gal)	56.2

Intersection: 1: W Martintown Rd & Compassion Way

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	49	48	51
Average Queue (ft)	24	23	24
95th Queue (ft)	49	42	50
Link Distance (ft)	651	236	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: W Martintown Rd & Old Plantation Rd

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	54	82	26
Average Queue (ft)	23	22	11
95th Queue (ft)	47	58	31
Link Distance (ft)	1374	256	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

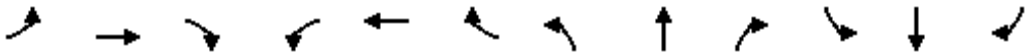
Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	R	UL	L	T	T
Maximum Queue (ft)	174	271	357	337	225	132	74	148	167
Average Queue (ft)	120	72	238	181	32	77	34	87	76
95th Queue (ft)	194	173	349	294	120	124	68	140	143
Link Distance (ft)		556	604	604				447	447
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150				200	200	200		
Storage Blk Time (%)	7	0		2	0				
Queuing Penalty (veh)	7	1		2	0				

Network Summary

Network wide Queuing Penalty: 10

Appendix F – Build 2027 Synchro and SimTraffic Reports



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	92	0	0	34	17	1221	43	0	1236	22
Future Volume (vph)	0	0	92	0	0	34	17	1221	43	0	1236	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.997	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1611	1805	3539	1583	0	3496	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1611	1805	3539	1583	0	3496	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		703			298			634			199	
Travel Time (s)		16.0			6.8			9.6			3.0	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.89
Heavy Vehicles (%)	25%	2%	0%	2%	2%	2%	0%	2%	2%	2%	3%	0%
Adj. Flow (vph)	0	0	102	0	0	37	18	1327	47	0	1389	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	102	0	0	37	18	1327	47	0	1414	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			15			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

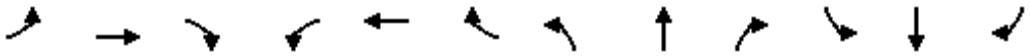
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	92	0	0	34	17	1221	43	0	1236	22
Future Vol, veh/h	0	0	92	0	0	34	17	1221	43	0	1236	22
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	-	-	0	-	-	0	100	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	92	92	92	92	89	89
Heavy Vehicles, %	25	2	0	2	2	2	0	2	2	2	3	0
Mvmt Flow	0	0	102	0	0	37	18	1327	47	0	1389	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	707	-	-	664	1414	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.94	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.32	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	382	0	0	403	488	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	382	-	-	403	488	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	14.8	0.2	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	488	-	-	382	403	-	-
HCM Lane V/C Ratio	0.038	-	-	0.268	0.092	-	-
HCM Control Delay (s)	12.7	-	-	17.8	14.8	-	-
HCM Lane LOS	B	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	136	0	0	34	27	1242	43	0	1318	29
Future Volume (vph)	0	0	136	0	0	34	27	1242	43	0	1318	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.997	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1611	1583	3574	1583	0	3520	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1611	1583	3574	1583	0	3520	0
Link Speed (mph)		25			30			45			45	
Link Distance (ft)		685			326			514			634	
Travel Time (s)		18.7			7.4			7.8			9.6	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.92	0.92	0.93	0.93
Heavy Vehicles (%)	6%	2%	0%	2%	2%	2%	14%	1%	2%	2%	2%	13%
Adj. Flow (vph)	0	0	151	0	0	37	29	1335	47	0	1417	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	151	0	0	37	29	1335	47	0	1448	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			25			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	136	0	0	34	27	1242	43	0	1318	29
Future Vol, veh/h	0	0	136	0	0	34	27	1242	43	0	1318	29
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	-	-	0	-	-	0	150	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	92	92	92	93	93	92	92	93	93
Heavy Vehicles, %	6	2	0	2	2	2	14	1	2	2	2	13
Mvmt Flow	0	0	151	0	0	37	29	1335	47	0	1417	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	724	-	-	668	1448	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.94	4.38	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.32	2.34	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	373	0	0	401	408	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	373	-	-	401	408	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.1	14.9	0.3	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	408	-	-	373	401	-	-
HCM Lane V/C Ratio	0.071	-	-	0.405	0.092	-	-
HCM Control Delay (s)	14.5	-	-	21.1	14.9	-	-
HCM Lane LOS	B	-	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.9	0.3	-	-

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	169	205	991	200	125	204	1128
Future Volume (vph)	169	205	991	200	125	204	1128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		200		200	
Storage Lanes	1	1		1		2	
Taper Length (ft)	25					100	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.97	0.95
Frt		0.850		0.850			
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1805	1583	3574	1615	0	3433	3539
Flt Permitted	0.950					0.950	
Satd. Flow (perm)	1805	1583	3574	1615	0	3433	3539
Right Turn on Red		No		Yes			
Satd. Flow (RTOR)				215			
Link Speed (mph)	35		45				45
Link Distance (ft)	644		651				514
Travel Time (s)	12.5		9.9				7.8
Peak Hour Factor	0.90	0.90	0.93	0.93	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	1%	0%	2%	2%	2%
Adj. Flow (vph)	188	228	1066	215	136	222	1226
Shared Lane Traffic (%)							
Lane Group Flow (vph)	188	228	1066	215	0	358	1226
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	15		15				25
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Number of Detectors	1	1	2	1	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Left	Thru
Leading Detector (ft)	20	20	100	20	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94
Detector 2 Size(ft)			6				6
Detector 2 Type			Cl+Ex				Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)			0.0				0.0
Turn Type	Prot	Perm	NA	pm+ov	Prot	Prot	NA
Protected Phases	4		6	4	5	5	2

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Permitted Phases		4		6			
Detector Phase	4	4	6	4	5	5	2
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.0	15.0	22.0	15.0	15.0	15.0	22.0
Total Split (s)	35.0	35.0	53.0	35.0	32.0	32.0	85.0
Total Split (%)	29.2%	29.2%	44.2%	29.2%	26.7%	26.7%	70.8%
Maximum Green (s)	29.0	29.0	47.0	29.0	26.0	26.0	79.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	18.9	18.9	33.8	59.0		15.3	55.4
Actuated g/C Ratio	0.22	0.22	0.39	0.68		0.18	0.64
v/c Ratio	0.48	0.66	0.77	0.18		0.59	0.54
Control Delay	36.3	43.3	28.3	1.1		39.7	10.1
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	36.3	43.3	28.3	1.1		39.7	10.1
LOS	D	D	C	A		D	B
Approach Delay	40.1		23.7				16.8
Approach LOS	D		C				B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 87			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 64.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: W Martintown Rd & Knobcone Ave

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	169	205	991	200	125	204	1128
Future Volume (veh/h)	169	205	991	200	125	204	1128
Initial Q (Qb), veh	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No		No				No
Adj Sat Flow, veh/h/ln	1900	1870	1885	1900		1870	1870
Adj Flow Rate, veh/h	188	228	1066	215		222	1226
Peak Hour Factor	0.90	0.90	0.93	0.93		0.92	0.92
Percent Heavy Veh, %	0	2	1	0		2	2
Cap, veh/h	337	295	1491	970		417	2236
Arrive On Green	0.19	0.19	0.42	0.42		0.12	0.63
Sat Flow, veh/h	1810	1585	3676	1610		3456	3647
Grp Volume(v), veh/h	188	228	1066	215		222	1226
Grp Sat Flow(s),veh/h/ln	1810	1585	1791	1610		1728	1777
Q Serve(g_s), s	6.1	8.9	16.1	4.0		3.9	12.7
Cycle Q Clear(g_c), s	6.1	8.9	16.1	4.0		3.9	12.7
Prop In Lane	1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	337	295	1491	970		417	2236
V/C Ratio(X)	0.56	0.77	0.72	0.22		0.53	0.55
Avail Cap(c_a), veh/h	807	707	2588	1464		1381	4317
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	24.0	25.2	15.8	5.9		26.9	6.8
Incr Delay (d2), s/veh	1.4	4.3	0.7	0.1		1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.4	5.4	1.8		1.5	3.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.5	29.4	16.4	6.0		27.9	7.0
LnGrp LOS	C	C	B	A		C	A
Approach Vol, veh/h	416		1281				1448
Approach Delay, s/veh	27.6		14.7				10.2
Approach LOS	C		B				B

Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		46.9		18.1	13.9	33.1	
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	
Max Green Setting (Gmax), s		79.0		29.0	26.0	47.0	
Max Q Clear Time (g_c+I1), s		14.7		10.9	5.9	18.1	
Green Ext Time (p_c), s		11.3		1.2	0.7	9.0	

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	8	0	0	6
Future Volume (vph)	0	0	8	0	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.950		
Satd. Flow (prot)	1863	0	0	1770	1611	0
Flt Permitted				0.950		
Satd. Flow (perm)	1863	0	0	1770	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	642			920	348	
Travel Time (s)	14.6			20.9	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	9	0	0	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	9	7	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

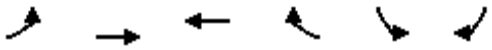
Intersection	
Int Delay, s/veh	7.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	8	0	0	6
Future Vol, veh/h	0	0	8	0	0	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	9	0	0	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	19	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	18	-
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	-	-	1622	-	998	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	992	1084
Mov Cap-2 Maneuver	-	-	-	-	992	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.006	-	-	0.005	-
HCM Control Delay (s)	8.3	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	73	35	21	63	0
Future Volume (vph)	0	73	35	21	63	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.949			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1768	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1768	0	1770	0
Link Speed (mph)		25	25		30	
Link Distance (ft)		328	685		739	
Travel Time (s)		8.9	18.7		16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	79	38	23	68	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	79	61	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.0%		ICU Level of Service A	
Analysis Period (min) 15			

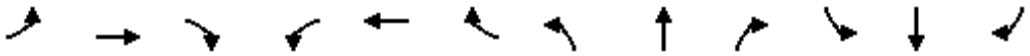
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	73	35	21	63	0
Future Vol, veh/h	0	73	35	21	63	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	79	38	23	68	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	61	0	-	0	129	50
Stage 1	-	-	-	-	50	-
Stage 2	-	-	-	-	79	-
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	1542	-	-	-	865	1018
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	944	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1542	-	-	-	865	1018
Mov Cap-2 Maneuver	-	-	-	-	865	-
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	944	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1542	-	-	-	865
HCM Lane V/C Ratio	-	-	-	-	0.079
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	76	0	0	39	54	1286	39	0	1297	59
Future Volume (vph)	0	0	76	0	0	39	54	1286	39	0	1297	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.993	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1644	1805	3574	1615	0	3531	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1644	1805	3574	1615	0	3531	0
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		703			298			634			199	
Travel Time (s)		16.0			6.8			9.6			3.0	
Peak Hour Factor	0.65	0.65	0.65	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	13%
Adj. Flow (vph)	0	0	117	0	0	42	59	1398	42	0	1441	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	117	0	0	42	59	1398	42	0	1507	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			15			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	60		60	15		60	60		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

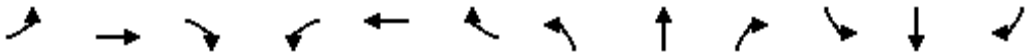
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	76	0	0	39	54	1286	39	0	1297	59
Future Vol, veh/h	0	0	76	0	0	39	54	1286	39	0	1297	59
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	-	-	0	-	-	0	100	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	92	92	92	92	92	92	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	1	13
Mvmt Flow	0	0	117	0	0	42	59	1398	42	0	1441	66

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	754	-	-	699	1507	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	356	0	0	387	450	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	356	-	-	387	450	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20	15.4	0.6	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	450	-	-	356	387	-	-
HCM Lane V/C Ratio	0.13	-	-	0.328	0.11	-	-
HCM Control Delay (s)	14.2	-	-	20	15.4	-	-
HCM Lane LOS	B	-	-	C	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.4	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	90	0	0	39	53	1392	39	0	1298	60
Future Volume (vph)	0	0	90	0	0	39	53	1392	39	0	1298	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		200	0		0
Storage Lanes	0		1	0		1	1		1	0		0
Taper Length (ft)	25			25			50			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.865			0.865			0.850		0.993	
Flt Protected							0.950					
Satd. Flow (prot)	0	0	1644	0	0	1644	1805	3574	1615	0	3585	0
Flt Permitted							0.950					
Satd. Flow (perm)	0	0	1644	0	0	1644	1805	3574	1615	0	3585	0
Link Speed (mph)		25			30			45			45	
Link Distance (ft)		685			326			514			634	
Travel Time (s)		18.7			7.4			7.8			9.6	
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.89	0.89	0.89	0.93	0.93	0.93
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	108	0	0	42	60	1564	44	0	1396	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	108	0	0	42	60	1564	44	0	1461	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			25			15	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	60		60	15		60	60		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	90	0	0	39	53	1392	39	0	1298	60
Future Vol, veh/h	0	0	90	0	0	39	53	1392	39	0	1298	60
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	-	-	0	-	-	0	150	-	200	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	92	92	92	89	89	89	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	1	0	0	0	0
Mvmt Flow	0	0	108	0	0	42	60	1564	44	0	1396	65

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	731	-	-	782	1461	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.9	-	-	6.9	4.1	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.3	-	-	3.3	2.2	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	369	0	0	341	469	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	369	-	-	341	469	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.8	17.1	0.5	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	469	-	-	369	341	-	-
HCM Lane V/C Ratio	0.127	-	-	0.294	0.124	-	-
HCM Control Delay (s)	13.8	-	-	18.8	17.1	-	-
HCM Lane LOS	B	-	-	C	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1.2	0.4	-	-

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	184	108	1283	132	93	132	1162
Future Volume (vph)	184	108	1283	132	93	132	1162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	0		200		200	
Storage Lanes	1	1		1		2	
Taper Length (ft)	25					100	
Lane Util. Factor	1.00	1.00	0.95	1.00	0.95	0.97	0.95
Frt		0.850		0.850			
Flt Protected	0.950					0.950	
Satd. Flow (prot)	1671	1599	3574	1615	0	3502	3574
Flt Permitted	0.950					0.950	
Satd. Flow (perm)	1671	1599	3574	1615	0	3502	3574
Right Turn on Red		No		Yes			
Satd. Flow (RTOR)				150			
Link Speed (mph)	35		45				45
Link Distance (ft)	644		651				514
Travel Time (s)	12.5		9.9				7.8
Peak Hour Factor	0.90	0.90	0.88	0.88	0.92	0.92	0.92
Heavy Vehicles (%)	8%	1%	1%	0%	0%	0%	1%
Adj. Flow (vph)	204	120	1458	150	101	143	1263
Shared Lane Traffic (%)							
Lane Group Flow (vph)	204	120	1458	150	0	244	1263
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	R NA	Left	Left
Median Width(ft)	15		15				25
Link Offset(ft)	0		0				0
Crosswalk Width(ft)	16		16				16
Two way Left Turn Lane			Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	9	15	
Number of Detectors	1	1	2	1	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Left	Thru
Leading Detector (ft)	20	20	100	20	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94
Detector 2 Size(ft)			6				6
Detector 2 Type			Cl+Ex				Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)			0.0				0.0
Turn Type	Prot	Perm	NA	pm+ov	Prot	Prot	NA
Protected Phases	4		6	4	5	5	2

Lane Group	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Permitted Phases		4		6			
Detector Phase	4	4	6	4	5	5	2
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	15.0	15.0	22.0	15.0	15.0	15.0	22.0
Total Split (s)	35.0	35.0	53.0	35.0	32.0	32.0	85.0
Total Split (%)	29.2%	29.2%	44.2%	29.2%	26.7%	26.7%	70.8%
Maximum Green (s)	29.0	29.0	47.0	29.0	26.0	26.0	79.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0	6.0
Lead/Lag			Lag		Lead	Lead	
Lead-Lag Optimize?			Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Min	Min	None	Min	None	None	None
Act Effct Green (s)	16.9	16.9	47.3	70.2		12.0	65.4
Actuated g/C Ratio	0.18	0.18	0.50	0.74		0.13	0.69
v/c Ratio	0.68	0.42	0.81	0.12		0.55	0.51
Control Delay	48.6	39.1	25.9	0.9		44.2	8.3
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	48.6	39.1	25.9	0.9		44.2	8.3
LOS	D	D	C	A		D	A
Approach Delay	45.1		23.6				14.1
Approach LOS	D		C				B

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 94.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: W Martintown Rd & Knobcone Ave

Movement	WBL	WBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (veh/h)	184	108	1283	132	93	132	1162
Future Volume (veh/h)	184	108	1283	132	93	132	1162
Initial Q (Qb), veh	0	0	0	0		0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00		1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00		1.00	1.00
Work Zone On Approach	No		No				No
Adj Sat Flow, veh/h/ln	1781	1885	1885	1900		1900	1885
Adj Flow Rate, veh/h	204	120	1458	150		143	1263
Peak Hour Factor	0.90	0.90	0.88	0.88		0.92	0.92
Percent Heavy Veh, %	8	1	1	0		0	1
Cap, veh/h	262	246	1813	1063		354	2460
Arrive On Green	0.15	0.15	0.51	0.51		0.10	0.69
Sat Flow, veh/h	1697	1598	3676	1610		3510	3676
Grp Volume(v), veh/h	204	120	1458	150		143	1263
Grp Sat Flow(s),veh/h/ln	1697	1598	1791	1610		1755	1791
Q Serve(g_s), s	8.7	5.2	25.6	2.6		2.9	12.9
Cycle Q Clear(g_c), s	8.7	5.2	25.6	2.6		2.9	12.9
Prop In Lane	1.00	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	262	246	1813	1063		354	2460
V/C Ratio(X)	0.78	0.49	0.80	0.14		0.40	0.51
Avail Cap(c_a), veh/h	653	615	2233	1252		1211	3753
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00		1.00	1.00
Uniform Delay (d), s/veh	30.7	29.2	15.5	4.8		31.8	5.7
Incr Delay (d2), s/veh	5.0	1.5	1.8	0.1		0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0		0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.7	8.8	1.1		1.2	3.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	35.7	30.7	17.3	4.9		32.5	5.9
LnGrp LOS	D	C	B	A		C	A
Approach Vol, veh/h	324		1608				1406
Approach Delay, s/veh	33.8		16.2				8.6
Approach LOS	C		B				A

Timer - Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		57.8		17.6	13.6	44.2	
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	
Max Green Setting (Gmax), s		79.0		29.0	26.0	47.0	
Max Q Clear Time (g_c+I1), s		14.9		10.7	4.9	27.6	
Green Ext Time (p_c), s		11.8		0.9	0.4	10.6	

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	0	11	0	0	13
Future Volume (vph)	0	0	11	0	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.950		
Satd. Flow (prot)	1863	0	0	1770	1611	0
Flt Permitted				0.950		
Satd. Flow (perm)	1863	0	0	1770	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	642			920	348	
Travel Time (s)	14.6			20.9	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	12	0	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	12	14	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		60	60		60	60
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

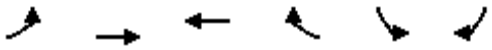
Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	0	0	13
Future Vol, veh/h	0	0	11	0	0	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	12	0	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	25	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	24	-
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	-	-	1622	-	991	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	984	1084
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.2	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1084	-	-	1622	-
HCM Lane V/C Ratio	0.013	-	-	0.007	-
HCM Control Delay (s)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	50	56	58	40	0
Future Volume (vph)	0	50	56	58	40	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.931			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1734	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1734	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		328	685		739	
Travel Time (s)		7.5	15.6		16.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	54	61	63	43	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	54	124	0	43	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	50	56	58	40	0
Future Vol, veh/h	0	50	56	58	40	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	61	63	43	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	124	0	-	0	147	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	54	-
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	1463	-	-	-	845	964
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1463	-	-	-	845	964
Mov Cap-2 Maneuver	-	-	-	-	845	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	969	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1463	-	-	-	845
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	9.5
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3203
Vehs Exited	3198
Starting Vehs	56
Ending Vehs	61
Travel Distance (mi)	1448
Travel Time (hr)	62.2
Total Delay (hr)	24.0
Total Stops	1989
Fuel Used (gal)	60.1

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3203
Vehs Exited	3198
Starting Vehs	56
Ending Vehs	61
Travel Distance (mi)	1448
Travel Time (hr)	62.2
Total Delay (hr)	24.0
Total Stops	1989
Fuel Used (gal)	60.1

Intersection: 1: W Martintown Rd & Compassion Way/The Hive Dwy 1

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	111	69	28
Average Queue (ft)	38	18	9
95th Queue (ft)	74	45	29
Link Distance (ft)	623	236	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: W Martintown Rd & Old Plantation Rd/The Hive Dwy 2

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	118	58	70
Average Queue (ft)	55	14	22
95th Queue (ft)	101	38	55
Link Distance (ft)	593	256	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	R	UL	L	T	T
Maximum Queue (ft)	174	242	355	371	225	247	219	181	254
Average Queue (ft)	106	133	234	195	53	163	84	104	117
95th Queue (ft)	179	230	339	319	152	225	168	173	195
Link Distance (ft)		556	604	604				447	447
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150				200	200	200		
Storage Blk Time (%)	4	6		4	0	4	0	0	
Queuing Penalty (veh)	8	10		8	0	22	1	0	

Intersection: 4: Site Dwy #2 & Compassion Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	7
95th Queue (ft)	26
Link Distance (ft)	314
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Old Plantation Rd & Site Dwy #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	45
Average Queue (ft)	21
95th Queue (ft)	43
Link Distance (ft)	705
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 48

Summary of All Intervals

Start Time	4:50
End Time	6:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	3389
Vehs Exited	3386
Starting Vehs	55
Ending Vehs	58
Travel Distance (mi)	1523
Travel Time (hr)	64.3
Total Delay (hr)	25.9
Total Stops	1978
Fuel Used (gal)	63.5

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	3389
Vehs Exited	3386
Starting Vehs	55
Ending Vehs	58
Travel Distance (mi)	1523
Travel Time (hr)	64.3
Total Delay (hr)	25.9
Total Stops	1978
Fuel Used (gal)	63.5

Intersection: 1: W Martintown Rd & Compassion Way/The Hive Dwy 1

Movement	EB	WB	NB	SB
Directions Served	R	R	L	TR
Maximum Queue (ft)	50	44	87	19
Average Queue (ft)	28	17	33	1
95th Queue (ft)	44	39	64	6
Link Distance (ft)	623	236		136
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 2: W Martintown Rd & Old Plantation Rd/The Hive Dwy 2

Movement	EB	WB	NB
Directions Served	R	R	L
Maximum Queue (ft)	73	38	68
Average Queue (ft)	35	14	25
95th Queue (ft)	61	32	55
Link Distance (ft)	593	256	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: W Martintown Rd & Knobcone Ave

Movement	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	R	T	T	R	UL	L	T	T
Maximum Queue (ft)	175	296	530	449	225	181	148	147	160
Average Queue (ft)	114	95	312	254	65	106	45	92	95
95th Queue (ft)	189	210	433	399	199	165	114	146	152
Link Distance (ft)		556	604	604				447	447
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	150				200	200	200		
Storage Blk Time (%)	7	0		10	0	0			
Queuing Penalty (veh)	7	0		13	0	0			

Intersection: 4: Site Dwy #2 & Compassion Way

Movement	NB
Directions Served	LR
Maximum Queue (ft)	27
Average Queue (ft)	9
95th Queue (ft)	29
Link Distance (ft)	314
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Old Plantation Rd & Site Dwy #1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	49
Average Queue (ft)	18
95th Queue (ft)	40
Link Distance (ft)	705
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 21

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ORDINANCE NO. 2024-XX
TO APPROVE THE GENERAL DEVELOPMENT PLAN
FOR THE 70.82± ACRE MOORES BLUFF PLANNED DEVELOPMENT
OFF OLD PLANTATION ROAD

WHEREAS, within the guidelines of the North Augusta Development Code, a General Development Plan for property within a designated Planned Development zone (PD) requires Planning Commission review and subsequent recommendation to City Council for review and approval; and

WHEREAS, an application has been received from CSRA Development Company, LLC requesting approval for a General Development Plan for a tract of land zoned Planned Development (PD) containing 70.82± acres located on the west side of on West Martintown Road, north of Old Plantation Road, and south of Compassion Way; and

WHEREAS, the developer, CSRA Development Company, LLC of Augusta, Georgia, proposes a mixed use development on tax parcel number 001-19-02-005

WHEREAS, the North Augusta Planning Commission, at its regular meeting of XX, reviewed the subject application and voted to recommend that City Council approve the General Development Plan for the 70.82± acre Moores Bluff Planned Development.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH AUGUSTA, SOUTH CAROLINA, IN MEETING DULY ASSEMBLED AND BY THE AUTHORITY THEREOF, THAT:

I. The General Development Plan for the 70.82± acre Moores Bluff Planned Development is hereby approved as outlined below and as shown on the attached plat and identified as "General Development Plan" as prepared by H&C Surveying. and The General Development Plan Narrative for Moores Bluff as prepared by CSRA Development, dated October 13, 2023.

A. Scope of Development: The scope of development described in the General Development Plan for the Moores Bluff Planned Development and described herein shall be the maximum level of development allowed. The land uses permitted in the Moores Bluff Planned Development shall be limited to those described in this ordinance.

1. Minor Modifications: Minor modifications to the development plan and program for valid land use planning and reasonable development reasons, i.e. mix of uses, number and location of buildings, development schedule, setbacks, parking, and landscaping, etc., may be approved by the Planning Commission at the time of subdivision approval for any portion of a phase or site plan approval for an individual parcel.

2. Flex Density and Intensity: Up to ten (5%) percent of the total residential density or commercial square footage allocated to a parcel may be deducted from the total permitted for that parcel and redistributed to one or more other parcels designated for the same use provided the total density or intensity of a recipient parcel is not increased by more than ten (5%) percent.

B. Development Program:

Parcel	Permitted Uses	Area in Acres	Maximum Density (units per gross acre) or Intensity (gross building area in sq. ft. per acre)
1	Self-Storage	24.07	210,000 sq. ft. Storage
2	Single Family Attached	46.75	3.3 units/acre

C. Parking Requirements: The minimum parking ratio will be determined by the standards set forth in the North Augusta Development Code for the applicable use.

D. Development Standards: Development standards applicable to Thoroughfare Commercial shall be those used for the General Commercial District and except as provided for in this section and in other sections of this ordinance:

Development standards applicable to residential areas shall be as provided in the North Augusta Development Code as R-5, Mixed Residential and applied to parcels at the time of concept plan approval.

1. No apartments or multifamily development is permitted to be built.

E. Plan Approval Process: Subsequent to the adoption of this ordinance the following plan approval steps shall be required in the order listed prior to the issuance of development permits.

1. Master Utility Plan – Master plans for water distribution; sewage collection; and stormwater quality, detention and drainage shall be developed and approved prior to or coincidental with the initial phase concept plan. The level of detail provided in the master utility plans shall be determined by the Project Engineer and City Engineer.

2. No traffic improvements for either site is required per the traffic study and based on the required traffic improvements for the proposed developments.

3. Wetlands Delineation and Mitigation – A wetlands delineation, permit and any mitigation plans approved by SCDHEC and the US Army Corps of Engineers shall be submitted prior to or coincidental with a Concept Plan for any phase that contains jurisdictional wetlands.

4. Phase Concept Plan – A concept plan for each tract identified in the General Development Plan shall be prepared for Planning Commission review and approval prior to or coincidental with the first preliminary plat application for each phase. The phase concept plan shall include an overall circulation system design, utility systems designs, anticipated mix and intensity or density of uses, proposed or draft master covenants and restrictions for the tract, and buffer delineation. The tract concept plan must indicate how the development of the phase will interrelate with the other phases in the development.

5. Preliminary Plat – Preliminary plats for sections will be processed and reviewed in accordance with the applicable provisions of the North Augusta Development Code, this ordinance and the General Development Plan Narrative for Moores Bluff.

6. Final Plat – Final plats for sections or phases of each tract will be processed and reviewed in accordance with the applicable provisions of the North Augusta Development Code and the approved preliminary plat.

7. Site Plan – Site plans for self-storage commercial parcel approved in a final plat for any portion of a tract will be processed and reviewed in accordance with the applicable provisions of the North Augusta Development Code, the general development plan ordinance and the General Development Plan Narrative for Moores Bluff.

F. Utilities: Water and sewer tap fees for each parcel shall be determined in accordance with the City Code provisions related to utility extensions.

G. Land Dedication: Land dedicated to the City in conjunction with the development will include road rights-of-way, utility easements and drainage ways in accordance with the applicable provisions of the North Augusta Development Code.

H. Buffers and Landscaping: Landscaped buffers, site landscaping, parking lot landscaping, and street trees shall be provided in the development as required for the applicable use by the North Augusta Development Code. Title to the

required buffers shall be retained by a property owners' association or deed-restricted to prevent a change of use.

Individual buffer specific landscape plans shall be developed and submitted with the applicable parcel site plan that show the locations of any retaining walls and new slopes within the buffer and details how the buffer and retaining wall will be treated. Such landscape plans shall include any necessary or proposed fencing as well as landscape material.

1. Fencing provided within the buffers located on or near the property lines between the commercial and residential uses may be permitted. The Planning Commission shall approve the height and style of the fence at the site plan stage. The fence shall be no less than five (5) feet in height. Alternatively, a solid fence made of wood, vinyl, metal, or masonry may be constructed.

2. Planting is not required within utility easements on any parcel.

K. Applicable Standards for Review: The information contained in the General Development Plan shall supplement the provisions of this ordinance and shall be used in the review of subdivision and site plans for projects within Moores Bluff. In the event of a conflict between the provisions of this ordinance and the content of the General Development Plan, the provisions of this ordinance shall prevail. General design criteria and development standards (parking, landscaping, etc.) applicable to each phase of the development and not otherwise prescribed in the General Development Plan or this ordinance shall be as provided for in the North Augusta Development Code as it may be amended.

L. Additional Provisions: Additional conditions applicable to the development are:

1. Proposed or anticipated covenants and deed restrictions on the parcels to be sold and the management of common areas shall be provided in conjunction with the concept plan and plat submission for each phase.
2. Exterior lighting details shall be included with each commercial site plan application, including a description of the lighting levels during business versus non-business hours and shall comply with the North Augusta Development Code.

3. Outdoor display and sale of merchandise must be approved by the Planning Commission at site plan approval or is otherwise prohibited.

4. Excessive noise associated with any use in the development including loading, unloading, trash compaction, building maintenance, parking lot or landscaping maintenance or any other activity shall be prohibited between the hours of 11:00 p.m. and 6:00 a.m.

5. Architectural plans of all elevations of proposed commercial buildings shall be submitted with a site plan application.

6. Waivers may be approved for loading, maintenance, screened storage and other areas shielded from public view.

7. Stormwater detention areas shall be fenced for safety and landscaped to shield the fencing, rip rap, and drainage structures. Black vinyl clad chain link fence shall be installed below the upper edge of each detention area in a manner as to be obscured by the landscaping on top of the detention area.

8. Signs: Signs shall conform to the provisions of the North Augusta Development Code unless specified otherwise herein.

    a. Wall signage size for commercial uses shall be permitted as provided for in the North Augusta Development Code. The sign panels shall be darker in color than the lettering and graphics.
    b. One freestanding monument sign may be permitted for each commercial or professional parcel. Monument signs shall not exceed 60 square feet in area or 10 feet in height and may advertise only the business or businesses located on the parcel. The sign panels shall be darker in color than the lettering and graphics.

9. The developer shall provide a maintenance guarantee supported by a letter of credit or monetary deposit as required by the North Augusta Development Code.

II. All ordinances or parts of ordinances in conflict herewith are, to the extent of such conflict, hereby repealed.

III. This Ordinance shall become effective immediately upon its adoption on third reading.

DONE, RATIFIED AND ADOPTED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF NORTH AUGUSTA, SOUTH CAROLINA, ON THIS _____ DAY OF _____, 2024.

First Reading_____

Second Reading_____

_____
Briton S. Williams, Mayor

ATTEST:

_____
Jamie Paul, City Clerk

26787 - Sinkler v. City of Charleston

/opinions/HTMLFiles/SC/26787.htm

THE STATE OF SOUTH CAROLINA
In The Supreme Court

G. Dana Sinkler and Anchorage Plantation Home Owners Association, Petitioners,

v.

County of Charleston, Charleston County Council and Theodora Walpole and John D. Walpole, Respondents.

ON WRIT OF CERTIORARI TO THE COURT OF APPEALS

Appeal From Charleston County
R. Markley Dennis, Jr., Circuit Court Judge

Opinion No. 26787
Heard January 21, 2010 - Filed March 15, 2010

REVERSED

G. Trenholm Walker, Francis M. Ervin, and Sara E. DeWolf, all of Pratt-Thomas & Walker, of Charleston, for Petitioners.

County Attorney Joseph Dawson, III, Deputy County Attorney Bernard E. Ferrara, Jr., Assistant County Attorney Austin A. Bruner, all of North Charleston; and Gerald M. Finkel, of Finkel Law Firm, of Charleston, for Respondents.

JUSTICE BEATTY: G. Dana Sinkler and Anchorage Plantation Home Owners Association (collectively, Petitioners) brought this action against the County of Charleston, Charleston County Council, and Theodora and John D. Walpole (collectively, Respondents) challenging an ordinance rezoning the Walpoles' property, Anchorage Plantation, from agricultural to a Planned Development (PD) district. Upon review, the circuit court ruled the ordinance was invalid and that the property should retain its agricultural classification. The Court of Appeals reversed, holding the rezoning to a PD was proper. Sinkler v. County of Charleston, Op. No. 2008-UP-297 (S.C. Ct. App. filed June 5, 2008). We granted a petition for a writ of certiorari to review the decision of the Court of Appeals and now reverse.

I. FACTS

A. Background of Dispute.

The South Carolina Local Government Comprehensive Planning Enabling Act of 1994 (the Enabling Act) granted local governments the authority to create planning commissions to implement comprehensive plans governing development in their communities.[1] In 1999, Charleston County Council enacted the County of Charleston Comprehensive Plan.

The Comprehensive Plan designated Wadmalaw Island part of the Agricultural Area of Charleston County, where the preferred land uses included farming and resource management, along with "preservation of the rural community character." The Comprehensive Plan further provided that development in areas classified as Agricultural Preservation within the Agricultural Area "should primarily support the needs of the farming industry, secondarily allowing for compatible residential development."

The Enabling Act permits the governing body of a county to adopt zoning ordinances to help implement a comprehensive plan. S.C. Code Ann. 6-29-720 (2004 & Supp. 2009). Charleston County Council enacted the Charleston County Zoning and Land Development Regulations (ZLDR) in 2001 to implement its Comprehensive Plan.

Petitioners separately own properties on Wadmalaw Island that are adjacent to a tract of land (roughly 750 acres) owned by the Walpoles. The Walpoles' property was used as a tomato farm and was zoned AG-15, an Agricultural Preservation classification.

Under the ZLDR, the AG-15 classification allows a "maximum density" of one dwelling unit per fifteen acres on interior land, with a "minimum lot area" of three acres. ZLDR 4.4.3(A). For land within one thousand feet of the OCRM[2] critical line, the AG-15 zoning classification allows a maximum density of one dwelling unit for every three acres. ZLDR 4.4.3(B). The configuration of the Walpoles' land limited it to a maximum of 107 dwellings under the AG-15 zoning restrictions.

On June 20, 2003, the Walpoles applied to have their property rezoned to a PD district. Charleston County Council adopted an ordinance rezoning the Walpoles' property from AG-15 to a PD district on February 17, 2004. Under the ordinance, the minimum lot size was reduced to one acre, although the allowed uses remained the same as those under the AG-15 classification. The maximum number of dwellings on the property remained unchanged at 107.

Petitioners brought this declaratory judgment action in 2004, asserting the ordinance rezoning the Walpoles' property was invalid because Charleston County Council exceeded its authority and violated provisions of the Enabling Act and the ZLDR in approving the change.

B. Circuit Court's Ruling.

The circuit court found the ordinance rezoning the Walpoles' property from AG-15 to a PD district was invalid and that the property remained zoned AG-15. The circuit court concluded Charleston County Council exceeded its authority and violated the provisions of both (1) the Enabling Act and (2) the ZLDR.

(1) The Enabling Act. The circuit court first found the ordinance did not meet the essential standards for establishing a PD as provided by sections 6-29-720 and -740 of the Enabling Act.

The circuit court stated the ordinance violated section 6-29-720, governing zoning methods, because the proposed PD plan that was approved failed to meet the statute's definition of a PD. Section 6-29-720 defines a PD as follows:

> [A] development project comprised of housing of different types and densities and of compatible commercial uses, or shopping centers, office parks, and mixed-use developments. A planned development district is established by rezoning prior to development and is characterized by a unified site design for a mixed use development[.]

S.C. Code Ann. 6-29-720(C)(4) (Supp. 2009) (emphasis added).

The circuit court noted the development in the proposed area is residential, the same type of development that is already authorized under its current zoning of AG-15. The court stated, "Distilling the PD Ordinance to its essence, its primary effect was simply to reduce the minimum lot size for the up-to-107 residential dwelling units."

The court found the PD plan submitted to Charleston County does not call for "housing of different types and densities and of compatible commercial uses, or shopping centers, office parks, and mixed-use developments," nor is it "characterized by a unified site design for a mixed use development" as required by section 6-29-720(C)(4).

Respondents had alternatively argued that County Council could implement its own zoning districts and did not have to meet the requirements of a PD district provided in the Enabling Act, based on the portion of section 6-29-720(C) that reads as follows:

> The zoning ordinance may utilize the following [listing cluster developments, floating zones, performance zoning, and planned development districts, among others] or any other zoning and planning techniques for implementation of the goals specified above. Failure to specify a particular technique does not cause use of that technique to be viewed as beyond the power of the local government choosing to use it[.]

S.C. Code Ann. 6-29-720(C).

The circuit court observed that, "[w]hile the County is correct that the legislature did not confine it to the categories of zoning districts listed in S.C. Code Ann. 6-29-720(C), in this instance the County actually employed one of the enabling statute's specifically defined categories, 'planned development district,' and specifically referred to the Enabling Act as the basis for its authority in 3.5.1, ZLDR." Accordingly, the circuit court concluded the ordinance was intended to implement a PD as described in section 6-29-720(C) rather than "some new, alternative . . . zoning category."

The circuit court further found the ordinance violated section 6-29-740 of the Enabling Act, entitled "Planned development districts," which allows variances from lot size, use, and density requirements contained in other ordinances and regulations through establishment of a PD. Section 6-29-740 provides in relevant part:

> In order to achieve the objectives of the comprehensive plan of the locality and to allow flexibility in development that will result in improved design, character, and quality of new mixed use developments and preserve natural and scenic features of open spaces, the local governing authority may provide for the establishment of planned development districts as amendments to a locally adopted zoning ordinance and official zoning map. The adopted planned development map is the zoning district map for the property. The planned development provisions must encourage innovative site planning for residential, commercial, institutional, and industrial developments within planned development districts.

S.C. Code Ann. 6-29-740 (2004) (emphasis added).

The court found that, in comparison to the AG-15 zoning, the proposed PD plan simply reduces the required lot size from three acres to one acre, but it includes "no elements that result in improved design, character, and quality of a new mixed use development." The court stated the proposed plan calls for up to 107 residential dwellings, but the AG-15 zoning already allows this residential use, so "the proposed plan cannot . . . be considered to be a 'new mixed use development.'" The court also noted the proposed plan does not specifically identify any particular land as open space or impose any requirement that the owners preserve open space; moreover, "the proposed plan does not result in more open space than AG-15 zoning, since each would allow up to 107 single family houses."

(2) The ZLDR. As an additional ground for invalidating the ordinance, the circuit court found the ordinance violated the ZLDR. The court noted the ZLDR sections defining the AG-10 and AG-8 zoning districts include the provision that an owner may reach maximum density only through the PD process, citing 4.5.3(B), ZLDR (for AG-10) and 4.6.3(B), ZLDR (for AG-8). "On the other hand, the ZLDR sections governing the more restrictive AG-25 and AG-15 districts have no parallel provision allowing any adjustment to any of the standards through a planned development district or the 'Planned Development process.'" The court concluded County Council did not intend for a property owner to be able to reduce the residential standards of property zoned AG-15 through a PD process and that the ZLDR do not allow the use of a PD to modify the restrictions of the AG-15 district for residential development.

C. Review by the Court of Appeals.

The Court of Appeals reversed, finding the Walpoles' property was properly rezoned to a PD based on "the deference provided local governing bodies and the flexibility created through the Enabling Act." Sinkler v. County of Charleston, Op. No. 2008-UP-297 (S.C. Ct. App. filed June 5, 2008), slip op. at 2.

The Court of Appeals found "the circuit court exceeded the applicable scope of review because a reviewing court should practice judicial restraint and not supplant its judgment for the local governing authority's judgment." Id. (citing Bob Jones Univ. v. City of Greenville, 243 S.C. 351, 133 S.E.2d 843 (1963)). In addition, citing Lenardis v. City of Greenville, 316 S.C. 471, 472, 450 S.E.2d 597, 598 (Ct. App. 1994), the Court of Appeals stated the appellate court "must leave [the disputed] decision undisturbed if the propriety of that decision is even 'fairly debatable.'" Id.

As to the Enabling Act, the Court of Appeals cited the prefatory language in section 6-29-720(C), which states "[t]he zoning ordinance may utilize the following or any other zoning and planning techniques for implementation of the goals specified above. Failure to specify a particular technique does not cause use of that technique to be viewed as beyond the power of the local government choosing to use it." Id. at 3 (quoting S.C. Code Ann. 6-29-720(C)) (alteration and emphasis in original). The court stated "Sinkler [Petitioners] [had] argued the County Council did not avail itself of this curative language because County Council utilized one of the definitions," but that it "need not explore Sinkler's argument as this court defers to the County Council's judgment regarding the plan." Id. "In the ordinance, the County Council found that the plan met Article 3.5 of the ZLDR . . . ." Id.

The Court of Appeals also found County Council's decision was not arbitrary or capricious, citing Bear Enterprises v. County of Greenville, 319 S.C. 137, 459 S.E.2d 883 (Ct. App. 1995). Id. "County Council reviewed the plan for the property multiple times and the county staff recommended rezoning the property. Accordingly, County Council's decision was neither arbitrary nor capricious." Id. at 3-4.

As to the circuit court's finding that the ordinance conflicted with the provisions of the ZLDR, the Court of Appeals held there was no conflict and nothing to suggest that County Council could not change an ordinance that it created. Id. at 4.

The Court of Appeals concluded that, since Petitioners had failed to show that the enacted ordinance conflicted with state law or the ZLDR, that County Council's decision was arbitrary and unreasonable, or that the rezoning violated Petitioners' constitutional rights, it would not substitute its judgment for that of County Council, and it held the circuit court erred in concluding County Council exceeded its lawfully delegated authority. Id. This Court granted a petition for a writ of certiorari to review the decision of the Court of Appeals.

II. LAW/ANALYSIS

Petitioners assert the Court of Appeals erred in (1) applying the wrong standard of review, (2) reversing the circuit court's invalidation of the ordinance on the basis it violates the provisions of the Enabling Act, and (3) reversing the circuit court's invalidation of the ordinance on the basis it conflicts with the ZLDR.

Because we find it dispositive, we direct our attention to Petitioners' argument that it was error to reverse the circuit court's determination that the rezoning ordinance was invalid because it violated the Enabling Act.

As noted above, the circuit court ruled the ordinance did not meet the qualifications for a PD as contained in sections 6-29-720 and -740 of the Enabling Act. The circuit court first found a PD requires "housing of different types and densities" and mixed use, as expressed by section 6-29-720. The court found the only change effected by the zoning ordinance in this case was to reduce the lot sizes so as to allow the property owners to avoid the density restriction mandated by the AG-15 category; all other factors remained the same as the AG-15 category.

Section 6-29-720 of the Enabling Act defines a PD as follows:

> [A] development project comprised of housing of different types and densities and of compatible commercial uses, or shopping centers, office parks, and mixed-use developments. A planned development district is established by rezoning prior to development and is characterized by a unified site design for a mixed use development[.]

S.C. Code Ann. 6-29-720(C)(4) (emphasis added).

The circuit court also found the ordinance violated section 6-29-740 of the Enabling Act, governing "Planned development districts," because it includes "no elements that result in improved design, character, and quality of a new mixed use development" as required by the statute. Section 6-29-740 states in relevant part that a PD should "result in improved design, character, and quality of new mixed use developments" and, moreover:

> The planned development provisions must encourage innovative site planning for residential, commercial, institutional, and industrial developments within planned development districts.

Id. 6-29-740.

The Court of Appeals found the ordinance did not violate the Enabling Act, stating it would defer to County Council's recitation in the ordinance that it satisfied the requirements for a PD and accord County Council the flexibility and authority contemplated in the Enabling Act.

We hold the circuit court properly concluded the ordinance did not meet the parameters for a PD. As found by that court, the only effect of the ordinance in this instance was to allow the Walpoles to reduce the lot sizes for the property, thus avoiding the restrictions mandated by AG-15 zoning. The ordinance did not provide for housing of different types and densities and compatible commercial use, and it did not create a new mixed use development as contemplated in the statutes of the Enabling Act. The property continued to have only residential dwellings and the ordinance did not plan for future diversity of development. As noted in the excerpt quoted from section 6-29-740 above, PD plans "must encourage innovative site planning for residential, commercial, institutional, and industrial developments within" the PD districts. S.C. Code Ann. 6-29-740.

As one treatise has observed, a PD is a zoning method that is used to create a planned mix of residential and commercial uses for the benefit of the community, as opposed to having only a single-use district:

> The planned unit development, in contrast to Euclidean zoning which divides a community into districts and explicitly mandates certain uses, . . . is a district in which a planned mix of residential, commercial, and even industrial uses is sanctioned subject to restrictions calculated to achieve compatible and efficient use of the land.

83 Am. Jur. 2d Zoning and Planning 396 (2003). The goal of a PD district is to have diversification of use and to create, in essence, a self-contained, planned community:

> In addition to facilitating flexibility in zoning, the planned unit development also seeks to grant diversification in the location of structures and other site qualities. Thus, the goal of planned unit development is achieved when an entire self-contained little community is permitted to be built within a zoning district, with the rules of density controlling not only the relation of private dwellings to open space, but also the relation of homes to commercial establishments such as theaters, hotels, restaurants, and quasi-commercial uses such as schools and churches.

Id. 398 (footnotes omitted).

The definitions of commentators and courts vary with the kind of planned unit development under discussion, but the description set forth above has been cited by several commentators. See, e.g., 3 Patricia E. Salkin, American Law of Zoning 24:8 (5th ed. 2009) (citing the description and its source, the Supreme Court of Pennsylvania, which applied this definition in Cheney v. Village 2 at New Hope, Inc.,

241 A.2d 81 (1968)). Accordingly, the essence of a PD under the Enabling Act is that the property will provide for mixed use. See id. at 24:9 ("Unlike *Euclidian* zoning which forces land development into a preconceived pattern, planned unit development permits the inclusion of a variety of housing types, lot sizes, and even nonresidential uses on a single tract."); Palmer/Sixth St. Props., L.P. v. City of Los Angeles, 96 Cal. Rptr. 3d 875, 878 n.2 (Ct. App. 2009) (noting a land use plan adopted for a specific area of Los Angeles defined a "mixed use" project as "[a]ny Project which combines a commercial use with a residential use, either in the same building or in separate buildings on the same lot or lots" (citing Plan, 4, Definitions)); Trail v. Terrapin Run, LLC, 920 A.2d 597, 606 (Md. Ct. Spec. App. 2007) (stating planned development "means more than just a subdivision or the concept would be unnecessary" and that "[t]he definition itself 'includes' different uses by virtue of its reference to mixed use development").

Respondents alternatively asserted that they did not have to meet the parameters of a PD under the Enabling Act because County Council was free to employ other zoning techniques, citing the prefatory language of section 6-29-720(C) governing zoning methods, which allows County Council to use one of the enumerated techniques or other techniques. We agree with the circuit court that County Council clearly chose to employ the PD process for the Walpoles' property and, once having invoked that technique, it could not arbitrarily fail to meet the requirements for a PD. Consequently, we hold the circuit court correctly ruled the ordinance is invalid because it did not properly establish a PD as contemplated by the terms of the Enabling Act, and we reverse the Court of Appeals' determination on this point.

III. CONCLUSION

Based on the foregoing, we reverse the decision of the Court of Appeals and hold the circuit court properly invalidated the ordinance rezoning the Walpoles' property from AG-15 to a PD district because the requirements for a PD district under the Enabling Act were not met.

REVERSED.[3]

TOAL, C.J., PLEICONES, HEARN, JJ., and Acting Justice James E. Moore, concur.

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[1] See S.C. Code Ann. 6-29-320 (2004) ("The county council of each county may create a county planning commission."); id. 6-29-510(A) (stating a local planning commission shall develop and maintain a comprehensive plan to guide development in its area of jurisdiction).

[2] OCRM refers to the Office of Ocean and Coastal Resource Management of the South Carolina Department of Health and Environmental Control.

[3] To the extent Petitioners assert the Court of Appeals applied the wrong standard of review, we find no error. The Court of Appeals found Petitioners failed to show the ordinance conflicted with state law or the ZLDR or that County Council had exceeded its lawfully delegated authority. We conclude the cases cited by the Court of Appeals are correct statements of the law in this area. However, because we agree with Petitioners that the circuit court properly invalidated the ordinance on the basis it violated the Enabling Act, we need not reach the remaining argument that the ordinance also violated the ZLDR.

DEPARTMENT OF PLANNING AND DEVELOPMENT

TOMMY PARADISE
DIRECTOR

MONTHLY REPORT
FOR
May 2024

City of North Augusta

Department of Planning and Development

Monthly Report for May 2024

Item	This Month		Year To Date		Same Month, Last Year		Last Year To Date	
Development Applications	**Received**	**Approved**	**Received**	**Approved**	**Received**	**Approved**	**Received**	**Approved**
Subdivisions								
Major Subdivision Plans (PP)	1	0	1	0	0	0	1	2
Planned Acres	24.42	0.00	24.42	0.00	0.00	0.00	0.85	63.35
Planned Lots	66	0	66	0	0	0	6	234
Minor Subdivision Plats (MP)	1	1	7	7	2	1	6	4
Platted New Lots	3	3	9	9	2	1	7	6
Major Subdivision Plats (FP)	1	0	1	0	1	0	2	0
Platted Acres	24.74	0.00	24.74	0.00	13.81	0.00	34.00	0.00
Platted Lots	88	0	88	0	29	0	103	0
Site Plans								
Minor Site Plans (MSP)	5	0	10	3	3	0	8	1
Major Site Plans (SP)	0	0	1	0	0	0	0	1
Site Plan Modification (SPM)	1	0	1	0	0	0	0	0
Total Site Plan Acres	23.36	0.00	67.66	19.21	6.21	0.00	12.23	8.71
Planned Developments								
PD Gen Dev Plans/Major Mod. (PD)	0	0	1	0	2	0	3	0
PD Acres	0	0	467	0	70.57	0	245.07	0
Development Plan Modification (PDM)	0	0	1	1	0	0	0	0
Annexations								
Annexation Agreements Received	0	0	0	0	0	0	0	0
Annexation Cases (ANX)	0	0	2	0	0	0	4	4
Approved by City Council	0	0	0	0	0	0	4	4
Parcels	0	0	2	0	0	0	4	4
Acres	0	0	471	0.00	0	0	1	1

City of North Augusta

Department of Planning and Development

Monthly Report for May 2024

Item	This Month		Year To Date		Same Month Last Year		Last Year To Date	
	Received	Approved	Received	Approved	Received	Approved	Received	Approved
Zoning/Text Amendments								
Rezoning (RZM)	1	1	4	1	0	0	0	0
Parcels	0.25	4	5	4	0	0	0	0
Acres	2	3.64	470.64	3.64	0.00	0.00	0.00	0.00
Conditional Zoning (RZC)	0	0	0	0	0	0	0	0
Parcels	0	0	0	0	0	0	0	0
Acres	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Text Amendments (RZT)	0	0	2	0	0	0	1	1
Other								
Certificates of Zoning Compliance (CZC)	7	7	55	55	4	4	42	42
Zoning Confirmation Letters (LZC)	1	1	6	6	3	1	9	7
Residential Site Reviews	26	26	139	139	23	23	83	83
Sign Permits (SN)	2	2	13	13	1	1	7	7
Right of Way Naming (RWN)	0	0	0	0	0	0	1	1
Right of Way Abandonment	0	0	0	0	0	0	0	0
Planning Projects (PROJ)	0	0	0	0	0	0	0	0
Communications Towers (CT)	0	0	0	0	0	0	0	0
Conditional Use Permits (CU)	0	0	1	1	0	0	6	6

Item	This Month		Year To Date		Same Month Last Year		Last Year To Date	
Appeals	Received	Approved	Received	Approved	Received	Approved	Received	Approved
Variances	4	0	4	3	4	0	9	8
Special Exceptions	1	0	1	0	0	0	0	0
Administrative Decisions	0	0	0	0	0	0	0	0
Waivers	2	0	5	3	0	0	2	2

City of North Augusta

Department of Planning and Development

Monthly Report for May 2024

Item	This Month	Year To Date	Same Month Last Year	Last Year To Date
Fees Collected				
Development Applications	$5,088.53	$13,238.66	$6,162.98	$16,077.87
Appeals	$500.00	$1,773.31	$963.74	$1,463.74
Maps/Publications	$0.00	$0.00	$0.00	$0.00
Special Review Fees	$0.00	$0.00	$0.00	$0.00
Total Fees	**$5,588.53**	**$15,011.97**	**$7,126.72**	**$17,541.61**

* Not yet recorded

Item	This Month		Year To Date		Same Month, Last Year		Last Year To Date	
Code Enforcement	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**	**Case Received or Investigated**	**Case Closed**
Property Maintenance	19	10	61	30	26	15	57	50
Property Leins/Contractor Mitigation	0	0	0	0	2	2	2	2
Swimming Pools	1	0	2	1	1	2	3	3
Recreational Vehicles/RV/Boat/Utility Trailers	3	2	7	5	1	3	11	13
Illegal Vehicles	4	6	35	24	1	11	21	22
Commercial Vehicles/Equipment	0	0	3	2	0	0	4	5
Temporary Signs	112	1012	338	338	155	155	585	585
Landscape Inspections	19	19	81	81	3	3	128	128
Structure Demolitions	0	0	0	0	0	0	0	0
Citation/Summons Issued	0	0	0	0	0	0	0	0

City of North Augusta
Department of Planning and Development

North Augusta Planning Department

May 2024 Staff Approvals

Residential Site Plans

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Structure
SP24-0003	010 09 05 017	Yolanda Higgins	343 Mill Branch Way	PD	5/3/2024	Swimming Pool
B24-0228	011 05 13 012	South Georgia Custom Homes	5132 Greyton Cir	R-7	5/7/2024	New Residential Construction
B24-0230	006 08 01 102	Your Neighborhood Builder	260 Mossy Oak Circle	R-7	5/13/2024	New Residential Construction
B24-0235	011 05 09 020	Plandwell Inc	7111 Kingburgh Ln	R-7	5/13/2024	New Residential Construction
B24-0236	011 05 15 014	Plandwell Inc	5143 Greyton Cir	R-7	5/13/2024	New Residential Construction
B24-0237	011 05 15 012	Plandwell Inc	5129 Greyton Circle	R-7	5/13/2024	New Residential Construction
B24-0239	011 05 15 011	Plandwell Inc	5123 Greyton Circle	R-7	5/13/2024	New Residential Construction
B24-0240	011 05 14 013	Plandwell Inc	6135 Bakerville Ln	R-7	5/13/2024	New Residential Construction
B24-0241	TMP1017	Ivey Residential	709 Endswell Dr	R-7	5/16/2024	New Residential Construction
B24-0242	TMP1016	Ivey Residential	713 Endswell Dr	R-7	5/16/2024	New Residential Construction
B24-0243	TMP1015	Ivey Residential	719 Endswell Dr	R-7	5/16/2024	New Residential Construction
B24-0246	007 13 36 005	Lacher Construction	636 Railroad Ave	PD	5/21/2024	New Residential Construction
B24-0252	127 00 07 036	Keystone Homes	4281 Beautiful Pond Park	PD	5/16/2024	New Residential Construction
B24-0253	127 00 07 037	Keystone Homes	4271 beautiful Pond Park	PD	5/16/2024	New Residential Construction

B24-0254	127 00 07 038	Keystone Homes	4263 Beautiful Pond Park	PD	5/16/2024	New Residential Construction
B24-0255	127 00 07 039	Keystone Homes	4255 Beautiful Pond Park	PD	5/16/2024	New Residential Construction
B24-0256	127 00 07 040	Keystone Homes	4245 Beautiful Pond Park	PD	5/16/2024	New Residential Construction
B24-0257	006 10 01 004	Colin Harrison	1819 Curtis Dr	R-14	5/21/2024	Add Uncovered Porch
B24-0260	007 05 08 007	Jerry Reece	612 W Woodlawn Ave	R-14	5/21/2024	Metal Carport Attached
SP24-0004	007 11 05 054	Christopher Verdery	84 Woodlawn Ln	R-7	5/21/2024	Swimming Pool
B24-0266	002 16 04 043	Joseph Matosian	109 Fiord Dr	PD	5/24/2024	Enlarge Deck & Screen Room
B24-0263	106 00 13 027	Keystone Homes	805 Snow Bunting Ct	R-10	5/24/2024	New Residential Construction
B24-0264	106 00 13 028	Keystone Homes	815 Snow Bunting Ct	R-10	5/24/2024	New Residential Construction
B24-0265	006 11 07 005	Keystone Homes	5043 Anna Creek Way	R-7	5/24/2024	New Residential Construction
B24-0267	006 11 06 003	Ivey Residential	5030 Anna Creek Way	R-7	5/24/2024	New Residential Construction
B24-0271	007 10 27 008	Greystone Construction Services LLC	209 W Buena Vista Ave	R-7	5/31/2024	New Residential Construction

Sign Permits

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Use
SN24-012	006 12 16 002	Diversified Signs & Graphics	orth Augusta Express Oil Chang	GC	5/1/2024	
SN24-013	006 20 12 001	Ronald Wade (Signs Unlimited	Our Lady of Peace	R-10	5/13/2024	

City of North Augusta
Department of Planning and Development

Certificate of Zoning Compliance Approvals

Application Number	Tax Parcel Number	Applicant	Legal Description	Zone	Approval Date	Use
CZC24-053	007 10 29 012	Kenneth Carpenter Jr	Carpenter Tire & Auto	D	5/1/2024	
CZC24-054	006 12 05 003	Rickie Jarvis	Sparkle Express Car Wash Grou	GC	5/8/2024	
CZC24-055	007 10 19 014	Melissa Jarrard	et Melissa's/Teresa's Treats Kit	D	5/13/2024	
CZC24-056	007 10 20 017	Ty Wells	The Soda Well	D	5/13/2024	
CZC24-057	012 09 01 001	Qing Mei Li	QQ Accupreesure Spa	GC	5/14/2024	
CZC24-058	007 16 08 023	Jagruti Rana	Shree Jala LLC	GC	5/16/2024	
CZC24-059	014 00 02 014	Leighton Lunger	Pray Her Forward	PD	5/28/2024	