Planning Commission Members
District 1: Alan Patterson
District 2: Tamecca Neely
District 3: Charles Deese, Chair
District 4: Judianna Tinklenberg
District 5: James Barnett, Vice-Chair
District 6: Sheila Hinson
District 7: Ben Levine

County Attorney
Ginny L. Merck-Dupont

Clerk to Planning Commission
Jennifer Bryan

Development Services Director

May 4, 2023 | **5:00 PM** | **101 North Main Street Lancaster, SC 29720**

LANCASTER COUNTY PLANNING COMMISSION
County Council Chambers, County Administration Building, 101 North Main Street, Lancaster, SC 29720

AGENDA

1. **Call to Order Regular Meeting and Roll Call Vote**

2. **New Business**

   a. UDO-TA-2022-0344 C4 OP Owner LLC/ Costco

   Application by C4 OP Owner LLC to amend UDO sections 4.3.2 regarding Highway Corridor Overlay regulations; and section 7.4.5 Signange Standards.

   b. RZ-2022-0344 C4 OP Owner LLC/Costco

   Application by C4 OP Owner LLC to rezone approximately 28.01 acres at and adjacent to 8918 Charlotte Highway (TM # 0010-00-029.00) from Light Industrial (LI) to Regional Business (RB) district, in order to develop a retail facility with ancillary gas station.

   c. SD-2022-1205 Riverchase Sec 3

   Application by Riverchase Estates Partners LLC for a Preliminary Plat for approximately 806.12 acres located along Riverside Road north of the intersection with Cobblestone way (p/o TM # 0030-00-002.00), for a phase of the larger Riverchase development, consisting of 251 single-family homes, minimum lot size one acre.

   d. RZ-2023-0531 Crossridge 4

   Application by Ben Cerullo on behalf of Crossridge Development LLC to rezone parcels at and adjacent to 8574 Charlotte Highway: 1.79 acres (p/o 0010-00-059.00) and 1.31 acres (p/o 0010-00-061.01) from PDD-26 to Regional Business (RB); ad 1.09 acres (p/o 0010-00-057.00) and 1.62 acres (p/o 0010-00-056.00) from Regional Business (RB) to PDD-26, to adjust boundaries of parcels under current development while complying with terms of PDD-26 agreement.

   e. Overview of next month's Agenda

   f. Other

3. **Adjourn**

Agenda Item Summary

Ordinance # / Resolution #: UDO-TA-2022-0344 C4 OP Owner LLC/ Costco
Contact Person / Sponsor: A. Davis
Department: Planning
Date Requested to be on Agenda: 5/4/2023

Points to Consider:

ATTACHMENTS:

Description	Upload Date	Type
Application	4/4/2023	Exhibit

Lancaster County
South Carolina

Planning Department
P.O. Box 1809, 101 N. Main Street, Lancaster, SC 29721
Phone: 803.285.6005, planning@lancastercountysc.net
www.mylancastersc.org

TEXT AMENDMENT APPLICATION

SUBMITTAL REQUIREMENTS

- Completed Application
- Signatures of Applicant
- Fees associated with Application

GENERAL INFORMATION

UDO Section(s) Proposed to be Amended: See Text Amendment Items 1 through 5 on attached pages.

Current Text:
Please see proposed Text Amendment Items 1 through 5 on the attached pages for the current text of the UDO Sections Proposed to be Amended.

Proposed Text:
Please see proposed Text Amendment Items 1 through 5 on the attached pages for the proposed new text (underlined) for the UDO Sections Proposed to be ~~Amended~~.

Description of Need for Proposed Text:
Please see proposed Text Amendment Items 1 through 5 on the attached pages for the accompanying Description of Need for each Proposed Text Amendment.

☑ Additional pages attached for more information

CONTACT INFORMATION

Applicant Name: Yates Dunaway for C4 OP Owner, LLC

Address: 801 East Blvd

City: Charlotte State: NC Zip: 28203 Phone: 312-485-2722

Fax: _____ Email: ydunaway@csere.com

APPLICATION CERTIFICATIONS

I hereby certify that I have read this application and the information supplied herein is true and correct to the best of my knowledge. I agree to comply with all applicable County ordinances and state laws related to the use and development of the land. I further certify that I am the property owner, or his/her authorized agent, or the subject property. I understand that falsifying any information herein may result in rejection or denial of this request.

Yates Dunaway — 3-30-23

Applicant — Date

Yates Dunaway — 3-30-23

Property Owner(s) — Date

Attach owner's notarized written authorization with property information if the applicant is not the owner.

LANCASTER COUNTY OFFICE USE ONLY

Application Number _____ Date Received _____ Receipt Number _____

Amount Paid _____ Check Number _____ Cash Amount _____

Received By _____ Planning Commission Meeting Date _____

SCHEDULE/PROCESS

1. **Submit Application**

- The deadline for this application is at least 45 days prior to the Planning Commission meeting, held every third Tuesday of the month.
- Once an application is submitted, it is placed on the Planning Commission agenda for the following month.
- An application withdrawal should be made in writing and received prior to public notice in order to receive a refund.
- Text Amendment Application Fee - $435.00

2. **Planning Commission**

- Conducts a public hearing on the application to receive input from Lancaster County citizens, applicant, and other interested parties.
- Reviews the application to ensure it is consistent with the Lancaster County Unified Development Ordinance, Comprehensive Plan, and all adopted County plans.
- Makes a recommendation to the County Council.

3. **County Council**

- Approves, denies, or submits application to the Planning Commission for further study.
- Action requires three readings for approval

Text Amendment Item 1.

Amend Section 4.3.2 of the Highway Corridor Overlay District (HCO) by adding the following underlined proposed text to the current text of Section 4.3.2.B.2 – DISTRICT BOUNDARIES AND APPLICABILITY:

B. DISTRICT BOUNDARIES AND APPLICABILITY

Section 4.3.2.B.2. The Highway Corridor Overlay District development regulations, as set forth in the Highway Corridor Overlay District, apply to all uses on the properties zoned Highway Corridor Overlay District except for single family housing as identified in Section 2.5, Permitted Uses. The development regulations applicable to single family housing are the development regulations of the underlying zoning district. In addition, Hospitals, Medical Clinics, and Large-Scale Retailer facilities shall be exempt from the Highway Corridor Overlay District development regulations located in Section 4.3.2.F.1., Subsection 4.3.2.F.1.b., Section 4.3.2.G.1., and Subsection 4.3.2.G.1.a.

Description of Need for Proposed Text. Currently, Section 4.3.2.F.1. requires that the front façade of buildings shall front on the street and be parallel to front property lines when placed along the corridor right-of-way. Subsection 4.3.2.F.1.b. requires that when fronting the corridor right-of-way, buildings shall have access from the front and rear of the building.

Section 4.3.2.G.1. requires that, for buildings fronting on the corridor, off-street surface parking shall be located primarily to the rear of building it serves and provides that side yard parking shall occupy no more than 45 percent of the principal corridor frontage line. Subsection 4.3.2.G.1.a. grants the Administrator authority to allow a higher percentage of side yard parking where dimensions or topographical constraints restrict the amount of off-street parking that can be placed to the rear of the building it serves.

Requiring frontage on the highway corridor and doing so as close as 25 feet has proven to be unworkable in many instances and counter to the goal of allowing room for the planned future widening of Highway 521 itself. For these reasons, the current draft of the Highway Corridor Overlay District in the UDO Update dated December 21, 2022, Chapter 2, proposed Section 2.7.3, footnote 37, calls for the elimination of the build-to line and the 25 feet setbacks.

Furthermore, the County's UDO Assessment, dated August 26, 2021, Appendix 1, Staff Recommendations for UDO Update, at page 10, reflects the opinions of both the Staff and Economic Development that the limitation on retail stores visible from the road with parking in front does not lend itself to developments that appear welcoming and full of activity, which in turn limits their ability to be successful. Economic Development recommended eliminating design requirements that hide the front of stores from the road and that require buildings to be constructed close to the road. Staff Recommendations regarding Section 4.3.2.G specifically call for allowing parking between the road and building for large centers.

Large-Scale Retailers are located in buildings of at least 100,000 square feet of gross floor area. For the reasons stated by Staff in the UDO Assessment and as reflected in draft of Section 2.7.3 prepared by the County's consultants, these projects should not be required to front up against the highway corridor. Large-Scale Retailers should be allowed to locate their major buildings back

away from the corridor with parking surrounding them including parking located between the road and building. For these same reasons, the current limitations on side yard parking and requirement for front and rear building access should be eliminated for Large-Scale Retailers.

Hospitals and Medical Clinics serve a unique role in our community and have a standard site layout. For many of the reasons stated above, future highway widening and visibility, medical buildings should not be required to front up against the highway corridor with limited setbacks. Moreover, basic access to Hospitals and Medical Clinics calls for non-emergency patients and visitors to park and enter the front of the building. The emergency department and ambulance access are located at the rear of the building. And for safety and privacy reasons non-emergency and emergency access are kept separate.

Text Amendment Item 2.

Amend Section 4.3.2 of the Highway Corridor Overlay District (HCO) by adding the following underlined proposed text to the current text of Section 4.3.2.D – EXCEPTIONS AND NON-CONFORMING SITUATIONS:

> **Section 4.3.2.D – EXCEPTIONS AND NON-CONFORMING SITUATIONS**
>
> Any property zoned and used for a single family residential use, including the single family residential portion of a property zoned Planned Development District (PDD), shall be exempt from the development standards of the Highway Corridor Overlay District. Any property zoned and used for a Hospital, Medical Clinic, and Large-Scale Retailer shall be exempt from the development standards of the Highway Corridor Overlay District located in Section 4.3.2.F.1. Subsection 4.3.2.F.1.b, Section 4.3.2.G.1., and Subsection 4.3.2.G.1.a. When a parcel has a vested right in effect, that parcel may be exempt from certain provisions of the Highway Corridor Overlay District, as outlined in Chapter 9 of the UDO. The development standards of this overlay district shall apply to all other properties within the district boundaries as outlined in Section 4.3.2.B.

Description of Need for Proposed Text. Please see discussion under Amendment Item 1 above.

Text Amendment Item 3.

Amend Section 10.3 of the UDO to add a new definition for "Large Scale Retailer":

> "Large-Scale Retailer" is a type of General Commercial use and includes membership-only retail warehouse facilities. Large-Scale Retailers are located in buildings of at least 100,000 square feet of gross floor area.

Description of Need for Proposed Text. Large-Scale Retailers are unique. They occupy very large buildings that are not conducive to fronting against a highway corridor. They have large customer parking demands that justify locating parking surrounding them including parking located between the road and building. Parking requirements would fall under General Commercial at 1 space per 250 SF per Section 7.2.4.A.

Text Amendment Item 4.

Add a new line (new line underlined below) to the chart located in UDO Section 7.2.6.A. – BICYCLE PARKING - for Large-Scale Retailer use:

7.2.6 BICYCLE PARKING

A. REQUIRED SPACES

The following minimum bicycle parking spaces are required (Excludes RUB, LI, HI, and M Districts):

Use	Required Short-Term Spaces	Required Long-Term Spaces
Dwelling, Multi-Family	1 per 20 units, 3 minimum	1 per 5 units (Projects with 10+ units only)
All Other Residential Uses	None Required	None Required
All Retail Uses	1 per 5,000 SF of gross floor area, 3 minimum	1 per 5,000 SF of gross floor area
All Commercial Uses	1 per 10,000 SF of gross floor area, 3 minimum	1 per 5,000 SF of gross floor area
Large-Scale Retailer Use	3	None Required
All Civic Uses	1 per 5,000 SF of gross floor area, 3 minimum	None Required

Description of Need for Proposed Text. Large-Scale Retailers serve the public who buy significant quantities of goods and large-sized goods to transport home, in car trunks, in trucks, on tops of cars, and otherwise. The need for bicycle parking is virtually non-existent. If the current bicycle requirement were applied to Large-Scale Retailers and calculated by the amount of floor area, then the result would be an extraordinary number of spaces reserved for a method of transportation that does not apply due to the quantities and size of goods typically involved in sales by Large-Scale Retailers.

Text Amendment Item 5.

Amend UDO Section 7.4.5, "Signage Standards by Category," by adding the underlined text to Section 7.4.5.A., "Attached Sign Standards," Subsection A., "Wall Signs," at bottom of the column for "Maximum Area," adding ", except 400 sq ft per building wall maximum for Large-Scale Retailer":

A. ATTACHED SIGN STANDARDS

	Permitted Location	Maximum Area	Maximum Height	Other Requirements	Maximum Number
A. Wall Signs	AR, RR, RN, LDR, MDR, HDR, UR, RUB, PB, HDR (non-residential uses only, but not Home Occupations)	30 sq ft OR 1 sq ft per linear ft of building wall, whichever is greater. 50 sq ft building maximum	No sign shall extend above the roofline	12 inch maximum protrusion	None. May not exceed maximum calculated square footage on any wall (cannot move allotment from one wall to another)
	NB, INS, RMX, MX, IMX	30 sq ft OR 1 sq ft per linear ft of building wall, whichever is greater. 50 sq ft building maximum.			
	LI, HI, GB, RB	50 sq ft OR 1sq ft per linear ft of building wall, whichever is greater. 75 sq ft building maximum, **except 400 sq ft per building wall maximum for Large -Scale Retailer**			

Description of Need for Proposed Text. Large-Scale Retailers by definition have over 100,000 square feet of gross floor area. The limit on wall signage of 75 square feet would produce wall signage size that is inadequate and disproportionate architecturally to the magnitude of the building. A sign this small would look awkward and out of place on the wall of a Large-Scale Retailer's building. Increasing the maximum signage to 400 square feet per wall is in line with the magnitude of the building and comparable to existing major retailers in the vicinity, such as Walmart and Lowe's Home Improvement. Note that Applicant seeks relief from the HCO's requirement that the Large-Scale Retailer building front on the highway corridor and that the planned building will be located some distance back from the highway.

Agenda Item Summary

Ordinance # / Resolution #: RZ-2022-0344 C4 OP Owner LLC/Costco
Contact Person / Sponsor: M. Blaszyk
Department: Planning
Date Requested to be on Agenda: 5/4/2023

Points to Consider:

ATTACHMENTS:

Description	Upload Date	Type
Application	4/4/2023	Exhibit
Parcel survey	4/4/2023	Exhibit
Location Map	5/3/2023	Exhibit

Lancaster County
South Carolina

Planning Department
P.O. Box 1809, 101 N. Main Street, Lancaster, SC 29721
Phone: 803.285.6005, planning@lancastercountysc.net
www.mylancastersc.org

ZONING MAP AMENDMENT APPLICATION

SUBMITTAL REQUIREMENTS

- Completed Application
- Signatures of Applicant and Property Owner
- Deed and survey plat or boundary survey
- Fees associated with review

GENERAL INFORMATION

Property Address 8918 Charlotte Hwy
City Indian Land State SC Zip 29707 Tax Parcel ID 0010-00-029.00
Current Zoning LI Current Use Vacant land
Proposed Zoning RB Total Acres 28.01
Project Description A retail warehouse and ancillary gas station

Surrounding Property Description Mixed-use to the north, and general business to the south

CONTACT INFORMATION

Applicant Name Yates Dunaway
Address 801 East Blvd
City Charlotte State NC Zip 28203 Phone
Fax Email ydunaway@csere.com
Property Owner Name C4 OP Owner LLC
Address 801 East Blvd
City Charlotte State NC Zip 28203 Phone
Fax Email ydunaway@csere.com

I hereby certify that I have read this application and the information supplied herein is true and correct to the best of my knowledge. I agree to comply with all applicable County ordinances and state laws related to the use and development of the land. I further certify that I am the property owner, or his/her authorized agent, or the subject property. I understand that falsifying any information herein may result in rejection or denial of this request.

Yate Dunaway — 3-25-23

Applicant — Date

Yate Dunaway — 3-25-23

Property Owner(s) — Date

Attach owner's notarized written authorization with property information if the applicant is not the owner.

LANCASTER COUNTY OFFICE USE ONLY

Application Number _____ Date Received _____ Receipt Number _____

Amount Paid _____ Check Number _____ Cash Amount _____

Received By _____ Planning Commission Meeting Date _____

SCHEDULE/PROCESS 1. **Submit Application**

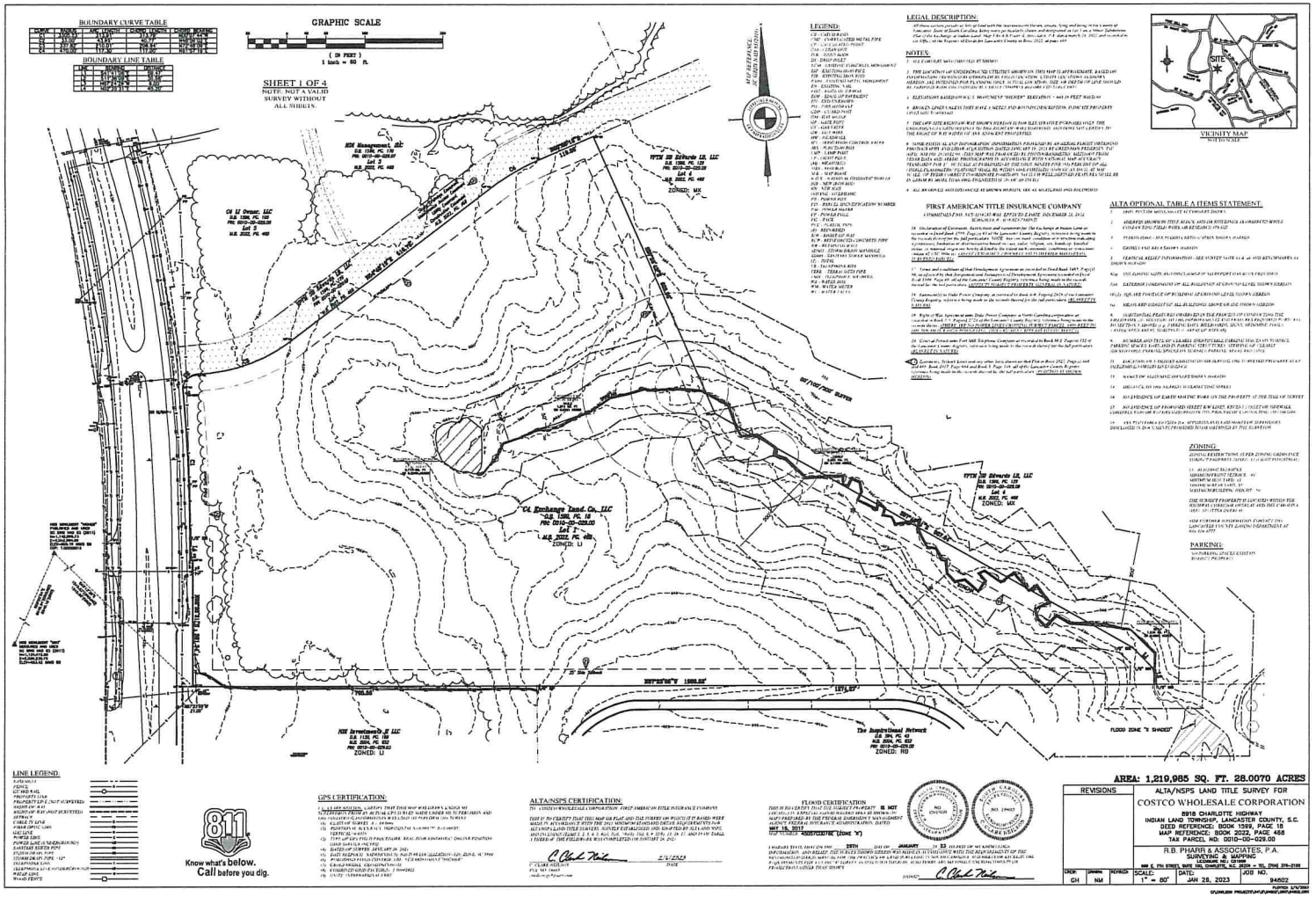
- The deadline for this application is at least 45 days prior to the Planning Commission meeting, held every third Tuesday of the month.
- Once an application is submitted, it is placed on the Planning Commission agenda for the following month.
- An application withdrawal should be made in writing and received prior to public notice in order to receive a refund.
- Rezoning Application Fee – single parcel $435.00
- Rezoning Application Fee – multi parcel $610.00

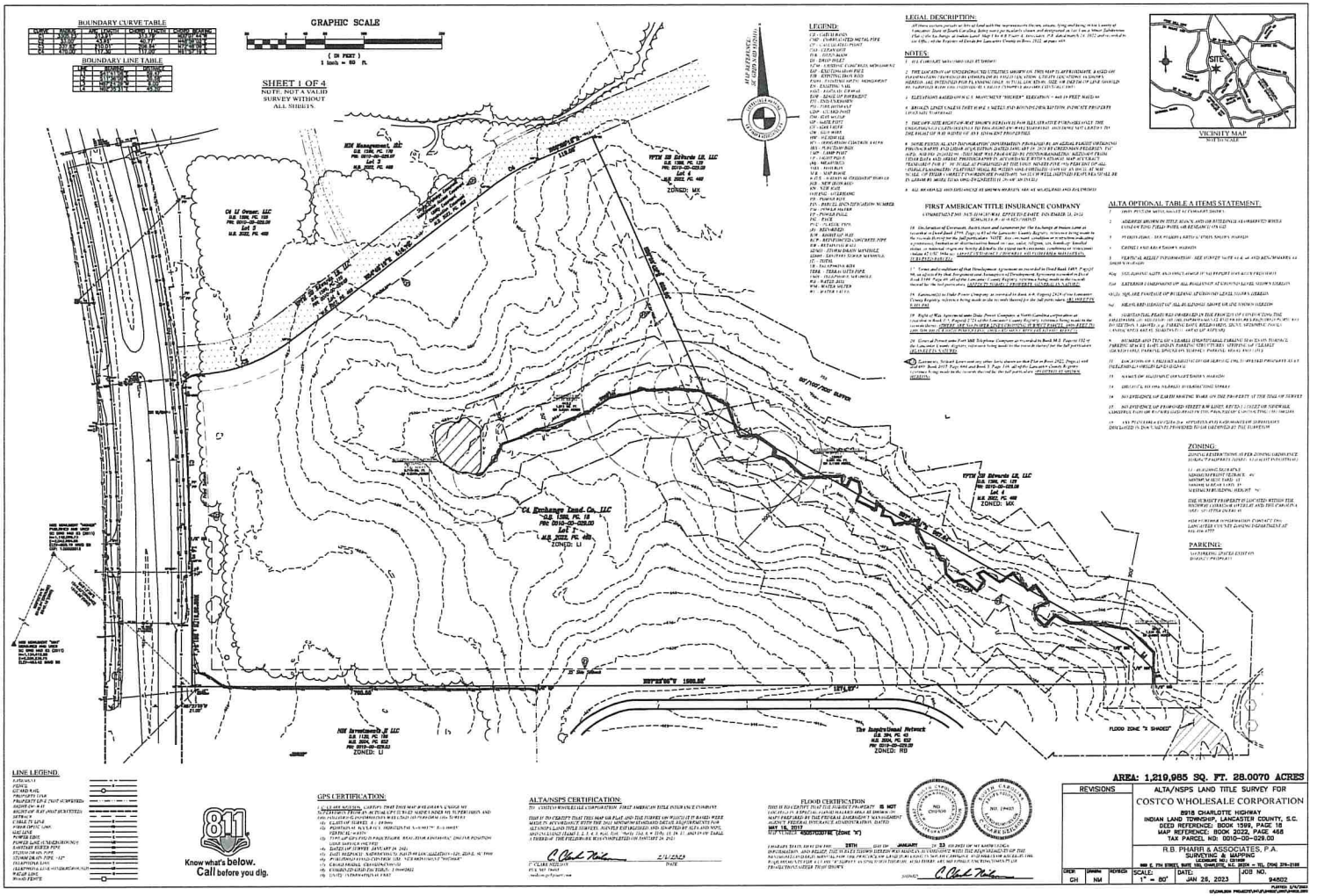
2. **Planning Commission**

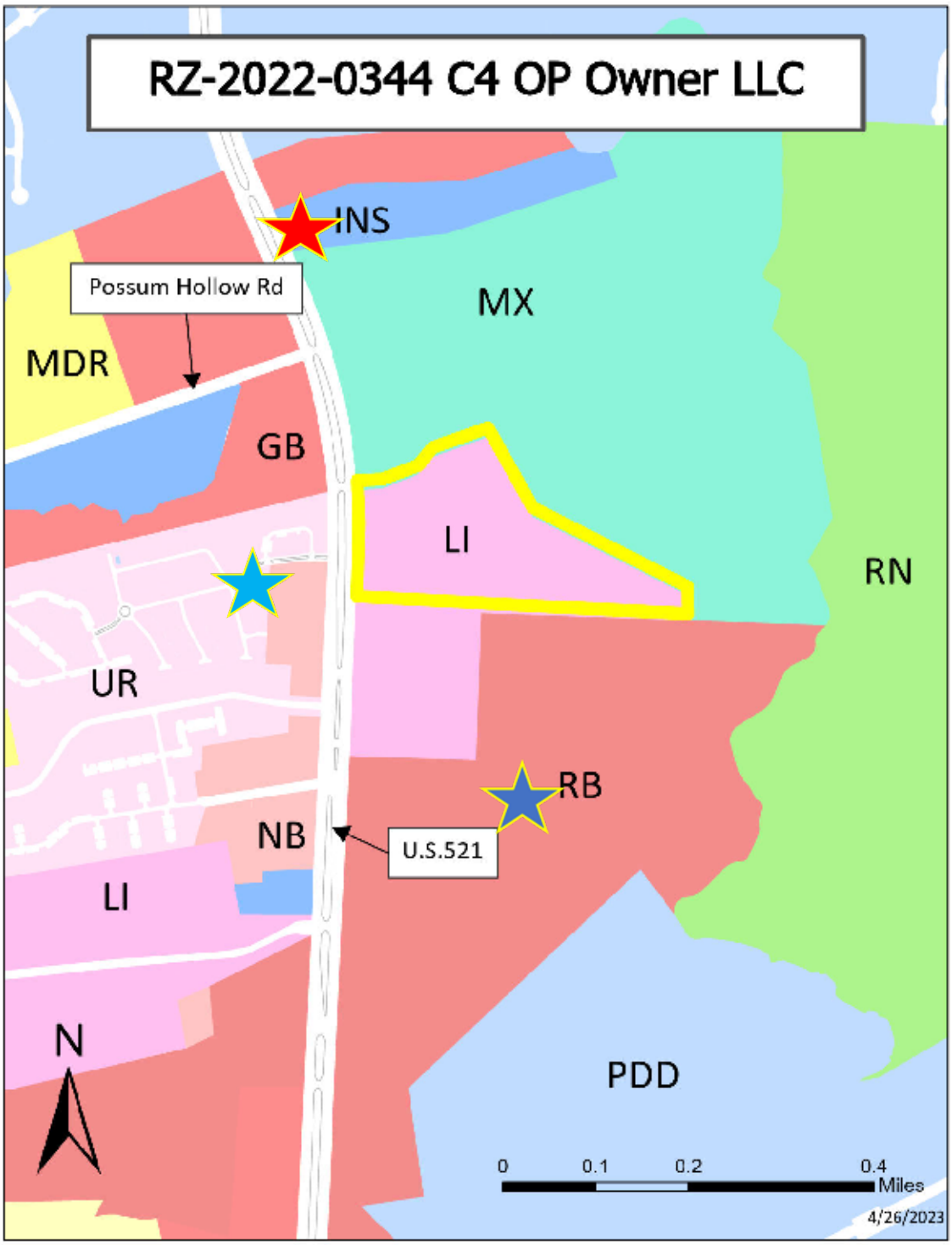
- Conducts a public hearing on the application to receive input from Lancaster County citizens, applicant, and other interested parties.
- Reviews the application to ensure it is consistent with the Lancaster County Unified Development Ordinance, Comprehensive Plan, and all adopted County plans.
- Makes a recommendation to the County Council.

3. **County Council**

- Approves, denies, or submits application to the Planning Commission for further study.
- Action requires three readings for approval.
- Subsequent to final County Council action on rezoning, notice of action will be provided to the applicant, owner, and adjacent property owners.
- If applicant would like to request a special presentation, please notify the County Clerk @ (803) 416-9307 before 5:00pm on the first Monday of the month to make arrangements.


BOUNDARY CURVE TABLE
BOUNDARY LINE TABLE
GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.
SHEET 1 OF 4
NOTE: NOT A VALID SURVEY WITHOUT ALL SHEETS.
LEGEND:
LEGAL DESCRIPTION:
NOTES:
FIRST AMERICAN TITLE INSURANCE COMPANY
ALTA OPTIONAL TABLE A ITEMS STATEMENT:
VICINITY MAP
NOT TO SCALE
ZONING:
PARKING:
AREA: 1,219,985 SQ. FT. 28.0070 ACRES
LINE LEGEND:
GPS CERTIFICATION:
ALTA/NSPS CERTIFICATION:
FLOOD CERTIFICATION
Know what's below. Call before you dig.
REVISIONS
ALTA/NSPS LAND TITLE SURVEY FOR
COSTCO WHOLESALE CORPORATION
6918 CHARLOTTE HIGHWAY
INDIAN LAND TOWNSHIP, LANCASTER COUNTY, S.C.
DEED REFERENCE: BOOK 1599, PAGE 18
MAP REFERENCE: BOOK 2022, PAGE 458
TAX PARCEL NO: 0010-00-029.00
R.B. PHARR & ASSOCIATES, P.A.
SURVEYING & MAPPING
LICENSURE NO.: C01599
400 S. 4TH STREET, SUITE 100, CHARLOTTE, NC 28202 - TEL (704) 376-2186
CHCK: GH
DRAWN: NM
REVISED:
SCALE: 1" = 80'
DATE: JAN 28, 2023
JOB NO.: 84502


GRAPHIC SCALE
1 inch = 60 ft.
SHEET 1 OF 4
NOTE: NOT A VALID SURVEY WITHOUT ALL SHEETS
BOUNDARY CURVE TABLE
BOUNDARY LINE TABLE
LEGEND:
LEGAL DESCRIPTION:
NOTES:
VICINITY MAP
NOT TO SCALE
SITE
FIRST AMERICAN TITLE INSURANCE COMPANY
ALTA OPTIONAL TABLE A ITEMS STATEMENT:
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LINE LEGEND:
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Know what's below. Call before you dig.
REVISIONS
ALTA/NSPS LAND TITLE SURVEY FOR
COSTCO WHOLESALE CORPORATION
8918 CHARLOTTE HIGHWAY
INDIAN LAND TOWNSHIP, LANCASTER COUNTY, S.C.
DEED REFERENCE: BOOK 1599, PAGE 18
MAP REFERENCE: BOOK 2022, PAGE 468
TAX PARCEL NO: 0010-00-029.00
R.B. PHARR & ASSOCIATES, P.A.
SURVEYING & MAPPING
LICENSURE NO.: C01600
900 E. 7TH STREET, SUITE 100, CHARLOTTE, N.C. 28204 • TEL: (704) 374-0189
ORDER: GH
DRAWN: NM
REVISED:
SCALE: 1" = 80'
DATE: JAN 26, 2023
JOB NO.: 94502



Lancaster County
South Carolina

Proposal:
Rezoning: LI to RB

Subject Property

Crossridge Center/
Inspiration Network

Transformation Church

Hanover Subdivision

Agenda Item Summary

Ordinance # / Resolution #: SD-2022-1205 Riverchase Sec 3
Contact Person / Sponsor: A. Davis
Department: Planning
Date Requested to be on Agenda: 5/4/2023

Points to Consider:

ATTACHMENTS:

Description	Upload Date	Type
Application	4/28/2023	Exhibit
Proposed Plat	4/28/2023	Exhibit
Location Map	4/28/2023	Exhibit
TIA	5/3/2023	Exhibit

PROJECT INFORMATION

Project Address/Location: 3750 Riverside Rd, Lancaster, SC 29720

Tax Map ID/Parcel No.: 0030-00-002.00

Project Description: 251 Single Family Residential Lots

Applicant Name: Riverchase Estates Partners, LLC

Address: 1450 Lake Robbins Drive Ste 430, The Woodlands, TX 77380

Phone: (803) 286-0060 Email: jeff.webb@lgihomes.com

Property Owner Name: Riverchase Estates Partners, LLC

Address: 1450 Lake Robbins Drive Ste 430, The Woodlands, TX 77380

Phone: (803) 286-0060 Email: jeff.webb@lgihomes.com

Other Project Contacts

Name: R. Joe Harris & Associates, Inc

Address: 1186 Stonecrest Blvd., Tega Cay, SC 29708

Phone: (803) 802-1799 Email: dgates@rjoeharris.com

Name: Melissa Burklin

Address: 3037 Sherman Drive, Lancaster SC 29720

Phone: 704-634-0644 Email: melissa.burklin@lgihomes.com

Applicant Signature: Jeff Webb Date: 3-28-23

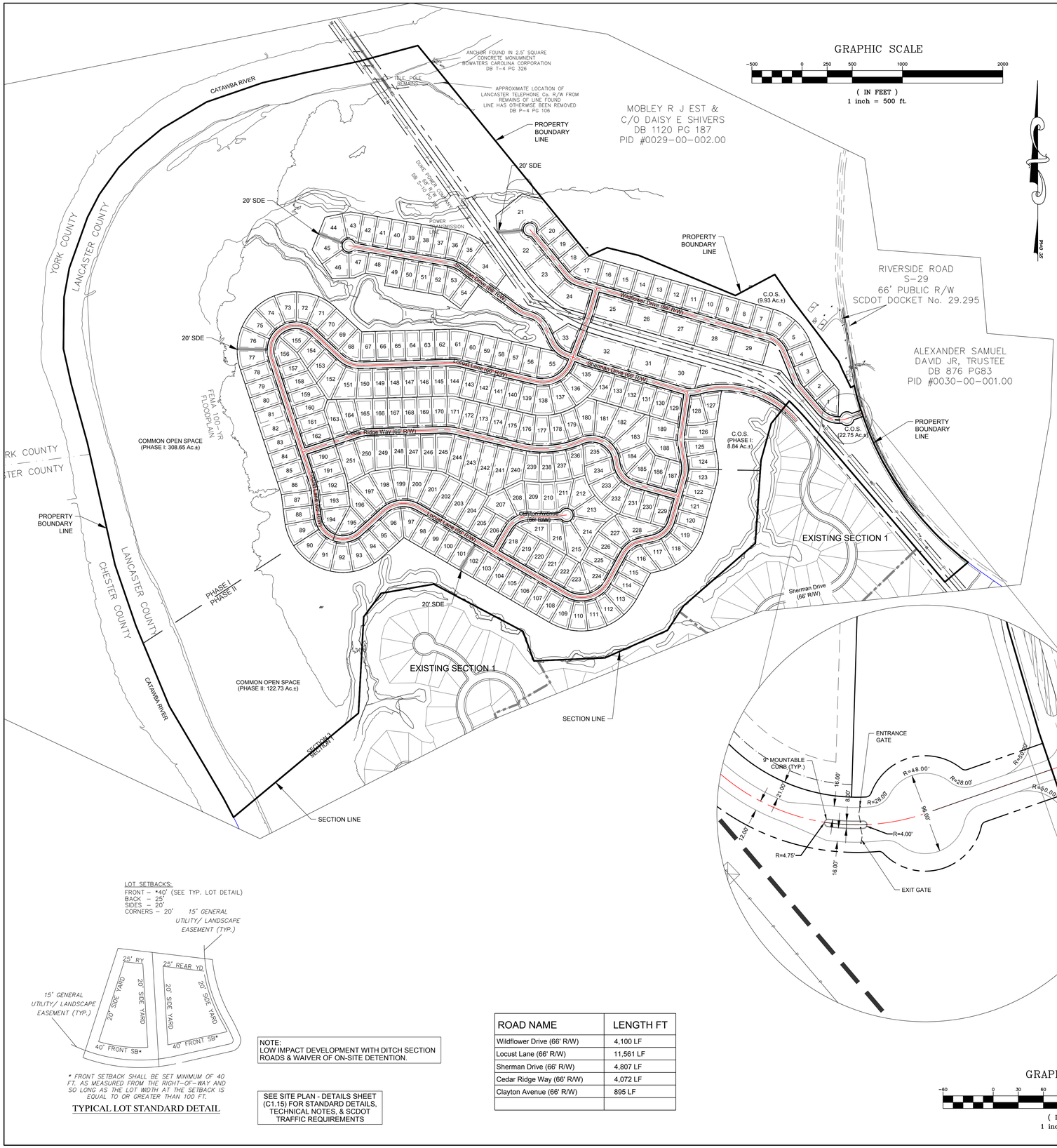
Owner Signature: Jeff Webb - Authorized Officer Date: 3-28-23

Owner Signature: _____ Date: _____

(For additional owners, attach copies of this page with required signatures)

PRELIMINARY PLAT CHECKLIST

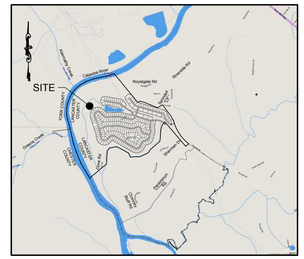
The following identifies information required on Preliminary Plat drawings; however, this checklist should not be used as a substitute to reviewing the UDO.



SITE TOPOGRAPHY PROVIDED FROM LANCASTER COUNTY AERIAL TOPOGRAPHY.

BOUNDARY INFORMATION PROVIDED BY STANTEC CONSULTING SERVICES, INC. ALTA SURVEY AND BOUNDARY INFORMATION RECEIVED FROM STANTEC AND DATED 03-29-2007.

HORIZONTAL DATUM TIED TO NAD 83 AND VERTICAL DATUM BASED ON NAVD 88. CONTACT R. JOE HARRIS & ASSOCIATES, INC. FOR BENCHMARKS AND CONTROL INFORMATION.


SITE
Catawba River
Riverside Rd
Riverside Rd
Riverside Rd

PROPERTY BOUNDARY LINE

RUINS

OPEN SPACE
9.93 Ac.±

UTILITY EASEMENT

PROPERTY BOUNDARY LINE

Wildflower Drive (66' R/W)

Sherman Drive (66' R/W)

DUKE POWER COMPANY
68' R/W
DB S-10 PG 182

LANCASTER AND CHESTER RAILWAY COMPANY
100' R/W
DB 200 PG 205
FORMERLY CC&C RR
DB F-2 PG 110

RAILROAD TRACKS

OPEN SPACE
8.84 Ac.±

OPEN SPACE
22.75 Ac.±

POWER TRANSMISSION LINE

SECTION 3

SECTION 1

SECTION LINE

WETLANDS BUFFER

EXISTING WETLANDS

ENTRANCE GATE

EXIT GATE

6" MOUNTABLE CURB (TYP.)

GATE

MB

PUMP

GRAPHIC SCALE
-60 0 30 60 120 240
(IN FEET)
1 inch = 60 ft.

MAP KEY
C1.01 C1.02 C1.03 C1.04 C1.05 C1.06 C1.07 C1.08 C1.09 C1.10 C1.11 C1.12 C1.13 C1.14

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS SOUTH CAROLINA UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

Engineer:

RJH

R. Joe Harris & Associates, Inc.

Engineering • Land Surveying • Planning Management

1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799

www.rjoeharris.com

This drawing shall not be used for construction purposes until the seal and signature of the responsible registrant appears on the drawing, and proper permit forms and related fees are transmitted by the Owner, Owner's Agent or Contractor to the Authority having jurisdiction.

Corporate Seal: SOUTH CAROLINA — R. JOE HARRIS & ASSOCIATES, INC. No. C02262 — CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES — 03.31.23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

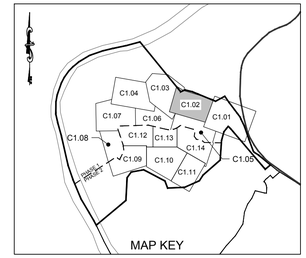
Site Plan - 1

Project No.	Drawing No.
4967	C1.01
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



PROPERTY BOUNDARY LINE

OPEN SPACE
9.93 Ac.±

UTILITY EASEMENT

POWER TRANSMISSION LINE

DUKE POWER COMPANY
68' R/W
DB S-10 PG 182

LANCASTER AND CHESTER
RAILWAY COMPANY
100' R/W
DB 200 PG 205
FORMERLY CC&C RR
DB F-2 PG 110

RAILROAD TRACKS

Wildflower Drive (66' R/W)

Locust Lane (66' R/W)

Sherman Drive (66' R/W)

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. — 811 Know what's below. Call before you dig.

Engineer:

RJH

R. Joe Harris & Associates, Inc.

Engineering • Land Surveying • Planning
Management

1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799

www.rjoeharris.com

This drawing shall not be used for construction purposes until the seal and signature of the responsible registrant appears on the drawing, and proper permit forms and related fees are transmitted by the Owner, Owner's Agent or Contractor to the Authority having jurisdiction.

Corporate Seal: SOUTH CAROLINA — R. JOE HARRIS & ASSOCIATES, INC. No. C02262 — CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES — 03.31.23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 2

Project No.	Drawing No.
4967	C1.02
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

PROPERTY BOUNDARY LINE

EXISTING WETLANDS

OPEN SPACE
308.65 Ac.±

WETLANDS BUFFER

20' SDE

RAILROAD TRACKS

APPROX.

POWER TRANSMISSION LINE

LANCASTER AND CHESTER RAILWAY COMPANY 100' R/W DB 200 PG 205 FORMERLY CC&C RR DB F-2 PG 110

DUKE POWER COMPANY 66' R/W DB S-10 PG 182

Wildflower Drive (66' R/W)

Locust Lane (66' R/W)

UTILITY EASEMENT

EXISTING WETLANDS

WETLANDS BUFFER

MAP KEY

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

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

Engineer:

R. Joe Harris & Associates, Inc.
Engineering • Land Surveying • Planning Management
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Corporate Seal: SOUTH CAROLINA — R. JOE HARRIS & ASSOCIATES, INC. — No. C02282 — CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

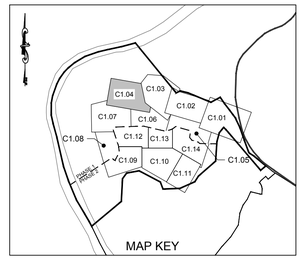
Site Plan - 3

Project No.	Drawing No.
4967	C1.03
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



MAP KEY

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. — 811 Know what's below. Call before you dig.

Engineer:

RJH

R. Joe Harris & Associates, Inc.

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www.rjoeharris.com

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Corporate Seal: R. JOE HARRIS & ASSOCIATES, INC. No. C02262 CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER CHRISTOPHER R. BRIDGES No. 29007 — 03/31/23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/3/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client:

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 4

Project No.	Drawing No.
4967	C1.04
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

POWER TRANSMISSION LINE

DUKE POWER COMPANY
68' R/W
DB S-10 PG 182

LANCASTER AND CHESTER
RAILWAY COMPANY
100' R/W
DB 200 PG 205
FORMERLY CC&C RR
DB F-2 PG 110

RAILROAD TRACKS

UTILITY EASEMENT

Locust Lane (66' R/W)

Sherman Drive (66' R/W)

OPEN SPACE
8.84 Ac.±

MAP KEY

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

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Corporate Seal: SOUTH CAROLINA — R. JOE HARRIS & ASSOCIATES, INC. No. C02262 — CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES — 03.31.23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

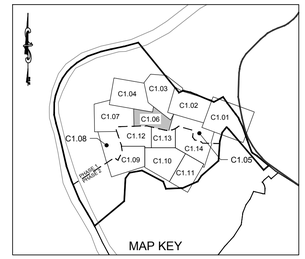
Site Plan - 5

Project No.	Drawing No.
4967	C1.05
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



EXISTING WETLANDS

WETLANDS BUFFER

Sherman Drive (66' R/W)

Locust Lane (66' R/W)

UTILITY EASEMENT

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

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Engineer:

R. Joe Harris & Associates, Inc.

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Corporate Seal

SOUTH CAROLINA
R. JOE HARRIS & ASSOCIATES, INC.
No. C02262
CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 29007
CHRISTOPHER R. BRIDGES
03.31.23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 6

Project No.	Drawing No.
4967	C1.06
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

36" Grid

OPEN SPACE
308.65 Ac.±

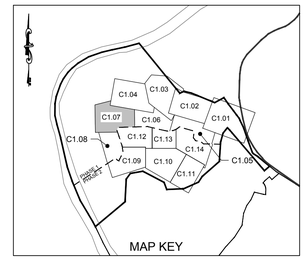
20' SIDE

Locust Lane (66' R/W)

EXISTING WETLANDS

WETLANDS BUFFER

UTILITY EASEMENT



MAP KEY

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

Engineer:

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Corporate Seal

SOUTH CAROLINA R. JOE HARRIS & ASSOCIATES, INC. No. C02262 CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 29007 CHRISTOPHER R. BRIDGES 03.31.23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

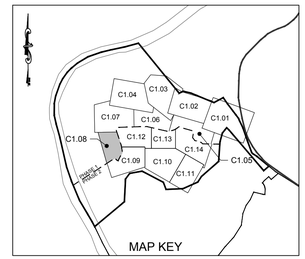
Site Plan - 7

Project No.	Drawing No.
4967	C1.07
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.





DATE	ISSUED FOR	REV
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Engineer:

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Corporate Seal: SOUTH CAROLINA — R. JOE HARRIS & ASSOCIATES, INC. No. C02262 — CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES — 03/31/23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client:

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

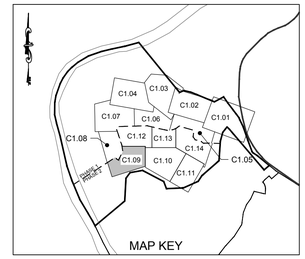
Site Plan - 8

Project No.	Drawing No.
4967	C1.08
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



PHASE I
PHASE II

UTILITY EASEMENT

Locust Lane (66' R/W)

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS Palmetto Utility Protection Service, Inc. — 811 Know what's below. Call before you dig.

Engineer:

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Corporate Seal

SOUTH CAROLINA
R. JOE HARRIS & ASSOCIATES, INC.
No. C02262
CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 29007
CHRISTOPHER R. BRIDGES
03/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

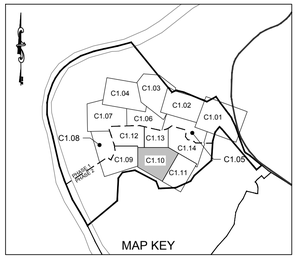
Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 9

Project No.	Drawing No.
4967	C1.09
DWG File Name: RiverChase Section 3_Site Overall	



GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

Clayton Avenue (66' R/W)

Locust Lane (66' R/W)

UTILITY EASEMENT

20' SDE

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

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Engineer's Seal: SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. BRIDGES — No. 29007 — 03/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

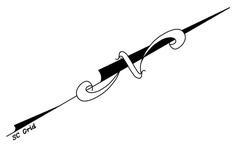
Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 10

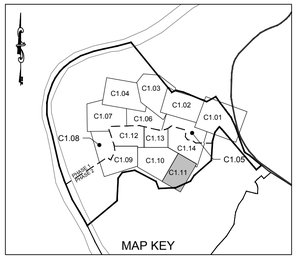
Project No.	Drawing No.
4967	C1.10
DWG File Name: RiverChase Section 3_Site Overall	



GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.





DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

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Engineer:

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1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799
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Engineer's Seal: SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 29007 — CHRISTOPHER R. BRIDGES — 03/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

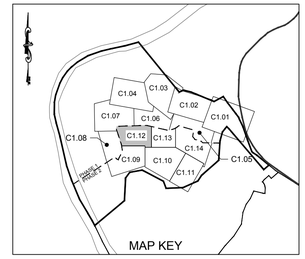
Site Plan - 11

Project No.	Drawing No.
4967	C1.11
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



PHASE I

PHASE II

UTILITY EASEMENT

Cedar Ridge Way (66' R/W)

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS SOUTH CAROLINA'S UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

Engineer:

RJH

R. Joe Harris & Associates, Inc.

Engineering • Land Surveying • Planning Management

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Corporate Seal

SOUTH CAROLINA
R. JOE HARRIS & ASSOCIATES, INC.
No. C02262
CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 29007
CHRISTOPHER R. BRIGGS
03/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	**Checked**
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	**Asbuilt Date**
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

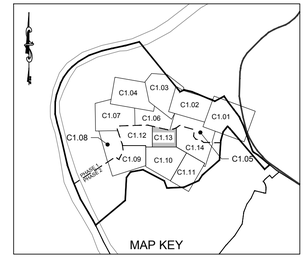
Site Plan - 12

Project No.	Drawing No.
4967	C1.12
DWG File Name: RiverChase Section 3_Site Overall	

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.



PHASE I

PHASE II

UTILITY EASEMENT

Cedar Ridge Way (66' R/W)

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

Engineer:

R. Joe Harris & Associates, Inc.
Engineering • Land Surveying • Planning Management
1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799

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Corporate Seal: SOUTH CAROLINA R. JOE HARRIS & ASSOCIATES, INC. No. C02262 CERTIFICATE OF AUTHORIZATION

Engineer's Seal: SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 29007 CHRISTOPHER R. BRIDGES 03/31/23

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client:

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Site Plan - 13

Project No.	Drawing No.
4967	C1.13
DWG File Name: RiverChase Section 3_Site Overall	

PHASE II

PHASE I

GRAPHIC SCALE

-60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

MAP KEY

Cedar Ridge Way (66' R/W)

Locust Lane (66' R/W)

UTILITY EASEMENT

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

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

Engineer:

R. Joe Harris & Associates, Inc.

Engineering • Land Surveying • Planning Management

1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799

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Corporate Seal

SOUTH CAROLINA
R. JOE HARRIS & ASSOCIATES, INC. No. C02262
CERTIFICATE OF AUTHORIZATION
03/31/23

Engineer's Seal

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 29007
CHRISTOPHER R. BRIGGS

Project Manager: Daniel Gates	Drawn: Dylan Guffey
Department Manager: Brandon Pridemore	Checked: Daniel Gates
Print/Plot Date: 3/31/2023	
Asbuilt Drawn: -	Asbuilt Date: -

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

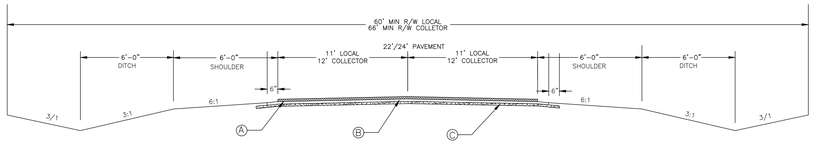
Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

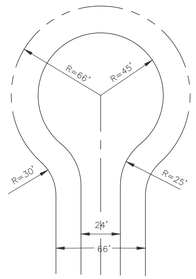
Site Plan - 14

Project No.	Drawing No.
4967	C1.14
DWG File Name: RiverChase Section 3_Site Overall	



RESIDENTIAL STREET STANDARDS

A) 1.0" TYPE C SURFACE COURSE
B) 2.0" TYPE C INTERMEDIATE COURSE
C) 8" ABC



CUL-DE-SAC

DEVELOPMENT STANDARDS & NOTES:

ZONING:
1. PROPERTY IS ZONED LOW DENSITY RESIDENTIAL (LDR) BUT IS BEING DEVELOPED AS R-30 PER THE DEVELOPMENT AGREEMENT.

ROADS:
1. ROADS TO BE BUILT ACCORDING TO APPROVED DEVELOPMENT AGREEMENT STANDARDS. ALL ROADS TO BE PRIVATELY MAINTAINED AND NOTED ON CONSTRUCTION PLANS, PLATS, ETC.
2. STREET SIGNS WILL BE PROVIDED BY THE DEVELOPER.

FIRE PROTECTION:
1. NO BURNING OF EXISTING STRUCTURES AND/OR VEGETATIVE DEBRIS ON SITE UNLESS PRIOR PERMISSION FROM SCDHEC AND SC FORESTRY COMMISSION.
2. WATERMAIN AND FIRE HYDRANT LOCATIONS HAVE NOT BEEN REVIEWED AND ARE SUBJECT TO SUBSEQUENT REVIEW/APPROVAL BY LANCASTER COUNTY FIRE MARSHAL AND LCWSD.
3. FIRE HYDRANTS SHALL BE LOCATED SO NO HOUSING UNIT OR OTHER STRUCTURE IS MORE THAN 500-FT FROM THE HYDRANT, AS THE LINE IS LAID.
4. DEVELOPMENT WILL LIKELY BE PHASED, EACH PHASE MUST BE STAND-ALONE AND MEET THE FIRE HYDRANT DISTANCE REQUIREMENT. IF A FIRE HYDRANT IN A SUBSEQUENT PHASE IS NECESSARY FOR ADEQUATE PROTECTION, IT MUST BE INSTALLED AS A PART OF THE CURRENT PHASE.
3. AT NO TIME CAN A ROADWAY GREATER THAN 150 FEET IN LENGTH NOT HAVE AN ADEQUATE TURNAROUND FOR EMERGENCY APPARATUS. IN THE PHASED CONSTRUCTION, TEMPORARY TURNAROUNDS MAY BE ACCEPTABLE AS LONG AS THEY ARE CONSTRUCTED TO PUBLIC WORKS DEPARTMENT'S STANDARDS AND APPROVED BY PUBLIC WORKS.
4. FIRE HYDRANTS MUST BE IN PLACE AND ACCESSIBLE PRIOR TO VERTICAL CONSTRUCTION AND MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
5. ACCESS TO THE SITE DURING CONSTRUCTION MUST BE ESTABLISHED AND MAINTAINED THROUGHOUT THE PROJECT FOR EMERGENCY SERVICES.
6. ANY FIRE HYDRANTS THAT ARE NOT PLACED AT INTERSECTING ROADS (MID-BLOCK) WILL REQUIRE A 26' WIDE ROADWAY SECTION (EXCLUSIVE OF CURBING) FOR 20' PRIOR TO AND 20' AFTER EACH MID-BLOCK HYDRANT.

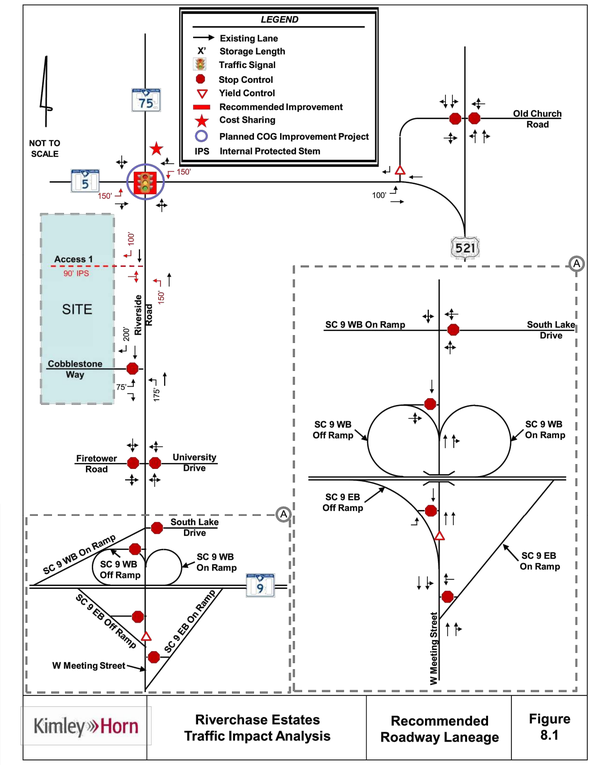
UTILITIES:
1. WATER SYSTEMS TO BE PLANNED, DESIGNED AND PERMITTED IN ACCORDANCE WITH LANCASTER COUNTY WATER & SEWER DISTRICT POLICIES SPECIFIED IN THE MOST CURRENT VERSION OF THE DEVELOPER POLICY.

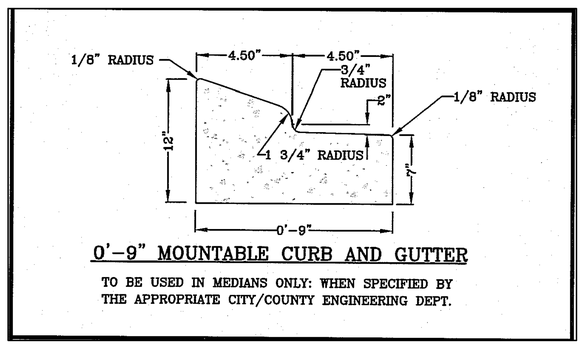
FLOOD:
1. PORTIONS OF THE DEVELOPMENT SITE ARE LOCATED WITHIN FEMA SPECIAL HAZARD FLOOD AREAS (SHFA).
2. ON PRELIMINARY PLANS AND FINAL PLATS, FLOOD PROTECTION ELEVATIONS (FPE) SHALL BE STATED FOR LOTS THAT ARE LOCATED WITHIN THE REGULATED SFHA'S.
3. NO FILL SHALL BE PLACED WITHIN THE REGULATED FLOODWAYS.

SCDOT TRAFFIC REQUIREMENTS

Rock Hill Highway (SC 5) and Riverside Road/W rebound Road
- Install a traffic signal if/when warrants are met.
- Construction of an eastbound left-turn lane with 150 feet of storage and appropriate taper.
- Construction of an westbound left-turn lane with 150 feet of storage and appropriate taper.

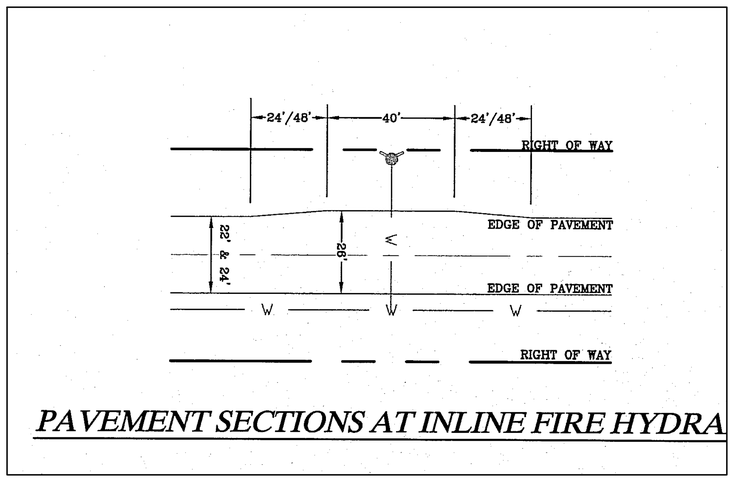
Riverside Road and Access 1
- Construction of Access 1 to include a single ingress lane, a single egress lane, and a 90-foot internal protected stem (IPS) with stop control.
- Construction of a northbound left-turn lane along Riverside Road with 150 of storage.
- Construction of a southbound right-turn lane along Riverside Road with 100 feet of storage.





0'-9" MOUNTABLE CURB AND GUTTER

TO BE USED IN MEDIANS ONLY: WHEN SPECIFIED BY THE APPROPRIATE CITY/COUNTY ENGINEERING DEPT.



PAVEMENT SECTIONS AT INLINE FIRE HYDRA

Kimley»Horn	Riverchase Estates Traffic Impact Analysis	Recommended Roadway Laneage	Figure 8.1

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PROTECTION UTILITY SERVICES
811 Know what's below. Call before you dig.

Engineer:
RJH
R. Joe Harris & Associates, Inc.
Engineering • Land Surveying • Planning Management
1186 Stonecrest Blvd., Tega Cay, S.C. 29708 P: (803) 802-1799
www.rjoeharris.com

This drawing shall not be used for construction purposes until the seal and signature of the responsible registrant appears on the drawing, and proper permit forms and related fees are transmitted by the Owner, Owner's Agent or Contractor to the Authority having jurisdiction.

Corporate Seal: SOUTH CAROLINA, R. JOE HARRIS & ASSOCIATES, INC. No. C02262, CERTIFICATE OF AUTHORIZATION, 03/31/23

Engineer's Seal: SOUTH CAROLINA, REGISTERED PROFESSIONAL ENGINEER, No. 29007, CHRISTOPHER R. BRIDGES

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client:
LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

Project:
Riverchase Section 3
Preliminary Plat

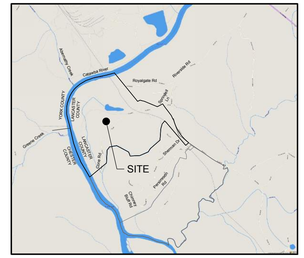
Drawing Title:
Site Plan - Details

Project No.	Drawing No.
4967	C1.15
DWG File Name: RiverChase Section 3_Site Overall	

SITE TOPOGRAPHY PROVIDED FROM LANCASTER COUNTY AERIAL TOPOGRAPHY.

BOUNDARY INFORMATION PROVIDED BY STANTEC CONSULTING SERVICES, INC. ALTA SURVEY AND BOUNDARY INFORMATION RECEIVED FROM STANTEC AND DATED 03-29-2007.

HORIZONTAL DATUM TIED TO NAD 83 AND VERTICAL DATUM BASED ON NAVD 88. CONTACT R. JOE HARRIS & ASSOCIATES, INC. FOR BENCHMARKS AND CONTROL INFORMATION.


Catawba River
Riverside Rd
Riverside Rd
Riverside Rd



VICINITY MAP - 1" = 1 MILE

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, INC. 811 Know what's below. Call before you dig.

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Corporate Seal

SOUTH CAROLINA R. JOE HARRIS & ASSOCIATES, INC. No. C02282 CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 29007 CHRISTOPHER R. BRIDGES

3/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

LGI Homes, LLC
3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
P: (803) 286-0060

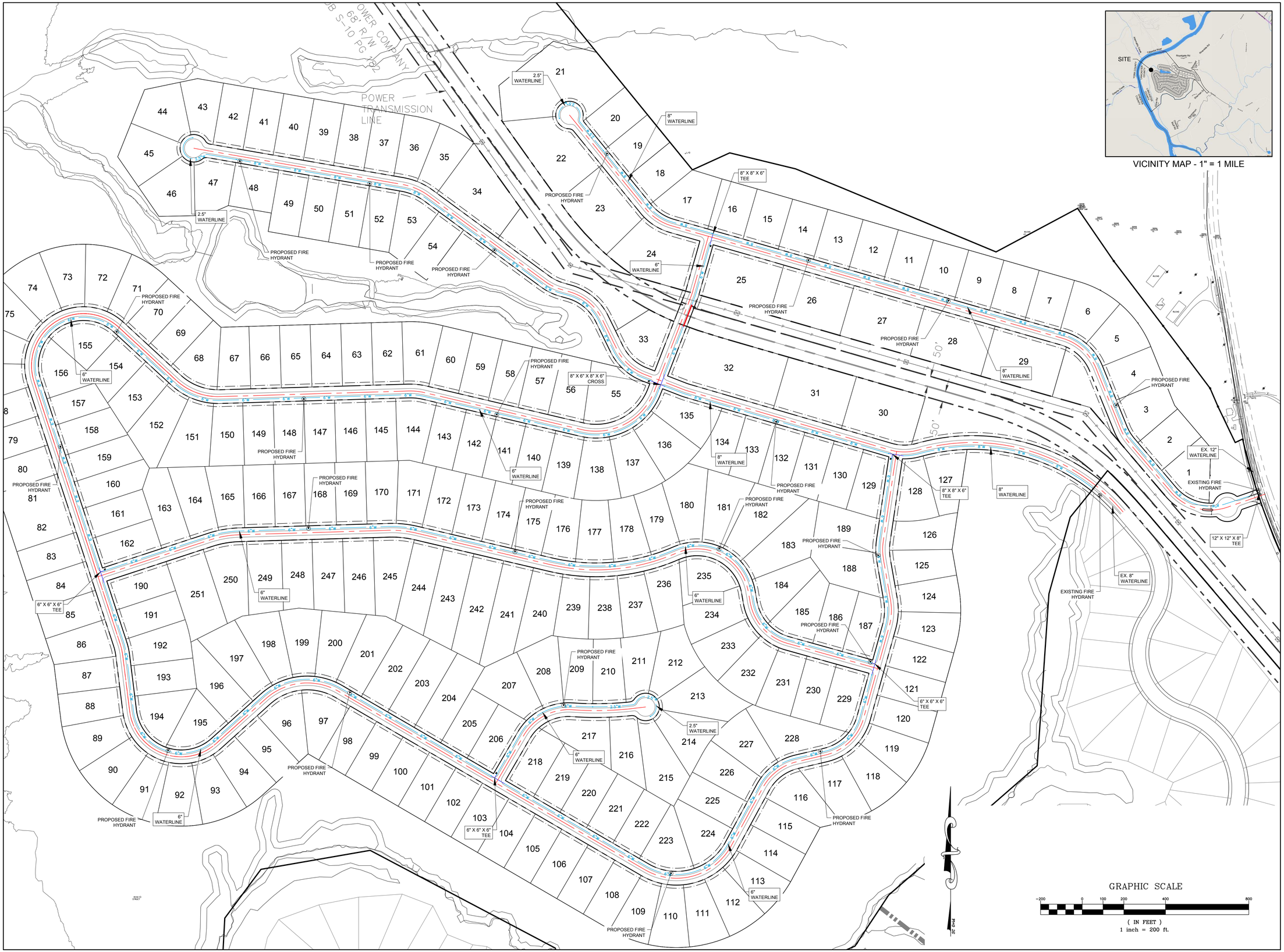
Project:

Riverchase Section 3 Preliminary Plat

Drawing Title:

Storm Plan

Project No.	Drawing No.
4967	C3.00
DWG File Name: RiverChase Section 3_Storm Overall	



VICINITY MAP - 1" = 1 MILE

DATE	ISSUED FOR	REV
03/31/2023	FIRST SUBMITTAL TO LANCASTER COUNTY	0

PUPS PALMETTO UTILITY PROTECTION SERVICE, LLC
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Engineer:

RJH

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Corporate Seal

SOUTH CAROLINA
R. JOE HARRIS & ASSOCIATES, INC.
No. C02262
CERTIFICATE OF AUTHORIZATION

Engineer's Seal

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 29007
CHRISTOPHER R. BRIDGES
12/31/23

Project Manager	Drawn
Daniel Gates	Dylan Guffey
Department Manager	Checked
Brandon Pridemore	Daniel Gates
Print/Plot Date	
3/31/2023	
Asbuilt Drawn	Asbuilt Date
-	-

Client

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3037 SHERMAN DRIVE
LANCASTER, SOUTH CAROLINA 29720
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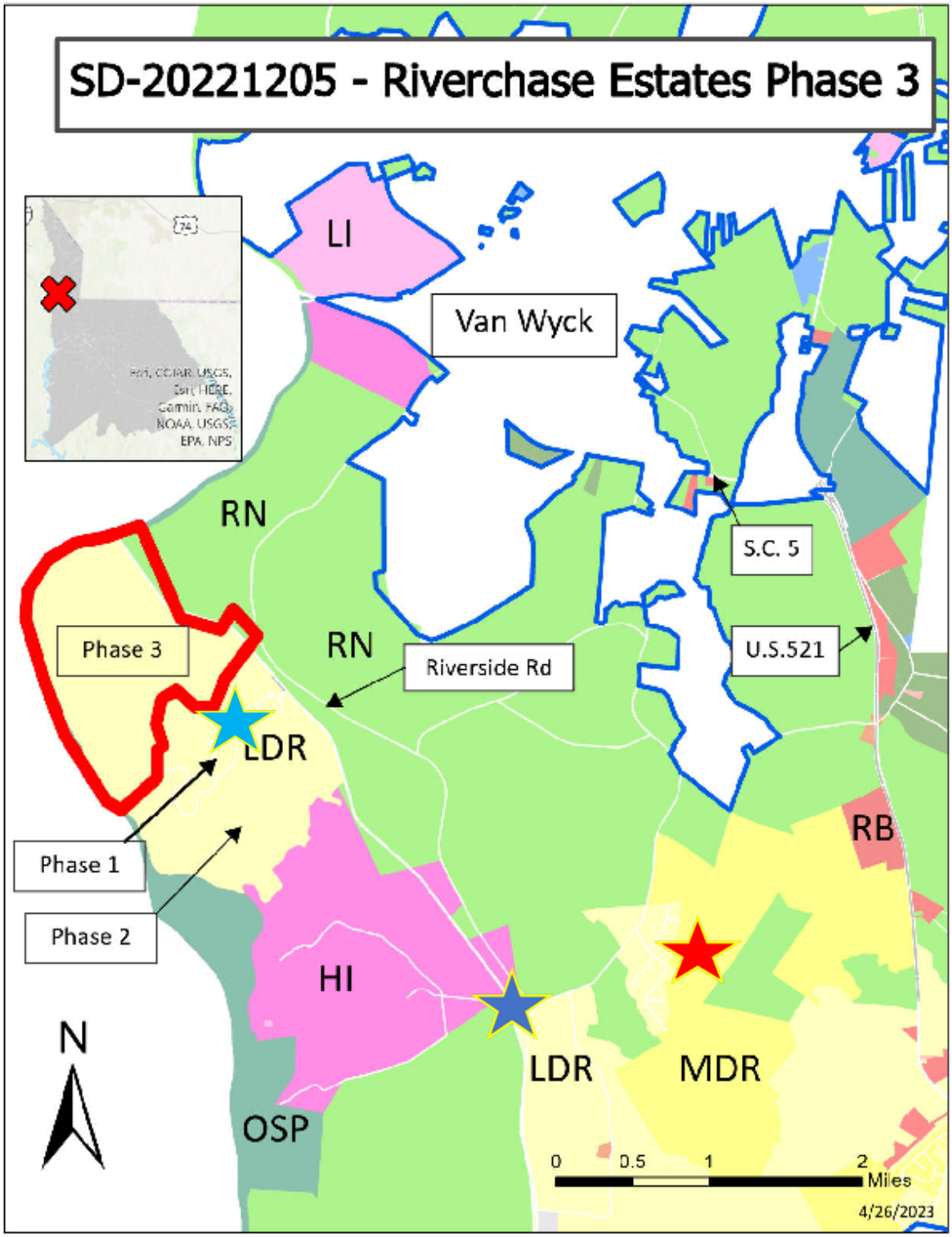
Project:

Riverchase Section 3
Preliminary Plat

Drawing Title:

Utility Plan

Project No.	Drawing No.
4967	C4.00
DWG File Name: RiverChase Section 3_Utility Plans	



Lancaster County
South Carolina

Proposal:
Preliminary Plat: 251 lots

Subject Property

Intersection Riverside & Old Hickory

Roselyn Development

Riverchase Section 1

Kimley»Horn



MEMORANDUM

To: Stephen Blackwelder, Lancaster County Environmental Compliance Manager
Ashley Davis, Lancaster County Senior Planner
Allison Love, SCDOT Assistant District Permit Engineer – District 4

From: Amy Massey, PE
Kimley-Horn and Associates, Inc.

Date: December 2, 2022

Subject: Riverchase Estates Traffic Impact Analysis (TIA) Addendum

The purpose of this Addendum is to incorporate Lancaster County review comments and provide responses regarding the TIA prepared by Kimley-Horn and Associates, Inc. (9-07-2022) for the proposed Riverchase Estates project.

The County's Not Approved Letter (10-17-2022) and South Carolina Department of Transportation (SCDOT) concurrence letter (10-31-2022) are attached. The following responses are provided in *italics* to County and SCDOT comments in **bold** and regular print.

Review Comments (SCDOT):

SCDOT Comments on Specific Study Intersections:

Rock Hill Highway (SC 5) and Riverside Road/W. Rebound Road

- SCDOT is supportive of the developer working with Lancaster County Government to commit funding to the planned Catawba COG project. *Acknowledged.*

- Installation of a signal cannot be considered until actual traffic meets the criteria set forth by the MUTCD. The developer or community may at their discretion choose to do a full warrant analysis which includes a 16-hour count in order to justify a signal at any point before full buildout or directly after to determine if a signal is actually warranted. *Acknowledged.*

SCDOT General Comments

- The proposed access location shall not be considered approved until required horizontal and vertical sight distances are verified by the developer's civil engineer and driveway and road separation requirements are met. *Acknowledged.*

- Construct appropriate tapers with all turn lanes. *Acknowledged.*

Review Comments (County Engineer):

Please see the attached documents from Infrastructure Consulting and Engineering (ICE) regarding the TIA submitted. If I need to coordinate a meeting with Eric Dillon from ICE, let me know. **Checklist comments**:

- Page 25 - Review need for roundabout vs. signal control. *Acknowledged. SIDRA 9 software was used to determine operating characteristics, level-of-service (LOS), and delay for the potential roundabout identified at the SC 5 and Riverside Road/W Rebound Road intersection. Based on this analysis, a single-lane roundabout intersection would be expected to operate with long delays along SC 5 during both peak hours; a multilane roundabout was also analyzed and produced acceptable LOS results under Lancaster County target guidelines. These results are shown in the attachments.*

- Page 26 - If signal control is preferred control for the intersection – most likely need SB left turn lane for operations and cross alignment. *As noted in the report, preliminary peak-hour signal warrants were satisfied for both peak hours under build-out conditions. Notably, a northbound left-turn lane is NOT recommended as developer mitigation but is shown as an option in the Target scenario required by Lancaster County. Should a northbound left-turn lane be constructed, a southbound left-turn lane may be useful for cross alignment, but, again, is not required to mitigate the site's impact on the intersection as the northbound and southbound approaches of Riverside/Rebound Road are already expected to operate with long delays under background conditions without the addition of site traffic. The addition of the signal with left-turn lanes along SC 5 is shown to provide the intersection with better results than background conditions. It should be noted that based on Lancaster County guidelines a target LOS is required where the existing/background LOS is below the following standards but is not recommended mitigation for the proposed development:*
    - *"For collector or local streets, Level-of-Service (LOS) C or better shall be maintained. On any arterial or higher order street, a LOS D or better shall be maintained. Where the existing LOS is below these standards, the traffic impact analysis shall identify those improvements required to ensure that development related traffic demands result in no net reduction in LOS, and identify additional improvements needed to raise the level of service to the standards on the applicable street to the adopted LOS standard."*

- Page 27 - Check for SB left turn lane on Riverside Road at University (quick check shows need for safety). *Upon review of SCDOT turn-lane warrants, a southbound left-turn lane is warranted for consideration under build-out conditions. However, the southbound approach operates with short delays without a turn lane. Additionally, the proposed site adds only 5% of projected site trips to the southbound left-turn movement (19 vehicles in the AM peak-hour and 15 vehicles in the PM peak-hour), and the intersection in question is not related to site access being over 4.5 miles from the site.*

- Page 28 - Do not recommend the striping for a left turn lane for NB lefts on Riverside Road onto SC 9 WB ramp as SCDOT needs to restrict this movement. *Acknowledged*.

- Page 34 - Do not recommend the restriction to a right turn only for EB approach of SC 5 onto US 521 to a right turn only as the left turns are the heaviest movement. Check for restriction of Old Church Road throughs and lefts to a right turn only and build U-Turn north and build an acceleration lane for the EB lefts onto NB US 521. *Acknowledged*. *As noted in the report and based on Lancaster County guidelines, a target LOS is required where the existing/background LOS is below a designated roadway's classification standards. However, it should be noted that these improvements analyzed in the "Build IMP Target LOS" scenario are not recommended mitigation for the proposed development.*
  As shown in the Attachments, the requested analysis was performed and did not provide significant improvement in delay experienced at this intersection. Additionally, the construction

of the aforementioned u-turn bulb would not be recommended as the westbound approach has less than 20 vehicles in either peak hour, and this mitigation measure would be costly.

- Page 37 - If signal control is considered for SC 5 at Riverside/W. Rebound Rd – along with EB and WB left turn lanes on SC 5, need right turn lanes on SC 5 onto Riverside/NB and SB turn lanes. *As discussed above, the north and southbound approaches of Riverside/Rebound Road are already expected to operate with long delays under background conditions without the addition of site traffic. The addition of the signal with left-turn lanes along SC 5 is shown to provide the intersection with better results than background conditions. The improvements shown in the Target LOS rows of the TIA are provided based on Lancaster County guidance and are not developer mitigation recommendations. However, it should be noted that auxiliary turn lane warrants for left- and right- turn lanes are not applicable to signalized intersections.*

- Page 37 - Note for sight distance for Access 1 meets requirements or site engineer will verify. *The TIA states: 'All additions and attachments to the State and County road system shall be properly permitted, designed, and constructed in conformance to standards maintained by the agencies.' This statement covers sight distance, as this is a standard that must be met in order to get permitted plans. It is noted that the site engineer is responsible for verifying sight distance.*

Recommendations:

- Verify sight distance for all access points. *Sight distance to be verified by site engineer.*

- Determine left and right turn lane needs at Riverside Road at University Drive. *Upon review of SCDOT turn-lane warrants, a southbound left-turn lane is warranted for consideration in the PM peak hour, but the northbound and southbound right-turn lanes are not warranted. It should be noted that the posted speed limit along Riverside Road is 45 mph. However, the southbound approach operates with short delays without a turn lane. The proposed site adds only 5% of projected site trips to the southbound left-turn movement, and the intersection in question is over 4.5 miles from the site.*

- SC 5 at Riverside Road/W. Rebound Road – If SCDOT would consider – check for roundabout vs. signal control. If signal control is preferred method of control – left turn lanes in all 4 approaches and the right turn lane for EB SC 5 movement onto Riverside Road. *Acknowledged. Coordination with the Catawba COG project is recommended to determine final layout and appropriate developer contribution.*

- Check for restricting Old Church Road to a right only and construction a U-turn north of the interchange and an acceleration lane for SC 5 EB lefts. *Not recommended as noted in comments above.*

The sealed TIA is attached without modification in addition to the SCDOT and County letters received.

Cc:

- Allison C. Love, AICP, SCDOT
- Patrick Murphy, PE, R. Joe Harris & Associates, Inc.

Attachments:

- SCDOT letter
- County letter, including sealed TIA
- Additional analysis results summaries and reports

South Carolina
Department of Transportation

Cherokee County
Chester County
Chesterfield County
Fairfield County
Lancaster County
Union County
York County

October 31, 2022

Amy B. Massey, P.E.
Kimley-Horn and Associates, Inc.
200 South Tryon Street, Suite 200
Charlotte, North Carolina 28202

RE: Riverchase Estates
Traffic Impact Analysis
Riverside Road (S-29-29)
Lancaster County

Dear Mrs. Massey,

Thank you for allowing us to review the Traffic Impact Analysis (TIA) regarding the site on Riverside Road (S-29-29). There are currently 122 single-family homes constructed and closed within the overall development. This TIA studies the impact of 814 additional single-family homes. The Department provides the following comments.

TIA Recommendations

Rock Hill Highway (SC 5) and Riverside Road/W. Rebound Road

- Cost sharing with the planned Catawba COG intersection and Nisbet development projects towards the following improvements:
  - Construction of an eastbound left-turn lane with 150 feet of storage.
  - Construction of a westbound left-turn lane with 150 feet of storage.
  - Installation of a traffic signal if/when warrants are met.

Riverside Road and Access 1

- Construction of Access 1 to include a single ingress lane, a single egress lane, and a 90-foot internal protected stem (IPS) with stop control.
- Construction of a northbound left-turn lane along Riverside Road with 150 feet of storage.
- Construction of a southbound right-turn lane along Riverside Road with 100 feet of storage.

SCDOT Comments on Specific Study Intersections

Rock Hill Highway (SC 5) and Riverside Road/W. Rebound Road

- SCDOT is supportive of the developer working with Lancaster County Government to commit funding to the planned Catawba COG project.
- Installation of a signal cannot be considered until actual traffic meets the criteria set forth by the MUTCD. The developer or community may at their discretion choose to do a full

District Four Engineering
Post Office Box 130
1232 JA Cochran Bypass
Chester, SC 29706
803-377-4155 | 803-581-0156 Fax

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Affirmative Action Employer
855-GO-SCDOT (855-467-2368)

warrant analysis which includes a 16 hour count in order to justify a signal at any point before full buildout or directly after to determine if a signal is actually warranted.

SCDOT General Comments

- The proposed access location shall not be considered approved until required horizontal and vertical sight distances are verified by the developer's civil engineer and driveway and road separation requirements are met.
- Construct appropriate tapers with all turn lanes.

Once comments from all reviewers have been addressed, please submit a digital copy of the final draft to the Department. We look forward to the project proceeding to the encroachment permit process. At that time, all geometrical features, pavement designs, etc., will be reviewed by the appropriate office. If you have any additional questions or concerns, please contact the District 4 Permit Office at (803) 377-4155.

Sincerely,

C. Jason Johnston, P.E.
District 4 Engineering Administrator

CJJ/mrj

ec: Stephen Blackwelder, Lancaster County Engineering
Clint Beaver, Lancaster Resident Maintenance Engineer

File: D4/PO/ACL

District Four Engineering
Post Office Box 130
1232 JA Cochran Bypass
Chester, SC 29706
803-377-4155 | 803-581-0156 Fax

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Lancaster County
Planning Department
P. O. Box 1809
Lancaster, SC 29721
803.285.6005
planning@lancastercountysc.net

October 17, 2022

Patrick Murphy
R. Joe Harris & Associates, Inc.
127 Ben Casey Drive
Fort Mill, SC 29708

Project Number	20221205
Project Name	Riverchase Estates Section 3
Location	Riverside Road
Stage	Traffic Impact Analysis
Parcel(s)	0030-00-002.00
Status	Not Approved

Dear: Patrick Murphy

We have completed our review. The comments listed on the attached report must be addressed with a response letter.

Once revised plans are received, they will be submitted to staff for review.
Please be aware that plans will not be routed for review without a response letter

Sincerely,

Chanda Kirkland

Chanda Kirkland, Development Service Coordinator
Lancaster County Government
101 N Main St
Lancaster, SC 29720
P: (803) 416-9390

Plan Review Comments

County Engineer - Stephen Blackwelder - 8035482406
sblackwelder@lancastersc.net

Not Approved

Review Comments:

Please see the attached documents from Infrastructure Consulting and Engineering (ICE) regarding the TIA submitted.
If i need to coordinate a meeting with Eric Dillon from ICE, let me know.

Planning - Ashley Davis - 803-416-9433
adavis@lancastersc.net

Not Approved

Review Comments:

Project Name: **Riverchase**

TIA Checklist

N/A	Yes	No	
☐	☒	☐	South Carolina PE Stamp and Signature on TIA/Plans
☐	☒	☐	Introduction and Executive Summary
☐	☒	☐	Study Area Descriptions and Roadway Classifications
☐	☒	☐	Analysis Period Correct
☐	☒	☐	Existing Traffic Operations
☐	☒	☐	Other projected transportation improvements in the study area
☐	☒	☐	Trip Generation Summary
☐	☒	☐	Trip Distribution and traffic assignment
☐	☒	☐	LOS Analysis: Background traffic growth and site build out
☐	☐	☒	Analysis of Sight Distance at Access Points *sight distance not verified in report for access*
☐	☒	☐	Identify need for Turn Lanes, Capacity and Storage Length
☐	☒	☐	Identify need for Signalization
☐	☒	☐	Identify Measures to Mitigate LOS deficiencies
☐	☒	☐	Vicinity Map
☐	☒	☐	Site Plan and Proposed Land Use
☐	☒	☐	Existing Peak hour volumes (counts conducted within the last 12 months)
☐	☒	☐	Projected Background Peak Hour Volumes -
☐	☒	☐	Trip Distribution % Including Added Project Peak Hour Volumes
☐	☒	☐	Project Build-Out Volumes
☐	☒	☐	Existing and Recommended Lane Configurations
☐	☒	☒	Intersection LOS (existing, background, build, mitigated)
☐	☒	☐	Unified Development Ordinance Section 6.8

Comments:

Good Report – need additional checks for auxiliary turn lanes at 2 intersections and alternative mitigation strategies at two intersections.

1. Overview of Traffic Impact Analysis (TIA) Report

Kimley Horn submitted a traffic impact analysis report for single family housing development that will access Riverside Road south of SC 5. Amy Massey is the Engineer on Record (EOR) for producing the detailed traffic study. Nine intersections were analyzed for impacts – Riverside Road at Cobblestone Way, SC 5 at Riverside Road/W. Rebound Road, Riverside Road at University Drive/ Firetower Road, Riverside Road at South Lake Dr./ SC 9 WB on-ramp, Riverside Road at SC 9 WB off-ramp, Riverside Road at SC 9 EB off-ramp, SC 9 at SC 9 EB on-ramp, SC 5 at US 521, US 521 at SC 5/Old Church Road. Also, one new access point was reviewed on Riverside Road. The overall report contained a good breakdown of volumes and distribution among all study locations. The analysis period for build out included the proposed year of 2034 plus one year for a 2035 modeling period. There were some unacceptable levels of services for certain movements at intersections and the report showed mitigation for all mentioned in the report.

2. Items of Interest in the TIA Report

The TIA document was redlined with marks highlighting interest items below (pages noted below reflect pdf pages and not report pages):

- Page 25 – Review need for roundabout vs. signal control
- Page 26 – If signal control is preferred control for the intersection – most likely need SB left turn lane for operations and cross alignment.
- Page 27 – Check for SB left turn lane on Riverside Road at University (quick check shows need for safety)
- Page 28 – Do not recommend striping for a left turn lane for NB lefts on Riverside Road onto SC 9 WB ramp as SCDOT needs to restrict this movement.
- Page 34 – Do not recommend the restriction to a right turn only for EB approach of SC 5 onto US 521 to a right turn only as the left turns are the heaviest movement. Check for restriction of Old Church Road throughs and lefts to a right turn only and build U-Turn north and build an acceleration lane for the EB lefts onto NB US 521.
- Page 36 – Auxiliary turn lane checks for Riverside Road at University.
- Page 37 – Roundabout review for SC 5 at Riverside Road/W. Rebound Rd.
- Page 37 - If signal control is considered for SC 5 at Riverside/W. Rebound – along with EB and WB left turn lanes on SC 5, need right turn lanes on SC 5 onto Riverside/NB and SB turn lanes.
- Page 37 - Check turn lanes for Riverside at University.
- Page 37 - Check operations a US 521 with restricting Old Church to right t turn only and adding U-turn to the north on US 521 and adding acceleration lane NOB US 52 for SC 5 EB lefts.
- Page 37 - Note for sight distance for Access 1 meets requirements or site engineer will verify.

3. Checklist Comments

Attached is a TIA checklist that reviews all submitted information for proper TIA submittal. The analysis period did reflect UDO 6.8.2 D for analysis year after development which would be 2035 (Build plus 1 year). The TIA did not review driveway sight distance (usually covered under site plan permitting).

4. Recommendations

1. **Verify sight distance for all access points.**
2. **Determine left and right turn lane needs at Riverside Road at University Drive.**
3. **SC 5 at Riverside Road/W. Rebound Road – If SCDOT would consider – check for roundabout versus signal control. If signal control is preferred method of control – left turn lanes in all 4 approaches and the right turn lane for EB SC 5 movement onto Riverside Road.**
4. **Check for restricting Old Church Road to a right only and construction a U-turn north of the interchange and an acceleration lane for SC 5 EB lefts.**

Riverchase Estates

Traffic Impact Analysis

Lancaster County, South Carolina

Prepared for:

R. Joe Harris & Associates, Inc.

September 2022

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Kimley»Horn

Traffic Impact Analysis for
Riverchase Estates
Lancaster County, South Carolina



Prepared for:

R. Joe Harris & Associates, Inc.
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9/8/2022

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September 2022
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TABLE OF CONTENTS

		Page No.
1.0	**EXECUTIVE SUMMARY**	**1**
2.0	**INTRODUCTION**	**3**
3.0	**EXISTING TRAFFIC CONDITIONS**	**6**
3.1	STUDY AREA	6
3.2	EXISTING TRAFFIC CONDITIONS	7
4.0	**BACKGROUND TRAFFIC CONDITIONS**	**10**
4.1	HISTORICAL GROWTH TRAFFIC	10
4.2	APPROVED OFFSITE DEVELOPMENT TRAFFIC	10
4.3	PLANNED TRANSPORTATION PROJECTS	11
4.4	2035 BACKGROUND TRAFFIC	11
5.0	**SITE TRAFFIC VOLUME DEVELOPMENT**	**14**
5.1	TRAFFIC GENERATION	14
5.2	SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT	14
5.3	2035 BUILD-OUT TRAFFIC VOLUMES	14
6.0	**CAPACITY ANALYSIS**	**18**
6.1	RIVERSIDE ROAD AND COBBLESTONE WAY	20
6.2	SC 5 AND RIVERSIDE ROAD/W REBOUND ROAD	21
6.3	RIVERSIDE ROAD AND FIRETOWER ROAD/UNIVERSITY DRIVE	23
6.4	RIVERSIDE ROAD AND SC 9 WB ON-RAMP/SOUTH LAKE DRIVE	24
6.5	RIVERSIDE ROAD AND SC 9 WB OFF-RAMP	25
6.6	RIVERSIDE ROAD/W MEETING STREET AT SC 9 EB OFF-RAMP	26
6.7	W MEETING STREET AND SC 9 EB ON-RAMP	27
6.8	SC 5 AND US 521 OFF-RAMP	28
6.9	US 521 AND SC 5/OLD CHURCH ROAD	29
6.10	RIVERSIDE ROAD AT ACCESS 1	31
7.0	**AUXILIARY TURN LANE WARRANTS**	**32**
8.0	**CONCLUSIONS**	**33**
APPENDIX		**35**

List of Figures

	Page No.
Figure 2.1 – Study Area/Site Location	4
Figure 2.2 – Proposed Site Plan	5
Figure 3.1 – Existing Roadway Laneage	8
Figure 3.2 – 2022 Existing Peak-Hour Traffic Volumes	9
Figure 4.1 – 2035 Background AM Peak-Hour Traffic Volumes	12
Figure 4.2 – 2035 Background PM Peak-Hour Traffic Volumes	13
Figure 5.1 – Site Traffic Distribution and Assignment	14
Figure 5.2 – 2035 Build-Out AM Peak-Hour Traffic Volumes	15
Figure 5.3 – 2035 Build-Out PM Peak-Hour Traffic Volumes	17
Figure 8.1 – Recommended Roadway Laneage	34

List of Tables

	Page No.
Table 3.1- Study Area Roadways	6
Table 4.1- Historical Growth Rate Calculations	10
Table 5.1 – Trip Generation	14
Table 6.0-A – Level-of-Service Summary for Signalized and Unsignalized Intersections	19
Table 6.1 – Riverside Road and Cobblestone Way	20
Table 6.2 – SC 5 and Riverside Road/W Rebound Road	21
Table 6.3 – Van Wyck Road and W. Rebound Road	23
Table 6.4 – Riverside Road and SC 9 WB On-Ramp/South Lake Drive	24
Table 6.5 – Riverside Road and SC 9 WB Off-Ramp	25
Table 6.6 – Riverside Road/W Meeting Street and SC 9 EB Off-Ramp	26
Table 6.7 – W Meeting Street and SC 9 EB On-Ramp	27
Table 6.8 – SC 5 and US 521 Off-Ramp	28
Table 6.9A – US 521 SB and SC 5/Old Church Road	29
Table 6.9B– US 521 NB and SC 5/Old Church Road	30
Table 6.10 – Riverside Road and Access 1	31

1.0 Executive Summary

The purpose of this Traffic Impact Analysis (TIA) is to review vehicular traffic impacts as a result of the proposed Riverchase Estates development. The primary objectives of the study are:

- To estimate trip generation and distribution for the proposed development.
- To perform intersection capacity analyses for the identified study area.
- To determine the potential traffic impacts of the proposed development.
- To develop recommendations for needed roadway and operational improvements to accommodate the proposed development's traffic impacts.

The proposed site is located along the west side of Riverside Road, east of the Catawba River in Lancaster County, South Carolina. As currently envisioned, the overall development plan consists of a total of 936 single family homes, expected to be built-out in 2034. Based on information from the Client, 122 homes are currently constructed and closed, and are accounted for within existing traffic. Therefore, this TIA studies the impact of 814 additional single-family homes as an update to the prior *Traffic Impact Assessment for Lancaster River Front Subdivision* (3-29-2007).

Based on the current site plan, one additional access point along Riverside Road is proposed in addition to the existing Riverchase Estates access (Cobblestone Way).

Per the Lancaster County Unified Development Ordinance (UDO) Section 6.8, the impact of the development was analyzed for the year after the development is expected to be at full occupancy. Therefore, this TIA evaluates the traffic operations under 2022 existing conditions, 2035 background conditions (without the proposed development), and 2035 build-out conditions (with the proposed development) during the AM and PM peak hours. Through coordination with Lancaster County and South Carolina Department of Transportation (SCDOT) staff, the following study intersections are included:

1. Riverside Road (S-29) and Cobblestone Way
2. Riverside Road (S-29)/W Rebound Road (SC 75) and Rock Hill Highway (SC 5)
3. Riverside Road (S-29) and University Drive (S-56)/Firetower Road
4. Riverside Road (S-29) and South Lake Drive (S-206)/Chester Hwy (SC 9) WB On-Ramp
5. Riverside Road (S-29) and Chester Hwy (SC 9) WB Off-Ramp
6. Riverside Road (S-29)/W Meeting Street (SC 9) and Chester Hwy (SC 9) EB Off-Ramp
7. W Meeting Street (SC 9) and Chester Hwy (SC 9) EB On-Ramp
8. Rock Hill Highway (SC 5) and Charlotte Highway (US 521) Ramp
9. Charlotte Highway (US 521) and Rock Hill Highway (SC 5) Ramp/Old Church Road (S-378)
10. Riverside Road (S-29) and Access 1

For purposes of this study, US 521, Riverside Road, W Rebound Road, and W Meeting Street are referenced as north/south with the exception of Old Church Road at its intersection with SC 5; while all other roads are referenced as east/west.

Kimley-Horn was retained to determine the potential traffic impacts of this development (in accordance with the traffic study guidelines in the *SCDOT Access and Roadside Management Standards (ARMS) Manual* and the Lancaster County UDO Section 6.8), and to identify transportation improvements that may be required to accommodate these impacts. Based on the analyses contained herein, the following improvements are recommended as developer mitigation:

Rock Hill Highway (SC 5) and Riverside Road/W Rebound Road

Cost sharing with the planned Catawba COG intersection and Nisbet development projects towards the following improvements:

- Construction of an eastbound left-turn lane with 150 feet of storage.
- Construction of a westbound left-turn lane with 150 feet of storage.
- Installation of a traffic signal if/when warrants are met.

Riverside Road and Access 1

- Construction of Access 1 to include a single ingress lane, a single egress lane, and a 90-foot internal protected stem (IPS) with stop control.
- Construction of a northbound left-turn lane along Riverside Road with 150 feet of storage.
- Construction of a southbound right-turn lane along Riverside Road with 100 feet of storage.

The transportation improvements for the study intersections are subject to approval by SCDOT and Lancaster County. All additions and attachments to State and County roadway system shall be properly permitted, designed, and constructed in conformance to standards maintained by the agencies.

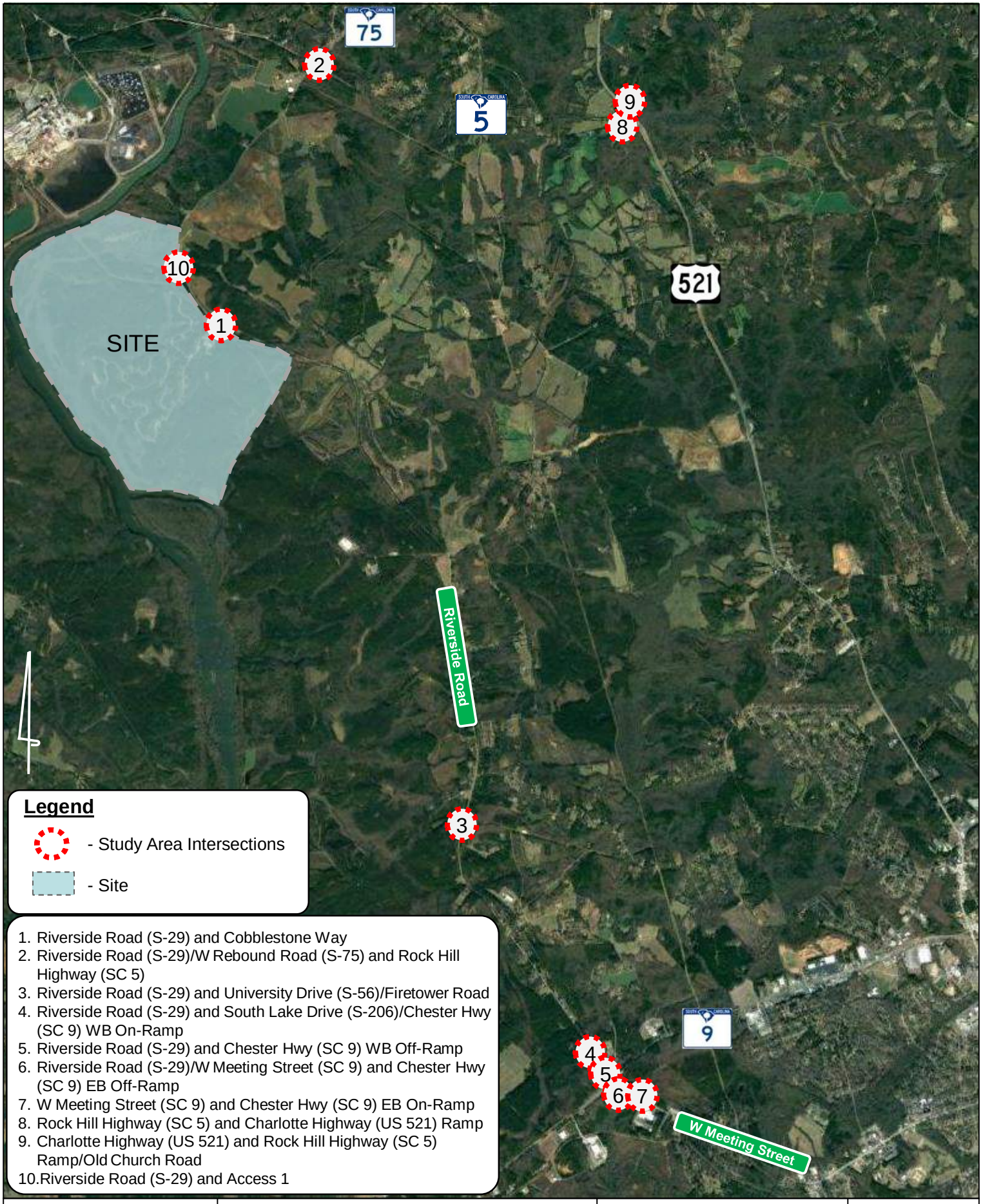
2.0 Introduction

The proposed site is located along the west side of Riverside Road, east of the Catawba River in Lancaster County, South Carolina. As currently envisioned, the overall development plan consists of a total of 936 single family homes, expected to be built-out in 2034. Based on information from the Client, 122 homes are currently constructed and closed, and are accounted for within existing traffic. Therefore, this TIA studies the impact of 814 additional single-family homes as an update to the prior Traffic Impact Assessment for Lancaster River Front Subdivision (3-29-2007). **Figure 2.1** shows the site location and study area.

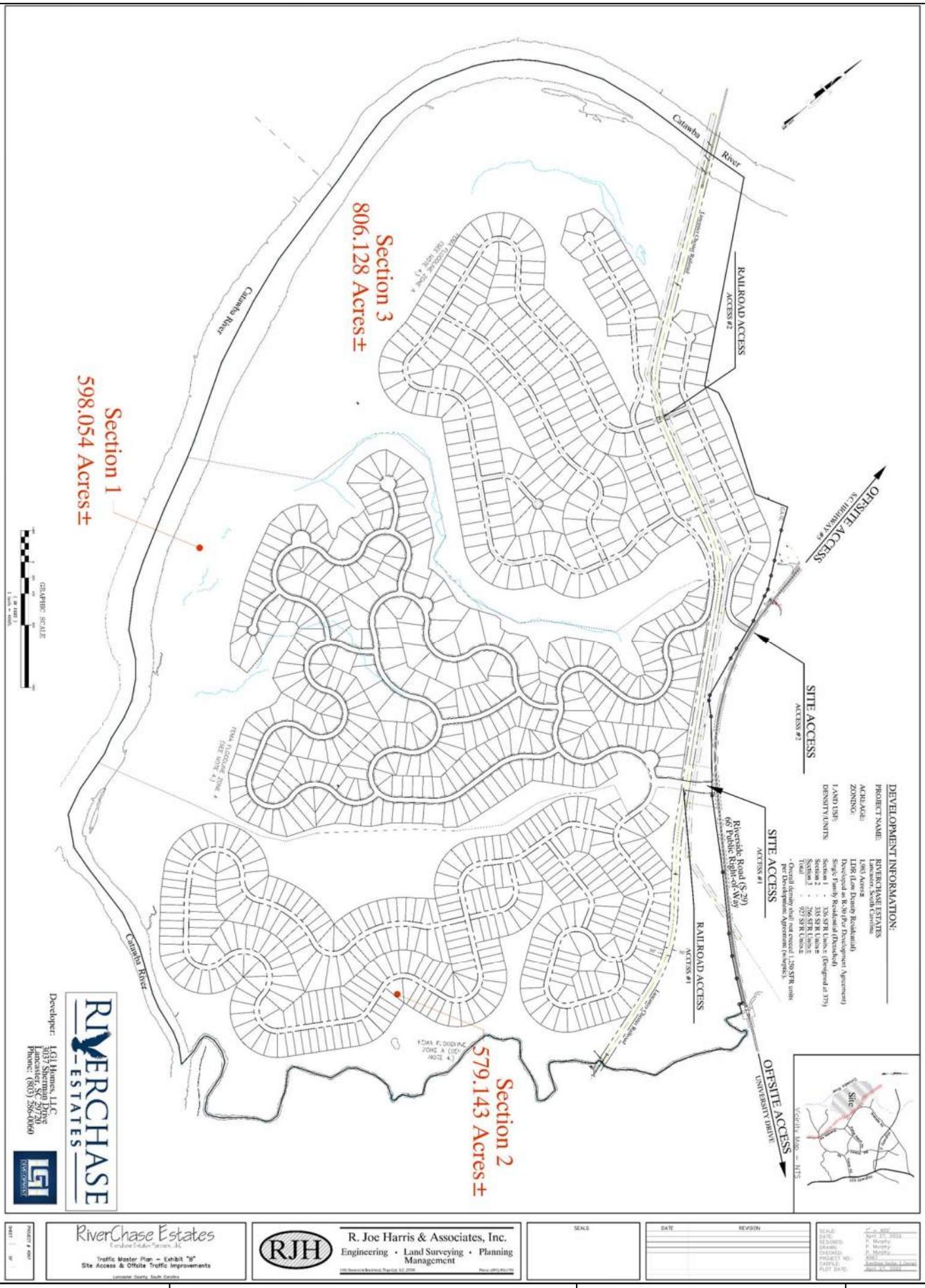
Based on the current site plan, one additional access point along Riverside Road is proposed in addition to the existing Riverchase Estates access (Cobblestone Way). **Figure 2.2** shows the proposed site plan for the development.

Per the Lancaster County Unified Development Ordinance (UDO) Section 6.8, the impact of the development was analyzed for the year after the development is expected to be at full occupancy. Therefore, this TIA evaluates the traffic operations under 2022 existing conditions, 2035 background conditions (without the proposed development), and 2035 build-out conditions (with the proposed development) during the AM and PM peak hours.

Kimley-Horn was retained to determine the potential traffic impacts of this development (in accordance with the traffic study guidelines in the South Carolina Department of Transportation (*SCDOT) Access and Roadside Management Standards (ARMS) Manual* and the Lancaster County UDO Section 6.8), and to identify transportation improvements that may be required to accommodate these impacts.



Kimley»Horn	**Riverchase Estates Traffic Impact Analysis**	**Study Area/ Site Location**	**Figure 2.1**



Kimley»Horn	**Riverchase Estates Traffic Impact Analysis**	**Proposed Site Plan**	**Figure 2.2**

3.0 Existing Traffic Conditions

Existing traffic conditions were coordinated with Lancaster County and SCDOT staff and collected through field observations and turning-movement counts to establish the existing conditions baseline analysis.

3.1 STUDY AREA

Through coordination with Lancaster County and SCDOT staff, the following study intersections are included:

1. Riverside Road (S-29) and Cobblestone Way
2. Riverside Road (S-29)/W Rebound Road (SC 75) and Rock Hill Highway (SC 5)
3. Riverside Road (S-29) and University Drive (S-56)/Firetower Road
4. Riverside Road (S-29) and South Lake Drive (S-206)/Chester Hwy (SC 9) WB On-Ramp
5. Riverside Road (S-29) and Chester Hwy (SC 9) WB Off-Ramp
6. Riverside Road (S-29)/W Meeting Street (SC 9) and Chester Hwy (SC 9) EB Off-Ramp
7. W Meeting Street (SC 9) and Chester Hwy (SC 9) EB On-Ramp
8. Rock Hill Highway (SC 5) and Charlotte Highway (US 521) Ramp
9. Charlotte Highway (US 521) and Rock Hill Highway (SC 5) Ramp/Old Church Road (S-378)
10. Riverside Road (S-29) and Access 1

For purposes of this study, US 521, Riverside Road, W Rebound Road, and W Meeting Street are referenced as north/south with the exception of Old Church Road at its intersection with SC 5; while all other roads are referenced as east/west.

Figure 3.1 shows the current roadway geometry at the study intersections. The primary roadways in the vicinity of the site are described in **Table 3.1** in terms of 2019 SCDOT annual average daily traffic (AADT) volumes in vehicles per day (vpd) available online, facility type and state functional classifications, and posted speed limits in miles per hour (mph).

Table 3.1- Study Area Roadways

Roadway	Section type	AADT	Posted speed limit
Charlotte Highway (US 521)	4-lane principal arterial	12,100 N of SC 5 22,800 S of SC 5	55
Chester Highway (SC 9)	4-lane principal arterial	12,000 E of Riverside	55
Rock Hill Highway (SC 5)	2-lane principal arterial	17,200 W of Rebound 12,100 E of Rebound	55
Riverside Road (S-29)	2-lane major collector (4-lanes minor arterial south of SC 9)	1,150 N of Lute Lane 2,500 S of Lute Lane	45
W Rebound Road (SC 75)	2-lane major collector	1,200	45
University Drive (S-56)	2-lane major collector	4,000	45
Firetower Road	Local	NA	Not posted
South Lake Drive (S-206)	2-lane major collector	NA	35
W Meeting Street (SC 9)	2-lane minor arterial (4 lanes at SC 9)	4,800	45
Old Church Road (S-378)	2-lane major collector	NA	Not posted

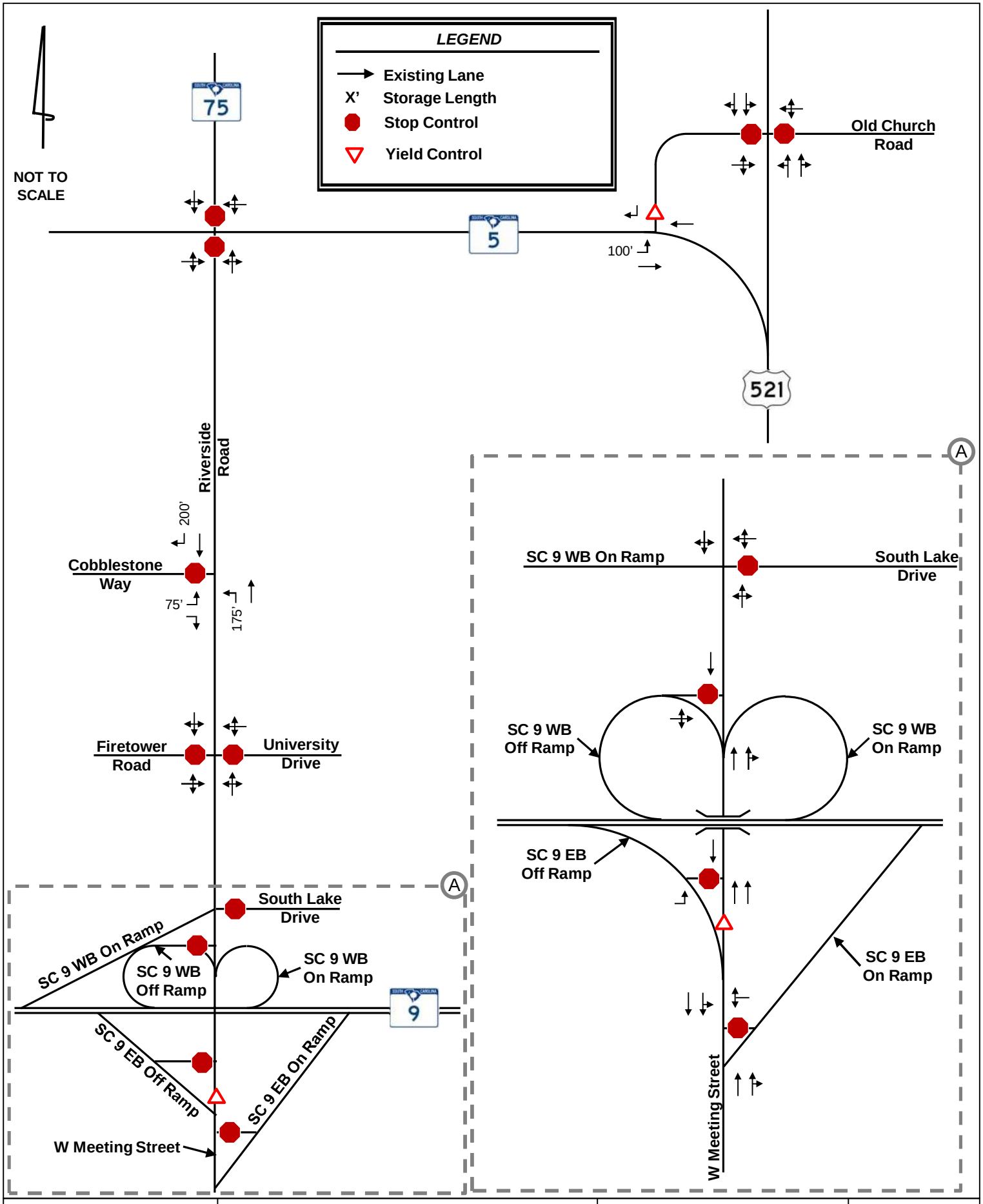
3.2 EXISTING TRAFFIC CONDITIONS

AM (7:00-9:00) and PM (4:00-6:00) peak-period intersection turning-movement counts were collected by Quality Counts LLC on Thursday, May 19, 2022 at the following intersections:

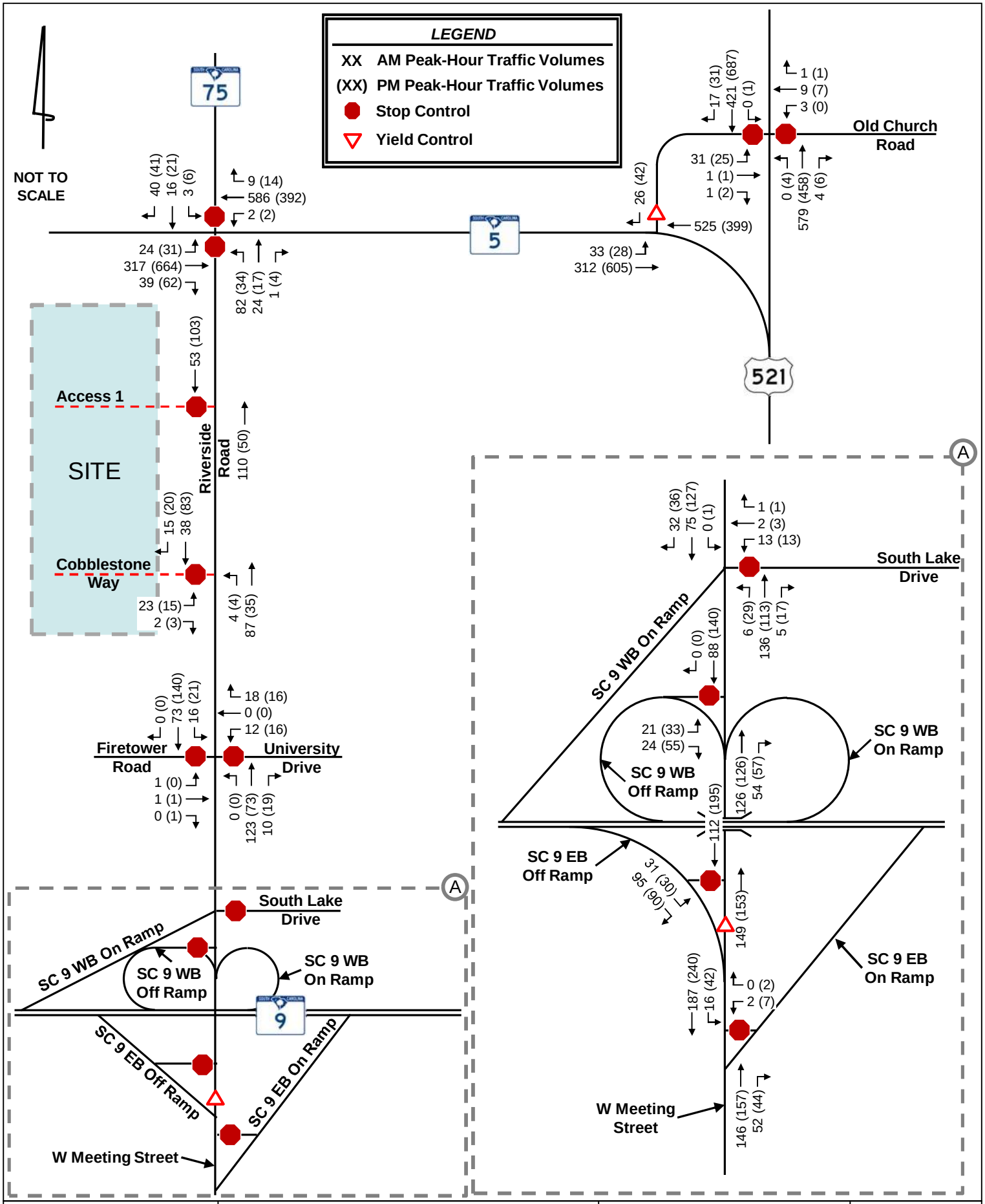
1. Riverside Road (S-29) and Cobblestone Way
2. Riverside Road (S-29)/W Rebound Road (SC 75) and Rock Hill Highway (SC 5)
3. Riverside Road (S-29) and University Drive (S-56)/Firetower Road
4. Riverside Road (S-29) and South Lake Drive (S-206)/Chester Hwy (SC 9) WB On-Ramp
5. Riverside Road (S-29) and Chester Hwy (SC 9) WB Off-Ramp
6. Riverside Road (S-29)/W Meeting Street (SC 9) and Chester Hwy (SC 9) EB Off-Ramp
7. W Meeting Street (SC 9) and Chester Hwy (SC 9) EB On-Ramp
8. Rock Hill Highway (SC 5) and Charlotte Highway (US 521) Ramp
9. Charlotte Highway (US 521) and Rock Hill Highway (SC 5) Ramp/Old Church Road (S-378)

Volume balancing was not performed between the study area intersections due to the presence of streets/driveways.

Figure 3.2 shows the 2022 existing AM and PM peak-hour traffic volumes. Raw peak-hour intersection turning-movement count data is provided in the **Appendix**.



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	Existing Roadway Laneage	Figure 3.1



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	2022 Existing Peak-Hour Traffic Volumes	Figure 3.2

4.0 Background Traffic Conditions

Projected background (non-project) traffic is defined as the expected growth or change in traffic volumes on the surrounding roadway network between the year the existing counts were collected and the expected build-out year absent the construction and opening of the proposed project. This includes both non-specific general growth based on historical increase in local traffic volumes (historical growth) and growth in traffic volumes caused by specific approved developments within the relative vicinity of the proposed development.

4.1 HISTORICAL GROWTH TRAFFIC

Historical growth is the increase in existing traffic volumes due to usage increases and non-specific growth throughout the area, and accounts for growth that is independent of specific approved off-site developments or planned transportation projects. Historical growth traffic is calculated using an annual growth rate, which is applied to the existing traffic volumes up to the future horizon year. Based on coordination with SCDOT and Lancaster County staff, the existing 2022 peak-hour traffic volumes were grown by an annual growth rate of 2.5% per year to the study's 2035 horizon year. Growth rate calculations can be seen in **Table 4.1**.

Table 4.1- Historical Growth Rate Calculations

SCDOT AADT			
	2019	2009	Growth Rate (2009-2019)
Riverside Road (From SC 5 to S-35)	1,150	900	2.5%
Riverside Road (From S-35 to SC 9 BUS)	2,500	1,550	4.9%
SC 75 (From SC 5 to US 521)	1,200	700	5.5%
SC 5 (From county line to S-29)	17,200	11,000	4.6%
SC 5 (From SC 75/Riverside Road to US 521)	12,100	8,100	4.1%
SC 9 (From S-514 to county line)	12,700	11,900	0.7%
US 521 (From SC 5 to SC 75)	12,100	11,000	1.0%
US 521 (From S-56 to SC 5)	22,800	17,300	2.8%
S-56 (From North Park Drive to Riverside Drive)	4,000	4,500	-1.2%
SC 9 (From county line to S-612)	12,000	11,200	0.7%
W Meeting Street (From SC 9 to SC 914)	4,800	4,500	0.6%
Average			***2.4%***

4.2 APPROVED OFFSITE DEVELOPMENT TRAFFIC

Based on agency coordination, one approved offsite development within the vicinity of this study area was included in the 2035 background traffic. The development, land uses and intensities, build-out percentage, and committed improvements based on its associated approved TIA and agency confirmation are outlined below.

- Roselyn (site trips obtained from the July 2019, *Revised Norman Property TIA*)
  - Phase 1: 2024
  - Phase 2: 2029 (Build +1)
  - 0% built out in 2022, 100% build out in 2035
  - Trips outside *Norman* study area to be assigned as through traffic on US 521 and to Rock Hill Highway
  - Mitigation: none in study area

Offsite approved development traffic volumes were taken directly from its respective TIA and factored as appropriate given the approximate build-out percentages. Existing intersection splits were used to carry and assign volumes appropriately at study area intersections that were not included in the approved TIA.

It is noted that consideration was given to including the Nisbet site; however, it was not ultimately included in this study since the Nisbet TIA is underway, the development is not yet approved, and associated mitigation is unknown. Rather, it was decided with County and SCDOT staff that it could also be accounted for as part of the historical growth since a 2.5% growth rate for 13 years is fairly significant.

Following the completion of each TIA, additional study on shared improvements may be required.

Approved development data and calculations are included in the **Appendix.**

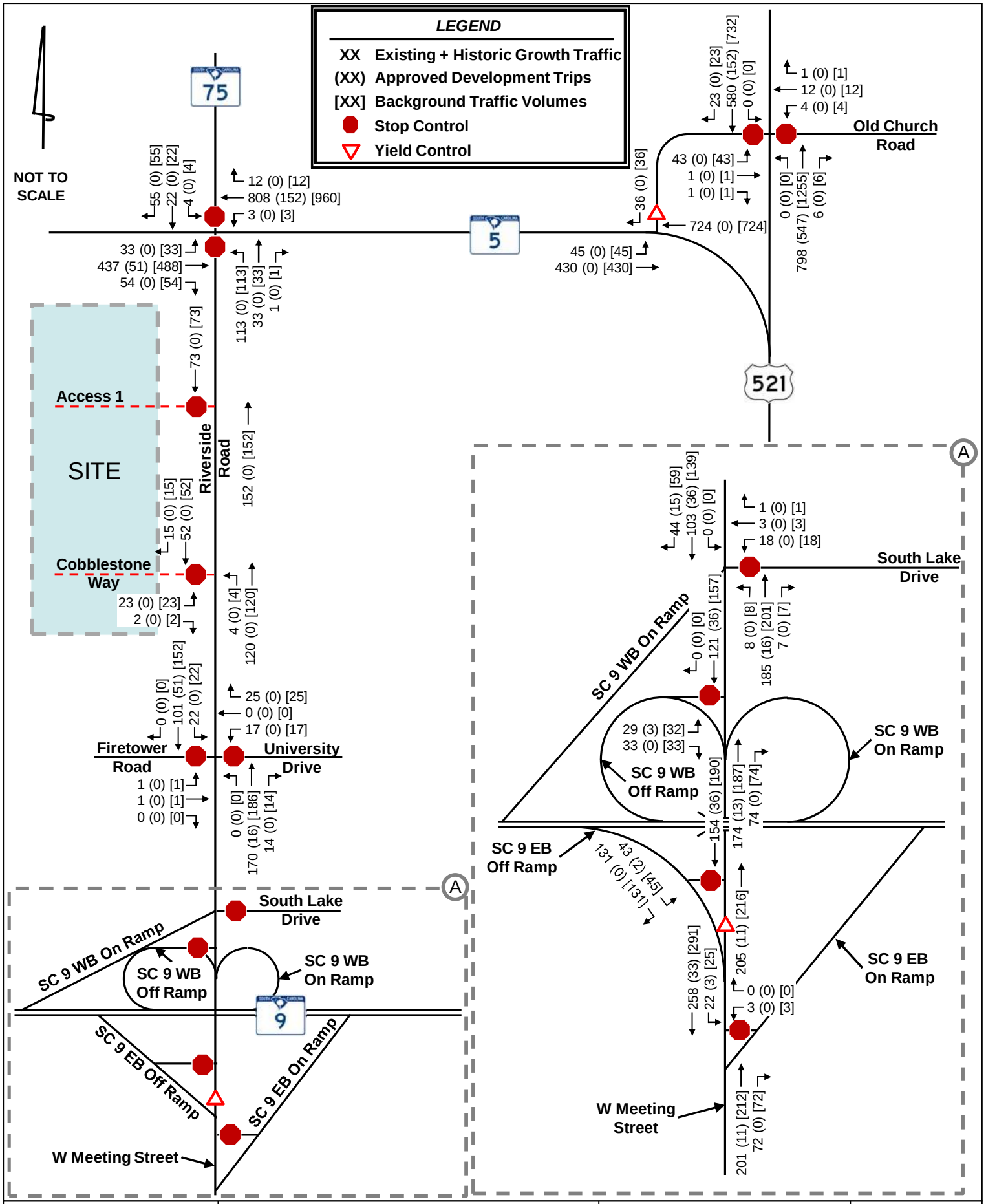
4.3 PLANNED TRANSPORTATION PROJECTS

Based on coordination with SCDOT, Catawba Council of Governments (COG), and Lancaster County staff, there is one planned transportation project planned, as follows. However, this was not incorporated into the 2035 background and build-out analysis scenarios due to the unknowns associated with the specific elements of the improvements.

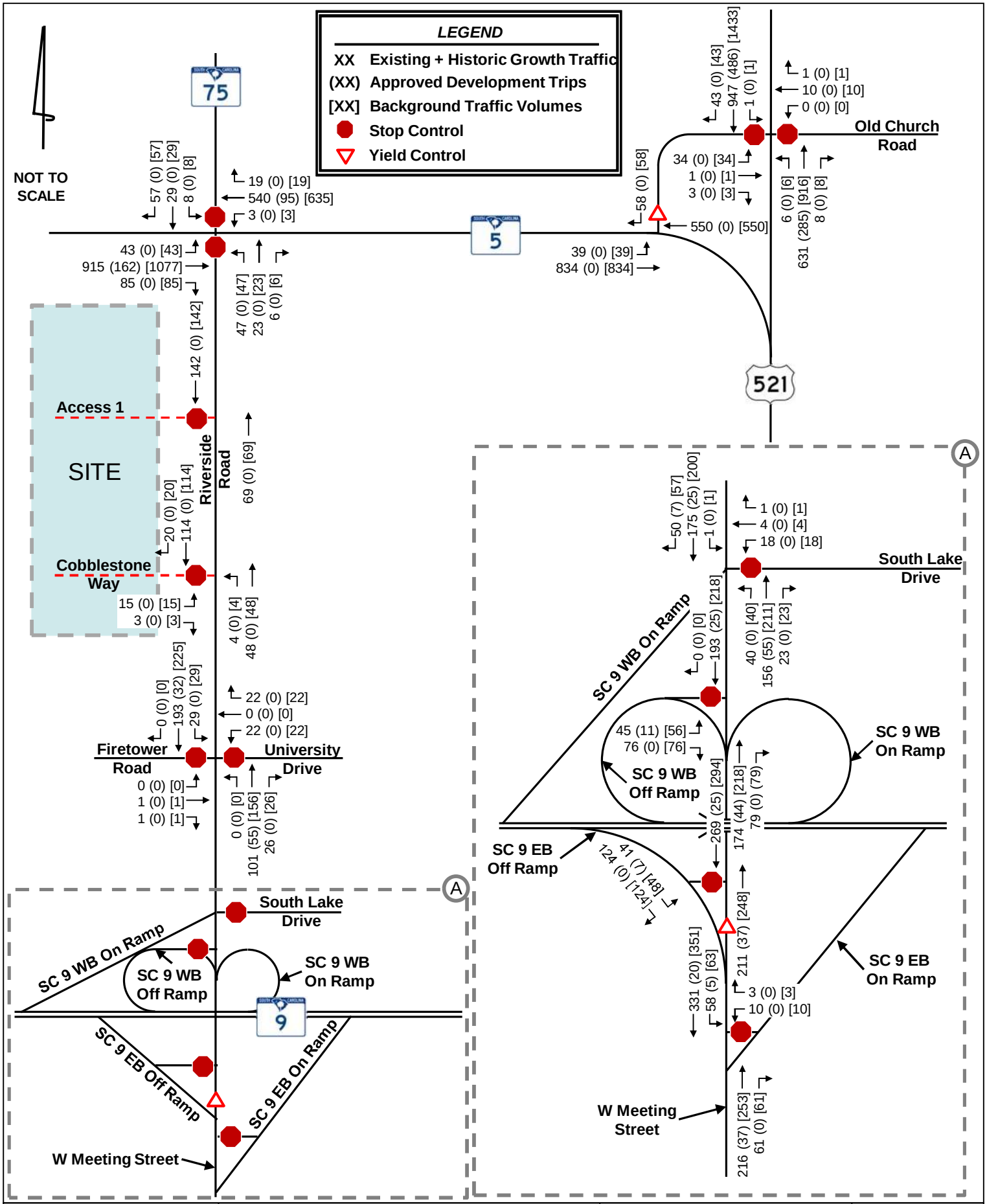
- Intersection improvement – SC 5 and Riverside Road (S-29-29)/Rebound Road (S-29-75)
  - Fiscal year (FY) Planned: 2023
  - In Feasibility Report Process. Schedule unknown for right-of-way (ROW) and construction
  - Right and/or left-turn lanes proposed
  - Design not completed

4.4 2035 BACKGROUND TRAFFIC

2035 background traffic consists of existing 2022 traffic, 2035 historical growth traffic, and approved development traffic. **Figures 4.1 and 4.2** show the 2035 background AM and PM peak-hour traffic volumes, respectively.



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	2035 Background AM Peak Hour Traffic Volumes	Figure 4.1



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	2035 Background PM Peak Hour Traffic Volumes	Figure 4.2

5.0 Site Traffic Volume Development

Site traffic developed for this TIA is defined as the vehicle trips expected to be generated and added to the study area by the construction of the proposed development, and the distribution and assignment of that traffic within the identified study area.

5.1 TRAFFIC GENERATION

The traffic generation potential of the proposed development was determined using the trip generation data published in *Trip Generation* (Institute of Transportation Engineers, 11th Edition). As currently envisioned, the overall development plan consists of a total of 936 single family homes, expected to be built-out in 2034. Based on information from the Client, 122 homes are currently constructed and closed, and are accounted for within existing traffic. Therefore, this TIA studies the impact of 814 additional single-family homes.

Table 5.1 summarizes the projected trip generation for the proposed development.

Table 5.1 - Trip Generation

ITE LUC	Land Use	Intensity		Daily	AM Peak Hour			PM Peak Hour			Peak Hour Type/Data Source
					Total	In	Out	Total	In	Out	
210	Single-Family Detached Housing	814	DU	6,945	502	131	371	713	449	264	Adj Street/ITE Eqn

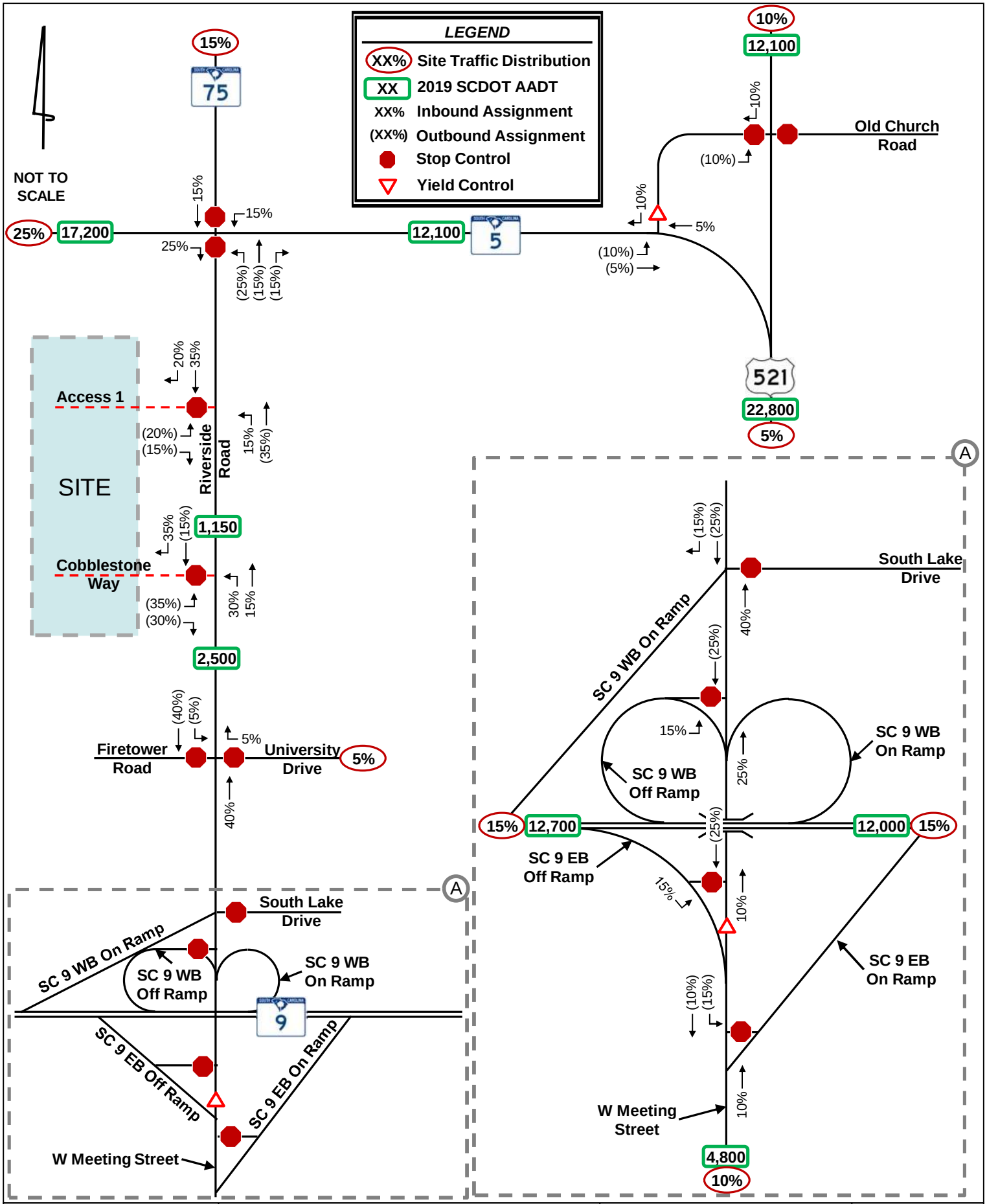
5.2 SITE TRAFFIC DISTRIBUTION AND ASSIGNMENT

The proposed development's trips were assigned to the surrounding network based on AADT data, approved development distribution, and the proposed site layout. The overall site traffic distribution and assignment, approved by SCDOT and Lancaster County staff, are shown in **Figure 5.1**.

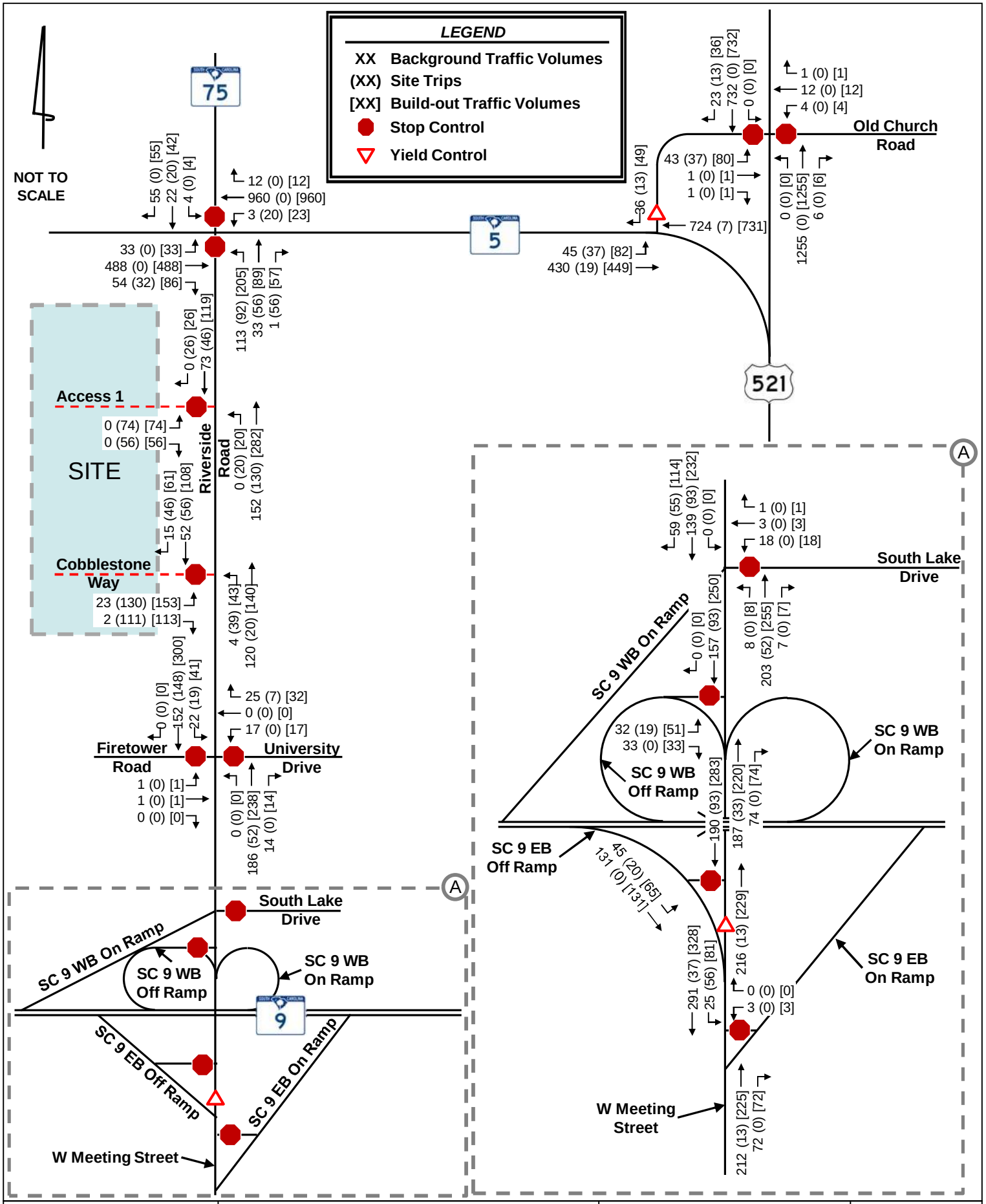
5.3 2035 BUILD-OUT TRAFFIC VOLUMES

The 2035 build-out traffic volumes include the assignment of the projected site traffic generation and 2035 background traffic volumes. **Figures 5.2 and 5.3** show the projected 2035 build-out traffic volumes for the AM and PM peak-hours, respectively.

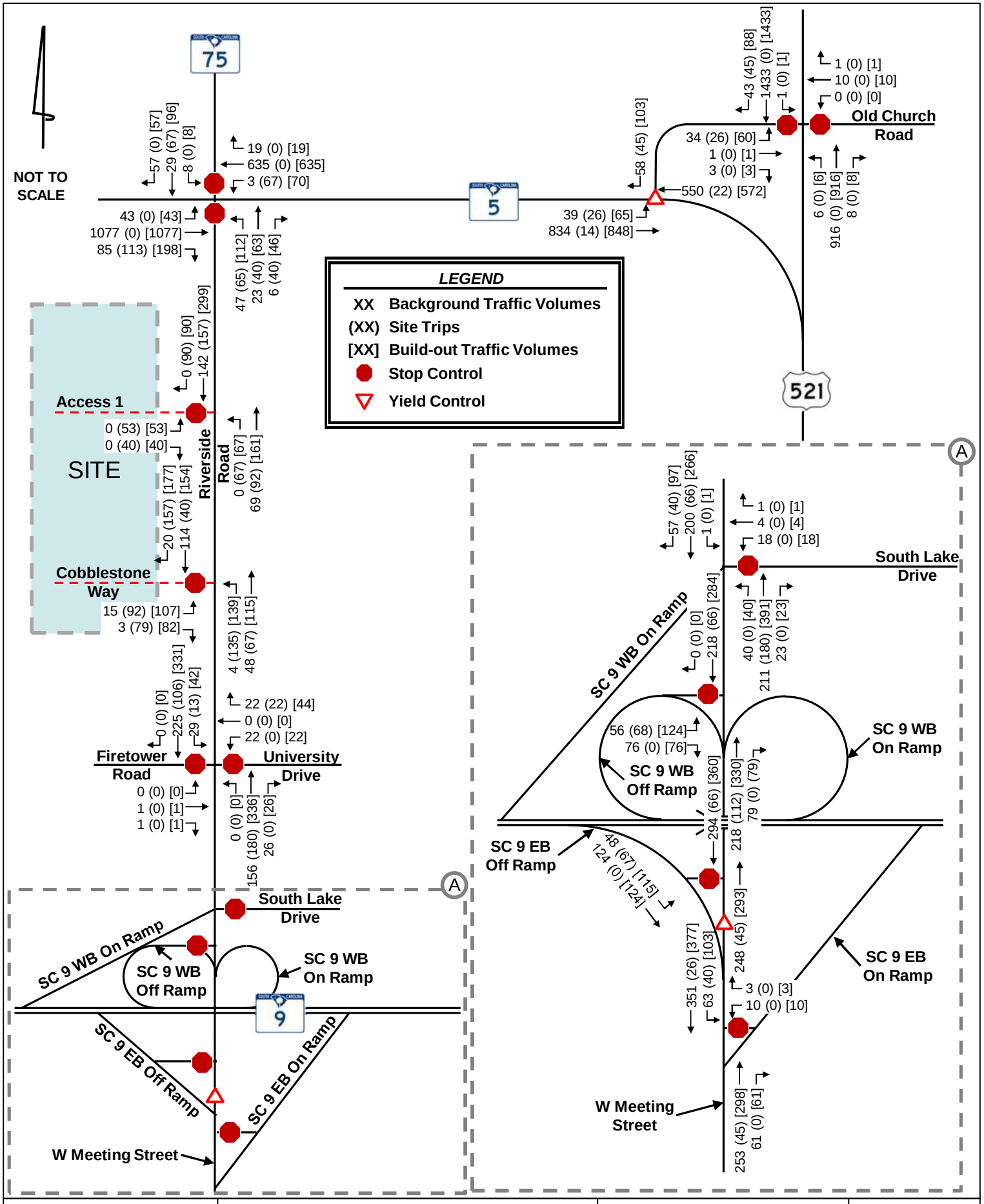
Intersection volume development worksheets for study area intersections are provided in the **Appendix**.



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	Site Traffic Distribution and Assignment	Figure 5.1



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	2035 Build-Out AM Peak Hour Traffic Volumes	Figure 5.2



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	2035 Build-Out PM Peak Hour Traffic Volumes	Figure 5.3

6.0 Capacity Analysis

Capacity analyses were performed for the AM and PM peak hours using Synchro Version 11 software to determine the operating characteristics at the signalized and stop-controlled intersections of the adjacent street network and to evaluate the impacts of the proposed development. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment, or through a particular intersection, within a specified period of time under prevailing operational, geometric and controlling conditions within a set time duration.

The *Highway Capacity Manual* (HCM) defines level of service (LOS) as a "quantitative stratification of a performance measure or measures representing quality of service" and is used to "translate complex numerical performance results into a simple A-F system representative of travelers' perceptions of the quality of service provided by a facility or service". The HCM defines six levels of service, LOS A through LOS F, with A having the best operating conditions from the traveler's perspective and F having the worst. However, it must be understood that "the LOS letter result hides much of the complexity of facility performance", and that "the appropriate LOS for a given system element in the community is a decision for local policy makers". According to the HCM, "for cost, environmental impact, and other reasons, roadways are typically designed not to provide LOS A conditions during peak periods but instead to provide some lower LOS that balances individual travers' desires against society's desires and financial resources. Nevertheless, during low-volume periods of the day, a system element may operate at LOS A."

LOS for a two-way stop-controlled (TWSC) intersection is determined by the control delay at the side-street approaches, typically during the highest volume periods of the day, the AM and PM peak periods. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. With respect to field measurements, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time the vehicle departs from the stop line. It is typical for stop sign-controlled side streets and driveways intersecting major streets to experience long delays during peak hours, particularly for left-turn movements. The majority of the traffic moving through the intersection on the major street experiences little or no delay.

LOS for signalized intersections is reported for the intersection as a whole, and typically during the highest volume periods of the day, the AM and PM peak periods. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

The LOS and control delay thresholds published in the *Highway Capacity Manual* for signalized and unsignalized intersections are outlined in **Table 6.0-A**, as well as the unsignalized operational descriptions assumed herein.

Table 6.0-A – Level-of-Service Summary for Signalized and Unsignalized Intersections			
Level-of-Service	**Signalized Intersections Control Delay Per Vehicle [sec/veh]**	**Unsignalized Intersections Average Control Delay [sec/veh]**	
A	≤ 10	≤10	Short Delays
B	> 10 – 20	>10-15	
C	> 20 – 35	>15-25	
D	> 35 – 55	>25-35	Moderate Delays
E	> 55 – 80	>35-50	
F	> 80	>50	Long Delays

Peak hour factors (PHFs) were taken directly from the count data for the existing conditions scenario. A PHF of 0.9 was assumed for future year analyses during the AM and PM peak hours. Heavy vehicle percentages were taken directly from field observations, subject to a two-percent minimum.

Capacity analyses were performed for the 2022 existing traffic conditions, 2035 background traffic conditions, and 2035 build-out traffic conditions. When determining the proposed development's traffic impact to the study area intersections, the 2035 background and 2035 build-out conditions were compared.

Mitigation for traffic impacts caused by the proposed development were noted and recommended based on Lancaster County and SCDOT mitigation requirements. When determining the proposed development's traffic impact to the study area intersections, the 2035 background and 2035 build-out conditions were compared.

Based on Lancaster County guidelines "for collector or local streets, Level-of-Service (LOS) C or better shall be maintained. On any arterial or higher order street, a LOS D or better shall be maintained. Where the existing LOS is below these standards, the traffic impact analysis shall identify those improvements required to ensure that development related traffic demands result in no net reduction in LOS, and identify additional improvements needed to raise the level of service to the standards on the applicable street to the adopted LOS standard." For the purposes of this TIA, the capacity analyses identifying additional improvements needed to raise the LOS to the adopted standards is referred to as "Build IMP Target LOS."

Based on the SCDOT *ARMS* Manual, the TIA 'should include proposed improvements or access management techniques that will mitigate any significant changes in the levels of service.' For the purposes of this TIA, "significant changes" were assumed where the overall intersection or stop-controlled approach delay increases by more than 25% or drops by one or more LOS grade between 2035 background and 2035 build-out conditions.

Capacity analysis reports generated by Synchro Version 11 software and SimTraffic queuing/blocking reports are included in the **Appendix**.

6.1 RIVERSIDE ROAD AND COBBLESTONE WAY

Table 6.1 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road and Cobblestone Way.

Table 6.1 - Riverside Road at Cobblestone Way							
Condition	Measure	EB		NB		SB	
		EBL	EBR	NBL	NBT	SBT	SBR
AM Peak Hour							
2022 Existing	LOS (Delay)	A (9.5)		A (0.5)		A (0.0)	
	Synchro 95th Q	5'	0'	0'	0'	0'	0'
2035 Background	LOS (Delay)	A (9.7)		A (0.2)		A (0.0)	
	Synchro 95th Q	3'	0'	0'	0'	0'	0'
2035 Build-out	LOS (Delay)	B (11.7)		A (1.9)		A (0.0)	
	Synchro 95th Q	30'	13'	3'	0'	0'	0'
PM Peak Hour							
2022 Existing	LOS (Delay)	A (9.6)		A (1.1)		A (0.0)	
	Synchro 95th Q	3'	0'	0'	0'	0'	0'
2035 Background	LOS (Delay)	A (9.6)		A (0.6)		A (0.0)	
	Synchro 95th Q	3'	0'	0'	0'	0'	0'
2035 Build-out	LOS (Delay)	B (14.8)		A (4.9)		A (0.0)	
	Synchro 95th Q	33'	8'	13'	0'	0'	0'
Background Storage		75'		175'			

As shown in Table 6.1, the stop-controlled eastbound approach of Cobblestone Way currently operates with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled westbound approach of Cobblestone Way is expected to continue to operate with short delays during both peak hours. Furthermore, no queueing issues are expected at this intersection. Therefore, no improvements are recommended for capacity purposes.

6.2 SC 5 AND RIVERSIDE ROAD/W REBOUND ROAD

Table 6.2 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of SC 5 and Riverside Road/W Rebound Road.

Table 6.2 - SC 5 at Riverside Road/West Rebound Road										
Condition	Measure	EB			WB		NB		SB	Intersection
		EBL	EBT	EBR	WBL	WBTR	NBL	NBTR	SBLTR	LOS (Delay)
AM Peak Hour										
2022 Existing	LOS (Delay)	A (0.6)			A (0.1)		F (232.6)		C (22.2)	-
	Synchro 95th Q	-	3'	-	-	0'	-	253'	33'	
2035 Background	LOS (Delay)	A (0.6)			A (0.0)		F (1644.4)		F (73.4)	-
	Synchro 95th Q	-	5'	-	-	0'	-	470'	90'	
2035 Build-out	LOS (Delay)	A (0.6)			A (0.2)		F (7504.6)		F (+)	-
	Synchro 95th Q	-	5'	-	-	3'	-	1223'	+	
2035 Build-out IMP	LOS (Delay)	B (15.7)			D (53.4)		F (87.0)		C (14.5)	D (46.0)
	Synchro 95th Q	#59'	319'	-	18'	#906'	-	#412'	1575'	
2035 Build-out Target	LOS (Delay)	A (7.6)			C (29.6)		D (51.5)		B (17.2)	C (26.2)
	Synchro 95th Q	31'	167'	13'	12'	#719'	#237'	109'	64'	
PM Peak Hour										
2022 Existing	LOS (Delay)	A (0.5)			A (0.1)		F (100.5)		E (37.3)	-
	Synchro 95th Q	-	3'	-	-	0'	-	100'	53'	
2035 Background	LOS (Delay)	A (0.3)			A (0.1)		F (3335.2)		F (464.2)	-
	Synchro 95th Q	-	5'	-	-	0'	-	295'	235'	
2035 Build-out	LOS (Delay)	A (0.3)			A (1.7)		F (+)		F (+)	-
	Synchro 95th Q	-	5'	-	-	20'	-	+	+	
2035 Build-out IMP	LOS (Delay)	E (75.8)			C (34.8)		F (238.3)		D (42.7)	E (76.1)
	Synchro 95th Q	18'	#1189'	-	#119'	258'	-	#332'	#164'	
2035 Build-out Target	LOS (Delay)	C (20.3)			C (27.1)		E (64.7)		D (42.8)	C (27.9)
	Synchro 95th Q	18'	#898'	18'	#108'	258'	#177'	97'	#163'	
# 95th percentile volume exceeds capacity, queue may be longer										
+ Computation not defined										

As shown in Table 6.2, the stop-controlled northbound approach of Riverside Road currently operates with long delays during both peak hours and is expected to continue to operate with long delays during both peak hours under background and build-out conditions during both peak hours. The stop-controlled southbound approach of W Rebound Road currently operates with short delays during the AM peak hour and moderate delays during the PM peak hour. Under 2035 background and build-out conditions, the stop-controlled southbound approach is expected to operate with long delays during both peak hours.

Notably, the stop-controlled northbound and southbound approaches produce an Error during one or more peak hour under 2035 build-out conditions, as shown in the table above. Given the expected increase in delay along the northbound and southbound approaches, identification of mitigation improvements is required. The following improvements were considered as contribution towards the future Catawba COG project to mitigate the impact of the proposed site:

- Construction of an eastbound left-turn lane with 150 feet of storage.
- Construction of a westbound left-turn lane with 150 feet of storage.
- Installation of a traffic signal if/when warrants are met.

With these improvements in place, the intersection is expected to operate at LOS D during the AM peak hour and LOS E during the PM peak hour.

Per the Lancaster County Zoning Code, SC 5 is considered a principal arterial and therefore an intersection LOS D or better shall be maintained. To achieve an overall target LOS D during the PM peak hour, the following additional laneage would be required:

- Construction of a northbound left-turn lane with 250 feet of storage.
- Construction of an eastbound right-turn lane with 100 feet of storage.

With these improvements in place, the intersection is expected to operate at LOS C during both peak hours.

It is noted that another development, Nisbet, is being proposed north of this intersection, and this intersection is also being studied as part of that development's TIA; therefore, further cost sharing coordination with the Nisbet development and Catawba COG is recommended. Per coordination with SCDOT and Lancaster County, additional analysis at this intersection may be required to determine final laneage and storage recommendations.

Based on a preliminary peak-hour signal warrant assessment (Warrant 3), both peak hours satisfy warrant criteria under build conditions. Preliminary signal warrant calculations are included in the **Appendix**.

6.3 RIVERSIDE ROAD AND FIRETOWER ROAD/UNIVERSITY DRIVE

Table 6.3 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road and Firetower Road/University Drive.

Table 6.3 - Riverside Road at Firetower Road/University Drive					
Condition	Measure	EB	WB	NB	SB
		EBLTR	WBLTR	NBLTR	SBLTR
AM Peak Hour					
2022 Existing	LOS (Delay)	B (11.1)	B (10.2)	A (0.0)	A (1.4)
	Synchro 95th Q	0'	5'	0'	3'
2035 Background	LOS (Delay)	B (12.3)	B (10.9)	A (0.0)	A (1.0)
	Synchro 95th Q	0'	5'	0'	3'
2035 Build-out	LOS (Delay)	C (16.0)	B (12.6)	A (0.0)	A (1.0)
	Synchro 95th Q	0'	8'	0'	3'
PM Peak Hour					
2022 Existing	LOS (Delay)	B (10.4)	B (10.2)	A (0.0)	A (1.2)
	Synchro 95th Q	0'	5'	0'	3'
2035 Background	LOS (Delay)	B (11.3)	B (11.5)	A (0.0)	A (0.9)
	Synchro 95th Q	0'	8'	0'	3'
2035 Build-out	LOS (Delay)	B (14.2)	B (14.7)	A (0.0)	A (0.9)
	Synchro 95th Q	0'	15'	0'	3'

As shown in Table 6.3, the stop-controlled eastbound and westbound approaches of Firetower Road and University Drive currently operate with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled eastbound and westbound approaches of Firetower Road and University Drive are expected to continue to operate with short delays during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

Notably, delay along the eastbound approach of Firetower Road is expected to degrade from LOS B to LOS C during the PM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS C, which is acceptable based on Lancaster County guidelines, the proposed site is not adding traffic to the eastbound approach, and the increase in delay is less than four seconds.

6.4 RIVERSIDE ROAD AND SC 9 WB ON-RAMP/SOUTH LAKE DRIVE

Table 6.4 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road and SC 9 WB On-Ramp/South Lake Drive.

Table 6.4 - Riverside Road at SC 9 WB On-Ramp/South Lake Drive				
Condition	Measure	WB	NB	SB
		WBLTR	NBLTR	SBLTR
AM Peak Hour				
2022 Existing	LOS (Delay)	B (10.3)	A (0.7)	A (0.0)
	Synchro 95th Q	3'	0'	0'
2035 Background	LOS (Delay)	B (11.6)	A (0.3)	A (0.0)
	Synchro 95th Q	3'	0'	0'
2035 Build-out	LOS (Delay)	B (13.6)	A (0.2)	A (0.0)
	Synchro 95th Q	5'	0'	0'
PM Peak Hour				
2022 Existing	LOS (Delay)	B (11.6)	A (1.8)	A (0.1)
	Synchro 95th Q	5'	3'	0'
2035 Background	LOS (Delay)	B (13.3)	A (1.2)	A (0.0)
	Synchro 95th Q	5'	3'	0'
2035 Build-out	LOS (Delay)	C (17.8)	A (0.7)	A (0.0)
	Synchro 95th Q	8'	3'	0'

As shown in Table 6.4, the stop-controlled westbound approach of South Lake Drive currently operates with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled westbound approach of South Lake Drive is expected to continue to operate with short delays during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

Notably, delay along the westbound approach of South Lake Drive is expected to degrade from LOS B to LOS C during the PM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS C, which is acceptable based on Lancaster County guidelines, the proposed site is not adding traffic to the westbound approach, and the increase in delay is 4.5 seconds.

Also of note, the northbound left-turn movement is projected to have 40 vehicles utilizing it during the PM peak hour, though a ramp to SC 9 westbound is located just south of this intersection. However, as this approach is being utilized for the northbound left-turn movement, it is suggested that a northbound left-turn lane is striped along this approach, utilizing the existing pavement available.

6.5 RIVERSIDE ROAD AND SC 9 WB OFF-RAMP

Table 6.5 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road and SC 9 WB Off-Ramp.

Table 6.5 - Riverside Road at SC 9 WB Off-Ramp				
Condition	Measure	EB	NB	SB
		EBLTR	NBTR	SBT
AM Peak Hour				
2022 Existing	LOS (Delay)	A (6.8)	A (0.0)	A (0.0)
	Synchro 95th Q	3'	0'	0'
2035 Background	LOS (Delay)	A (7.2)	A (0.0)	A (0.0)
	Synchro 95th Q	3'	0'	0'
2035 Build-out	LOS (Delay)	A (7.0)	A (0.0)	A (0.0)
	Synchro 95th Q	5'	0'	0'
PM Peak Hour				
2022 Existing	LOS (Delay)	A (7.4)	A (0.0)	A (0.0)
	Synchro 95th Q	8'	0'	0'
2035 Background	LOS (Delay)	A (7.9)	A (0.0)	A (0.0)
	Synchro 95th Q	10'	0'	0'
2035 Build-out	LOS (Delay)	A (7.1)	A (0.0)	A (0.0)
	Synchro 95th Q	10'	0'	0'

As shown in Table 6.5, the stop-controlled eastbound approach of SC 9 WB Off-Ramp currently operates with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled eastbound approach of SC 9 WB Off-Ramp is expected to continue to operate with short delays during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

6.6 RIVERSIDE ROAD/W MEETING STREET AT SC 9 EB OFF-RAMP

Table 6.6 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road/W Meeting Street and SC 9 EB Off-Ramp.

Table 6.6 - Riverside Road/W Meeting Street at SC 9 EB Off-Ramp				
Condition	Measure	EB	NB	SB
		EBL	NBT	SBT
AM Peak Hour				
2022 Existing	LOS (Delay)	B (10.2)	A (0.0)	A (0.0)
	Synchro 95th Q	5'	0'	0'
2035 Background	LOS (Delay)	B (11.2)	A (0.0)	A (0.0)
	Synchro 95th Q	8'	0'	0'
2035 Build-out	LOS (Delay)	B (12.7)	A (0.0)	A (0.0)
	Synchro 95th Q	13'	0'	0'
PM Peak Hour				
2022 Existing	LOS (Delay)	B (11.1)	A (0.0)	A (0.0)
	Synchro 95th Q	5'	0'	0'
2035 Background	LOS (Delay)	B (12.6)	A (0.0)	A (0.0)
	Synchro 95th Q	8'	0'	0'
2035 Build-out	LOS (Delay)	C (15.8)	A (0.0)	A (0.0)
	Synchro 95th Q	28'	0'	0'

As shown in Table 6.6, the stop-controlled eastbound approach of SC 9 EB Off-Ramp currently operates with short delays and queues during both peak hours. Under 2035 background and build-out conditions, the stop-controlled eastbound approach of SC 9 EB Off-Ramp is expected to continue to operate with short delays and queues during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

Notably, delay along the eastbound approach of SC 9 EB off-ramp is expected to degrade from LOS B to LOS C during the PM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS C, which is acceptable based on Lancaster County guidelines, and the increase in delay along this approach is approximately three seconds.

6.7 W MEETING STREET AND SC 9 EB ON-RAMP

Table 6.7 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of W Meeting Street and SC 9 EB On-Ramp.

Table 6.7 - W Meeting Street at SC 9 EB On-Ramp				
Condition	Measure	WB	NB	SB
		WBLR	NBTR	SBLT
AM Peak Hour				
2022 Existing	LOS (Delay)	B (10.9)	A (0.0)	A (0.9)
	Synchro 95th Q	0'	0'	3'
2035 Background	LOS (Delay)	B (12.0)	A (0.0)	A (0.7)
	Synchro 95th Q	0'	0'	3'
2035 Build-out	LOS (Delay)	B (14.4)	A (0.0)	A (1.9)
	Synchro 95th Q	0'	0'	5'
PM Peak Hour				
2022 Existing	LOS (Delay)	B (11.5)	A (0.0)	A (1.4)
	Synchro 95th Q	3'	0'	3'
2035 Background	LOS (Delay)	B (13.3)	A (0.0)	A (1.4)
	Synchro 95th Q	3'	0'	5'
2035 Build-out	LOS (Delay)	C (15.8)	A (0.0)	A (2.0)
	Synchro 95th Q	3'	0'	8'

As shown in Table 6.7, the stop-controlled westbound approach of SC 9 EB On-Ramp currently operates with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled westbound approach of SC 9 EB On-Ramp is expected to continue to operate with short delays during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

Notably, delay along the eastbound approach of SC 9 EB on-ramp is expected to degrade from LOS B to LOS C during the PM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS C, which is acceptable based on Lancaster County guidelines, and the increase in delay along this approach is less than three seconds.

6.8 SC 5 AND US 521 OFF-RAMP

Table 6.8 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of SC 5 and US 521 Off-Ramp.

Table 6.8 - SC 5 at US 521 Off-Ramp					
Condition	Measure	EB		WB	SB
		EBL	EBT	WBT	SBR
AM Peak Hour					
2022 Existing	LOS (Delay)	A (1.0)		A (0.0)	B (12.9)
	Synchro 95th Q	5'	0'	0'	5'
2035 Background	LOS (Delay)	A (1.0)		A (0.0)	C (16.1)
	Synchro 95th Q	5'	0'	0'	10'
2035 Build-out	LOS (Delay)	A (1.6)		A (0.0)	C (16.8)
	Synchro 95th Q	10'	0'	0'	13'
PM Peak Hour					
2022 Existing	LOS (Delay)	A (0.4)		A (0.0)	B (12.1)
	Synchro 95th Q	3'	0'	0'	8'
2035 Background	LOS (Delay)	A (0.4)		A (0.0)	B (13.7)
	Synchro 95th Q	3'	0'	0'	13'
2035 Build-out	LOS (Delay)	A (0.7)		A (0.0)	C (15.4)
	Synchro 95th Q	8'	0'	0'	25'
Background Storage		100'			

As shown in Table 6.8, the yield-controlled southbound approach of SC 5 currently operates with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled southbound approach of SC 5 is expected to continue to operate with short delays and queues during both peak hours. Since the proposed site is not expected to have a significant impact on operations at this intersection, no improvements are recommended for capacity purposes.

Notably, delay along the southbound approach of US 521 off-ramp is expected to degrade from LOS B to LOS C during the PM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS C, which is acceptable based on Lancaster County guidelines, and the increase in delay along this approach is less than two seconds.

6.9 US 521 AND SC 5/OLD CHURCH ROAD

Table 6.9 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of US 521 and SC 5/Old Church Road. Due to the 90-foot wide median between the northbound and southbound lanes of US 521, this intersection was analyzed as 2 separate intersections.

Table 6.9A - US 521 SB at SC 5/Old Church Road					
Condition	Measure	EB	WB	SB	
		EBLTR	WBLTR	SBLT	SBR
AM Peak Hour					
2022 Existing	LOS (Delay)	B (13.6)	B (13.0)	A (0.0)	
	Synchro 95th Q	8'	5'	0'	-
2035 Background	LOS (Delay)	C (17.9)	C (15.8)	A (0.0)	
	Synchro 95th Q	13'	5'	0'	-
2035 Build-out	LOS (Delay)	C (20.3)	C (16.5)	A (0.0)	
	Synchro 95th Q	28'	5'	0'	-
2035 Build-out IMP - SBR	LOS (Delay)	C (19.8)	C (16.5)	A (0.0)	
	Synchro 95th Q	28'	5'	0'	0'
2035 Build-out Target	LOS (Delay)	B (12.4)	C (15.8)	A (0.0)	
	Synchro 95th Q	15'	5'	0'	-
PM Peak Hour					
2022 Existing	LOS (Delay)	C (15.0)	B (14.6)	A (0.0)	
	Synchro 95th Q	8'	3'	0'	-
2035 Background	LOS (Delay)	E (46.4)	E (38.5)	A (0.0)	
	Synchro 95th Q	33'	13'	0'	-
2035 Build-out	LOS (Delay)	F (70.3)	E (41.9)	A (0.0)	
	Synchro 95th Q	73'	13'	0'	-
2035 Build-out IMP - SBR	LOS (Delay)	F (61.9)	E (41.9)	A (0.0)	
	Synchro 95th Q	68'	13'	0'	0'
2035 Build-out Target	LOS (Delay)	D (28.4)	E (41.9)	A (0.0)	
	Synchro 95th Q	33'	13'	0'	-

As shown in Table 6.9, the stop-controlled eastbound and westbound approaches of SC 5 and Old Church Road currently operate with short delays during both peak hours. Under 2035 background and build-out conditions, the stop-controlled eastbound and westbound approaches are expected to operate with short delays during the AM peak hour. During the PM peak hour, the eastbound approach is expected to operate with moderate delays under background conditions and long delays under build-out conditions, while the westbound approach is expected to operate with moderate delays under background and build-out conditions. Since the proposed site degrades operations along the eastbound approach from LOS E to LOS F during the PM peak hour, identification of mitigation improvements is required. The following improvement was identified to mitigate the site's impact on the intersection:

- Construction of a southbound right-turn lane with 100 feet of storage and appropriate taper.

With this improvement in place, the eastbound approach is expected to continue to operate at LOS F. Therefore, this improvement is not recommended as developer mitigation. Note that an eastbound right-turn lane also does not mitigate, with 1-3 vehicles making that movement.

Per the Lancaster County Zoning Code, US 521 is considered a principal arterial and therefore an intersection LOS D or better shall be maintained. To achieve an overall target LOS D during the PM peak hour, the following additional improvements would be required:

- Restrict the eastbound approach to a right-turn movement.
- Improve median break approximately 1,800 feet south of this intersection to allow for the u-turn movement.

With these improvements in place, the eastbound approach is expected to operate with short/moderate delays during the AM and PM peak hours, respectively. Notably, due to the US 521/SC 5 interchange and topographic constraints south of this intersection, the construction of a new u-turn bulb is likely infeasible.

Table 6.9B - US 521 NB at SC-5/Old Church Road

Condition	Measure	EB	WB	NB
		EBLT	WBTR	NBLTR
AM Peak Hour				
2022 Existing	LOS (Delay)	B (12.9)	C (15.4)	A (0.0)
	Synchro 95th Q	8'	5'	0'
2035 Background	LOS (Delay)	C (22.6)	E (38.5)	A (0.0)
	Synchro 95th Q	18'	13'	0'
2035 Build-out	LOS (Delay)	D (26.6)	E (38.5)	A (0.0)
	Synchro 95th Q	38'	13'	0'
PM Peak Hour				
2022 Existing	LOS (Delay)	B (12.4)	B (13.1)	A (0.0)
	Synchro 95th Q	5'	3'	0'
2035 Background	LOS (Delay)	C (15.3)	C (20.7)	A (0.0)
	Synchro 95th Q	8'	5'	0'
2035 Build-out	LOS (Delay)	C (16.1)	C (20.7)	A (0.0)
	Synchro 95th Q	15'	5'	0'

As shown in Table 6.91, the stop-controlled eastbound and westbound approaches of SC 5 and Old Church Road currently operate with short delays during both peak hours. Under 2035 background conditions, the stop-controlled eastbound and westbound approaches are expected to operate with short/moderate delays during the AM peak hour, respectively, and short delays during the PM peak hour. Under 2025 build-out conditions, the eastbound and westbound approaches are expected to operate with moderate delays during the AM peak hour and short delays during the PM peak hour.

Notably, delay along the eastbound approach of SC 5 is expected to degrade from LOS C to LOS D during the AM peak hour. However, mitigation of this degradation is not recommended as the approach operates at LOS D, which is acceptable based on Lancaster County guidelines, and the increase in delay along this approach is four seconds. Also of note, delay along the westbound approach, though above Lancaster County LOS thresholds, is not impacted by the proposed site traffic, and therefore, mitigation is not recommended.

6.10 RIVERSIDE ROAD AT ACCESS 1

Table 6.10 summarizes the LOS, control delay, and 95th percentile queue lengths at the unsignalized intersection of Riverside Road and Access 1.

Table 6.10 - Riverside Road at Access 1						
Condition	Measure	EB	NB		SB	
		EBLR	NBL	NBT	SBT	SBR
AM Peak Hour						
2035 Build-out	LOS (Delay)	B (12.3)	A (0.5)		A (0.0)	
	Synchro 95th Q	23'	-	0'	0'	-
2035 Build-out IMP	LOS (Delay)	B (12.2)	A (0.5)		A (0.0)	
	Synchro 95th Q	23'	0'	0'	0'	0'
PM Peak Hour						
2035 Build-out	LOS (Delay)	C (15.1)	A (2.5)		A (0.0)	
	Synchro 95th Q	23'	-	5'	0'	-
2035 Build-out IMP	LOS (Delay)	B (14.2)	A (2.5)		A (0.0)	
	Synchro 95th Q	20'	5'	0'	0'	0'

Based on review of the site plan shown in Figure 2.2, a single ingress and single egress lane was assumed on the eastbound approach of Access 1.

As shown in Table 6.10**,** the stop-controlled eastbound approach of Access 1 is expected to operate with short delays and queues during both peak hours under build-out conditions. Therefore, no improvements are recommended for capacity purposes. As discussed in Section 7.0, a northbound left-turn lane and a southbound right-turn lane are recommended based on turn-lane warrants and included in the table above.

Based on the SCDOT *ARMS* Manual, the minimum throat length for unsignalized intersections with one exit lane is 30 feet. The longest Synchro 95th percentile queue is expected to be less than 30 feet for the eastbound approach. The longest SimTraffic maximum queues are expected to be 90 feet for the eastbound approach. Therefore, a 90-foot internal protected stem (IPS) is recommended along Access 1.

7.0 Auxiliary Turn Lane Warrants

Warrants for additional turn-lane improvements for unsignalized intersections beyond those necessary for capacity were determined based on a review of the figures 9.5-A and 9.5-E found on pages 9.5 (2) and 9.5 (7) in the *2017 SCDOT Highway Design Manual*. The results of the warrants for left and right-turn lanes under 2035 build-out conditions are summarized below and included in the **Appendix**.

The following turn lanes are warranted under 2035 build-out conditions:

Riverside Road and Access 1

- Northbound left-turn lane should be considered (warranted in PM Peak)
- Southbound right-turn lane should be considered (warranted in PM Peak)

Based on review of the SimTraffic simulation with the northbound left-turn lane included, the maximum left-turn queue is expected to be 67 feet. Therefore, based on review of the SimTraffic queues and SCDOT ARMS minimum storage lengths for left-turn lanes, a northbound left-turn lane with 150 feet of storage is recommended.

Based on review of the SimTraffic simulation with the southbound right-turn lane included, the maximum right-turn queue is expected to be 13 feet. Therefore, a southbound right-turn lane with 100 feet of storage is recommended.

8.0 Conclusions

Based on the analyses contained herein, the following transportation improvements are recommended as developer mitigation:

Rock Hill Highway (SC 5) and Riverside Road/W Rebound Road

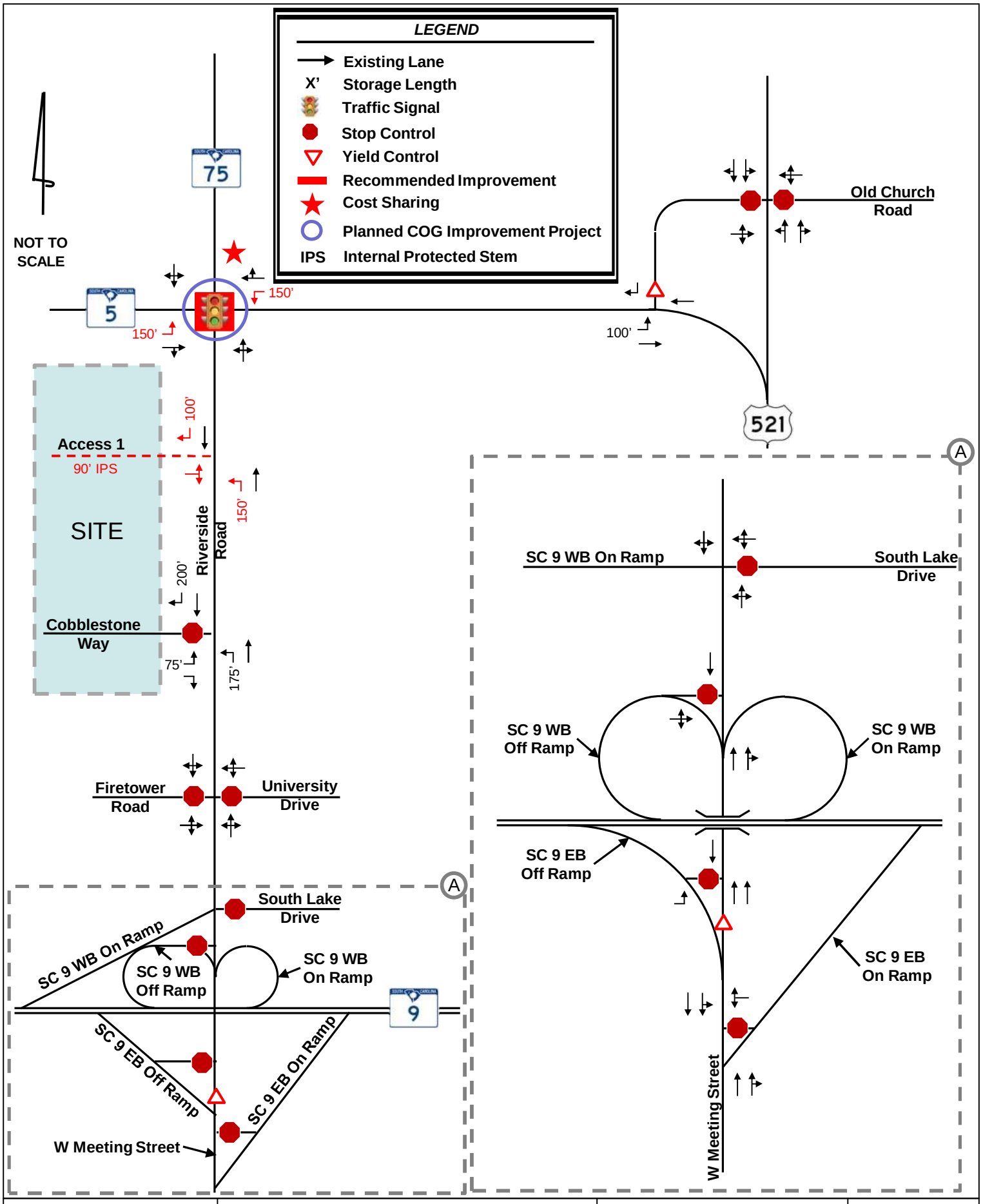
Cost sharing with the planned Catawba COG intersection and Nisbet development projects towards the following improvements:

- Construction of an eastbound left-turn lane with 150 feet of storage.
- Construction of a westbound left-turn lane with 150 feet of storage.
- Installation of a traffic signal if/when warrants are met.

Riverside Road and Access 1

- Construction of Access 1 to include a single ingress lane, a single egress lane, and a 90-foot IPS with stop control.
- Construction of a northbound left-turn lane along Riverside Road with 150 feet of storage.
- Construction of a southbound right-turn lane along Riverside Road with 100 feet of storage.

The recommended developer mitigation is shown in **Figure 8.1**. The transportation improvements for the study intersections are subject to approval by SCDOT and Lancaster County. All additions and attachments to State and County roadway system shall be properly permitted, designed, and constructed in conformance to standards maintained by the agencies.



Kimley»Horn	Riverchase Estates Traffic Impact Analysis	Recommended Roadway Laneage	Figure 8.1

Appendix

Scoping Correspondence

Pouch, Tate

From: Stephen Blackwelder <sblackwelder@lancastersc.net>
Sent: Tuesday, July 19, 2022 8:22 AM
To: Love, Allison C.; Shirley, Thomas; Massey, Amy
Cc: Hogarth, Will; Gamble, David D.; Rox Burhans
Subject: RE: Riverchase Estates - TIA Update parameters

I concur with Allison. Consider it included with the 2.5% growth, but note it so we and others know it was considered.

Lancaster County
South Carolina
www.mylancastersc.org

Stephen Blackwelder, *Environmental Compliance Manager*
Engineering & Environmental Services

Lancaster County Government
8451 Charlotte Highway
Indian Land, SC 29707

P: (803) 548-2406 F: (877) 636-3050
C: (803) 288-7775
sblackwelder@lancastersc.net

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From: Love, Allison C. <LoveAC@scdot.org>
Sent: Monday, July 18, 2022 11:56 AM
To: Shirley, Thomas <Thomas.Shirley@kimley-horn.com>; Stephen Blackwelder <sblackwelder@lancastersc.net>; Massey, Amy <Amy.Massey@kimley-horn.com>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>
Subject: RE: Riverchase Estates - TIA Update parameters

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—IT Helpdesk, support.lancastercountysc.net

Thomas,

You make very good points.

If one TIA gets approved before the other, then a revision to the later TIA can be requested if there are potential conflicts with intersection mitigation.

Please note this discussion (agreeing to count Nisbet in background traffic) in the document so that later, Stephen and I aren't scratching our heads and saying, "Why didn't we include Nisbet?"

Thank you,

Allison C. Love, AICP
Assistant District Permit Engineer – District 4
SC Department of Transportation
(803) 385-4261

Safety 1st – Live By It!
Let 'em Work, Let 'em Live!

From: Shirley, Thomas <Thomas.Shirley@kimley-horn.com>
Sent: Wednesday, July 13, 2022 3:34 PM
To: Stephen Blackwelder <sblackwelder@lancastersc.net>; Love, Allison C. <LoveAC@scdot.org>; Massey, Amy <Amy.Massey@kimley-horn.com>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>
Subject: RE: Riverchase Estates - TIA Update parameters

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Stephen and Allison,

Thanks for the responses! We would hesitate to include Nisbet since the TIA is underway and we have no idea whether it will ultimately be approved or what mitigation would go along with those volumes. Including this could muddy the waters for improvements which is required for this site vs the Nisbet site.

As for the one Stephen mentions, typically without a TIA we really wouldn't have anything to base it on and instead assume it is included in the background growth rate.

As a 2.5% growth rate for 13 years to 2035 is fairly significant, would you consider assuming these are both accounted for in background growth?

Should there be concerns about specific intersections following the completion of each study, perhaps additional study on shared improvements could be looked into then?

Thanks and let us know your thoughts.

Thomas Shirley, EIT
Kimley-Horn | 200 South Tryon Street, Suite 200, Charlotte, NC 28202
Direct: 980-296-0814

From: Stephen Blackwelder <sblackwelder@lancastersc.net>
Sent: Wednesday, July 13, 2022 2:19 PM

To: Shirley, Thomas <Thomas.Shirley@kimley-horn.com>; Love, Allison C. <LoveAC@scdot.org>; Massey, Amy <Amy.Massey@kimley-horn.com>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>
Subject: RE: Riverchase Estates - TIA Update parameters

Thomas,
I am sorry for the delay in getting back to you. I was on vacation last week and am catching up on loose ends.
I would agree with the changes as outlined in your email. I agree with Allison regarding Nisbet. Additionally we have a sketch plan for Ranchwood on Riverside Road closer to SC 5. This proposed subdivision is on 251 acres and has 176+/ lots proposed. I have not seen any scoping information for a TIA at this point, and I don't know the status other than they submitted a sketch plan in May 2022.

Lancaster County
South Carolina
www.mylancastersc.org

Stephen Blackwelder, *Environmental Compliance Manager*
Engineering & Environmental Services

Lancaster County Government
8451 Charlotte Highway
Indian Land, SC 29707

P: (803) 548-2406 F: (877) 636-3050
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NOTICE: All email correspondence to and from this address may be subject to public disclosure under the SC Freedom of Information Act.

From: Shirley, Thomas <Thomas.Shirley@kimley-horn.com>
Sent: Wednesday, July 13, 2022 1:00 PM
To: Love, Allison C. <LoveAC@scdot.org>; Massey, Amy <Amy.Massey@kimley-horn.com>; Stephen Blackwelder <sblackwelder@lancastersc.net>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>
Subject: RE: Riverchase Estates - TIA Update parameters

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Stephen/Rox,

Following up here – does the County have any comments?

Thanks!

Thomas Shirley, EIT
Kimley-Horn | 200 South Tryon Street, Suite 200, Charlotte, NC 28202
Direct: 980-296-0814

From: Shirley, Thomas
Sent: Wednesday, July 6, 2022 2:07 PM
To: Love, Allison C. <LoveAC@scdot.org>; Massey, Amy <amy.massey@kimley-horn.com>; Stephen Blackwelder <sblackwelder@lancastersc.net>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>
Subject: RE: Riverchase Estates - TIA Update parameters

Thanks Allison.

Stephen, does the County have any comments?

Thomas Shirley, EIT
Kimley-Horn | 200 South Tryon Street, Suite 200, Charlotte, NC 28202
Direct: 980-296-0814

From: Love, Allison C. <LoveAC@scdot.org>
Sent: Friday, July 1, 2022 4:01 PM
To: Massey, Amy <Amy.Massey@kimley-horn.com>; Stephen Blackwelder <sblackwelder@lancastersc.net>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>; Shirley, Thomas <Thomas.Shirley@kimley-horn.com>
Subject: RE: Riverchase Estates - TIA Update parameters

Good afternoon, Amy.

We are ok with the TIA update parameters in your email. Although the Nisbet site is also in a TIA scoping phase, I recommend including it as a background development since the study areas overlap.

Thank you and have a safe and fun holiday weekend.

Allison C. Love, AICP
Assistant District Permit Engineer – District 4
SC Department of Transportation
(803) 385-4261

Safety 1st – Live By It!
Let 'em Work, Let 'em Live!

From: Massey, Amy <Amy.Massey@kimley-horn.com>
Sent: Monday, June 20, 2022 6:07 PM
To: Love, Allison C. <LoveAC@scdot.org>; Stephen Blackwelder <sblackwelder@lancastersc.net>
Cc: Hogarth, Will <Will.Hogarth@kimley-horn.com>; Gamble, David D. <GambleDD@scdot.org>; Rox Burhans <RBurhans@lancastersc.net>; Shirley, Thomas <Thomas.Shirley@kimley-horn.com>
Subject: Riverchase Estates - TIA Update parameters

*** This is an EXTERNAL email. Please do not click on a link or open any attachments unless you are confident it is from a trusted source. ***

Good afternoon,

We are preparing a TIA Update for the Riverchase Estates along Riverside Road, east of the Catawba River. Plan consists of 758 single family homes. It is noted that 169 of the lots that are already present at Riverchase Estates are closed and already accounted for in existing traffic volumes. See attached site location, plan, and trip generation.

Access is proposed as follows:

- Two accesses to Riverside Road: Cobblestone Way (existing), and one about 2000' north (proposed)

Expected build-out is 2034.

The following scenarios are to be analyzed:

- 2022 Existing Conditions
- 2035 (build + 1) Background Conditions
- 2035 Build-out Conditions

We are thinking the following for study area (counts performed 5-19-22)- this is similar to the last study:

- Riverside Road (S-29) and Cobblestone Way
- Riverside Road (S-29)/W Rebound Road (S-75) and Rock Hill Highway (SC 5)
- Riverside Road (S-29) and University Drive (S-56)/Firetower Road
- Riverside Road (S-29) and South Lake Drive (S-206)/Chester Hwy (SC 9) WB On-Ramp
- Riverside Road (S-29) and Chester Hwy (SC 9) WB Off-Ramp
- Riverside Road (S-29)/W Meeting Street (SC 9) and Chester Hwy (SC 9) EB Off-Ramp
- W Meeting Street (SC 9) and Chester Hwy (SC 9) EB On-Ramp
- Rock Hill Highway (SC 5) and Charlotte Highway (US 521) Ramp
- Charlotte Highway (US 521) and Rock Hill Highway (SC 5) Ramp/Old Church Road (S-378)

The draft distribution and assignment is attached- again, similar to the last study. Does this look reasonable?

For growth rate, we are thinking 2.5% based on the attached historical growth rates.

We anticipate including Roselyn as the approved development.

- Phase 1: 2024
- Phase 2: 2029 (Build +1)
- 0% built out in 2022, 100% build out in 2035
- No improvements in this study area
- Trips outside *Norman* study area to be assigned as through traffic on US 521 and to Rock Hill Highway

No SCDOT roadway improvement projects are planned within the proposed study area based on desktop review. One proposed Catawba COG project at the study intersection of Riverside Road and W Rebound Round/SC 5 intersection that appears to have some funding for FY 2023. The nature and timeline of these improvements will be confirmed with the COG.

Please let us know your thoughts, and if we need to discuss further.

Thank you,
Amy

Amy Massey, PE (SC, NC)
Kimley-Horn
Direct: 704-954-7470 **|** Mobile: 704-287-3304
amy.massey@kimley-horn.com

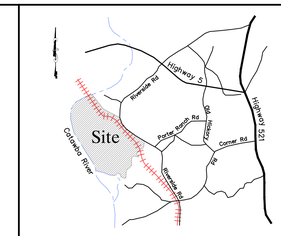
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Site Plan

DEVELOPMENT INFORMATION:

PROJECT NAME:	RIVERCHASE ESTATES Lancaster, South Carolina	
ACREAGE:	1,983 Acres±	
ZONING:	LDR (Low Density Residential) Developed as R-30 (Per Development Agreement)	
LAND USE:	Single Family Residential (Detached)	
DENSITY/UNITS:	Section 1 -	326 SFR Units± (Designed at 375)
	Section 2 -	335 SFR Units±
	Section 3 -	266 SFR Units±
	Total -	927 SFR Units±

- Overall density shall not exceed 1,250 SFR units per Development Agreement (w/septic).



OFFSITE ACCESS
S.C. HIGHWAY #5

SITE ACCESS
ACCESS #2

SITE ACCESS
ACCESS #1

OFFSITE ACCESS
UNIVERSITY DRIVE

Riverside Road (S-29)
66' Public Right-of-Way

RAILROAD ACCESS
ACCESS #2

RAILROAD ACCESS
ACCESS #1

GATE

Catawba River

Lancaster Chester Railroad

50'

Section 2
579.143 Acres±

Section 3
806.128 Acres±

Section 1
598.054 Acres±

FEMA FLOODLINE ZONE A
(SEE NOTE 4.)

Catawba River

GRAPHIC SCALE
400 0 200 400 800 1600
(IN FEET)
1 inch = 400ft.

RIVERCHASE ESTATES

Developer: LGI Homes, LLC
3037 Sherman Drive
Lancaster, SC 29720
Phone: (803) 286-0060

LGI DEVELOPMENT

SCALE: 1" = 400'
DATE: April 27, 2022
DESIGNED: P. Murphy
DRAWN: P. Murphy
CHECKED: P. Murphy
PROJECT NO.: 4967
CADFILE: RiverChase Section 3 Concept
PLOT DATE: April 27, 2022

REVISION
DATE

SEALS

R. Joe Harris & Associates, Inc.
Engineering • Land Surveying • Planning Management
1186 Stateswood Boulevard, Rock Hill, SC 29730
Phone: (803) 802-1799

RJH

RiverChase Estates
Riverchase Estates Partners, LLC
Traffic Master Plan – Exhibit "B"
Site Access & Offsite Traffic Improvements
Lancaster County, South Carolina

PROJECT # 4967

SHEET | OF |

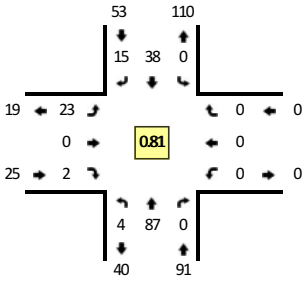
Turning Movement Counts

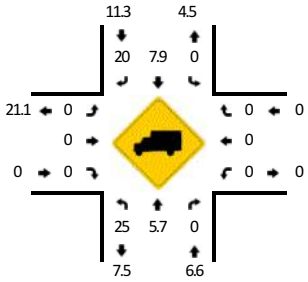
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

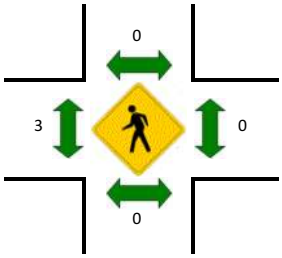
LOCATION: Riverside Rd -- Cobblestone Wy
CITY/STATE: Lancaster, SC

QC JOB #: 15818401
DATE: Thu, May 19 2022

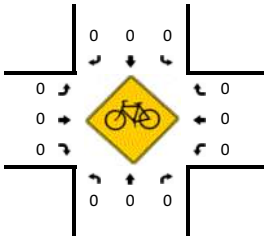
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Peak 15-Min: 7:00 AM -- 7:15 AM

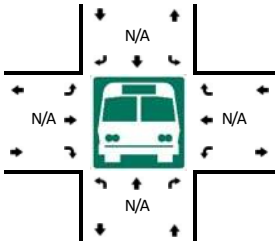


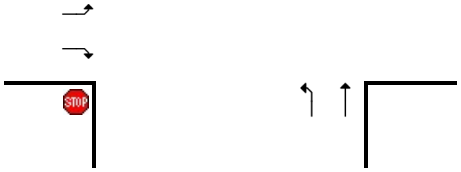


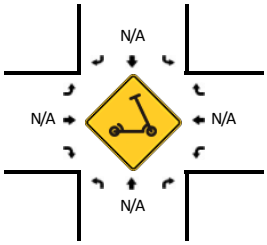












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				Cobblestone Wy (Eastbound)				Cobblestone Wy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	28	0	0	0	8	5	0	10	0	0	0	0	0	0	0	52	
7:15 AM	0	23	0	0	0	12	5	0	5	0	0	0	0	0	0	0	45	
7:30 AM	2	11	0	0	0	10	1	0	5	0	2	0	0	0	0	0	31	
7:45 AM	1	25	0	0	0	8	4	0	3	0	0	0	0	0	0	0	41	169
8:00 AM	1	15	0	1	0	1	3	0	6	0	1	0	0	0	0	0	28	145
8:15 AM	0	13	0	0	0	10	11	0	5	0	1	0	0	0	0	0	40	140
8:30 AM	1	7	0	0	0	7	6	0	2	0	0	0	0	0	0	0	23	132
8:45 AM	0	5	0	0	0	6	12	0	4	0	1	0	0	0	0	0	28	119

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	112	0	0	0	32	20	0	40	0	0	0	0	0	0	0	208
Heavy Trucks	0	0	0		0	0	4		0	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 6/3/2022 8:45 AM

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

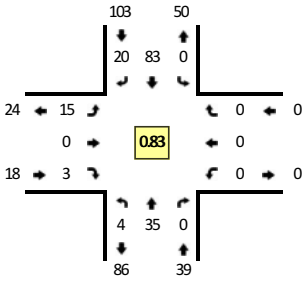
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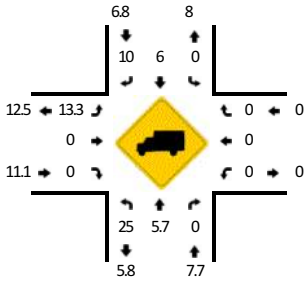
Method for determining peak hour: Total Entering Volume

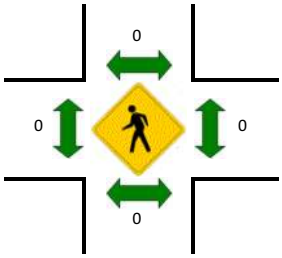
LOCATION: Riverside Rd -- Cobblestone Wy
CITY/STATE: Lancaster, SC

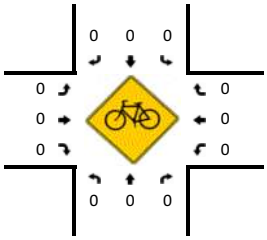
QC JOB #: 15818402
DATE: Thu, May 19 2022

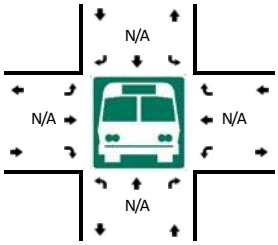
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

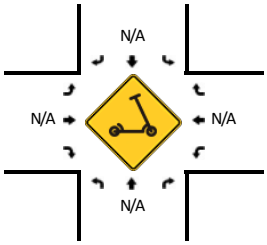












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				Cobblestone Wy (Eastbound)				Cobblestone Wy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	11	0	0	0	19	3	0	8	0	1	0	0	0	0	0	42	
4:15 PM	0	12	0	0	0	26	7	0	2	0	1	0	0	0	0	0	48	
4:30 PM	1	6	0	0	0	23	4	0	4	0	1	0	0	0	0	0	39	
4:45 PM	1	8	0	0	0	15	3	0	2	0	0	0	0	0	0	0	29	158
5:00 PM	2	9	0	0	0	19	6	0	7	0	1	0	0	0	0	0	44	160
5:15 PM	2	9	0	0	0	15	5	0	12	0	0	0	0	0	0	0	43	155
5:30 PM	1	9	0	0	0	15	9	0	2	0	5	0	0	0	0	0	41	157
5:45 PM	0	6	0	0	0	14	5	0	5	0	0	0	0	0	0	0	30	158

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	48	0	0	0	104	28	0	8	0	4	0	0	0	0	0	192
Heavy Trucks	0	4	0		0	12	4		0	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

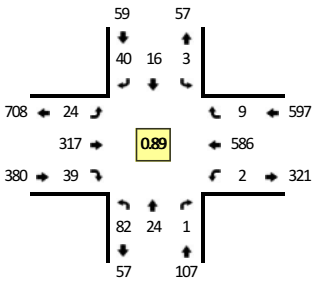
Report generated on 6/3/2022 8:45 AM

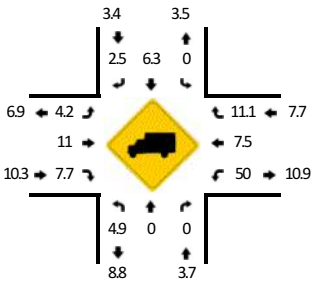
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

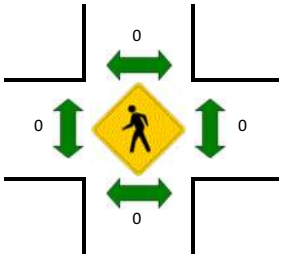
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: W Rebound Rd/Riverside Rd -- Rock Hill Hwy | **QC JOB #:** 15818403
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

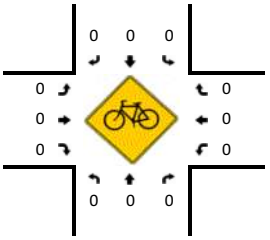
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

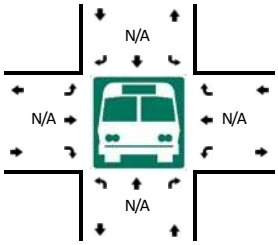




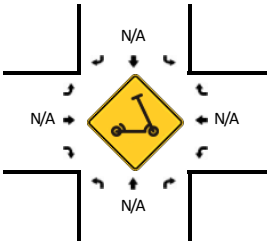












15-Min Count Period Beginning At	W Rebound Rd/Riverside Rd (Northbound)				W Rebound Rd/Riverside Rd (Southbound)				Rock Hill Hwy (Eastbound)				Rock Hill Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	30	7	0	0	1	5	6	0	5	53	9	0	0	162	1	0	279	
7:15 AM	22	9	0	0	0	2	12	0	4	82	14	0	0	144	3	0	292	
7:30 AM	10	7	0	0	1	3	17	0	7	103	8	0	1	161	2	0	320	
7:45 AM	20	1	1	0	1	6	5	0	8	79	8	0	1	119	3	0	252	1143
8:00 AM	19	7	0	0	1	3	4	0	8	88	7	0	1	110	1	0	249	1113
8:15 AM	6	9	0	0	0	8	7	0	8	91	12	0	0	108	3	0	252	1073
8:30 AM	9	1	1	0	1	7	3	0	3	78	6	0	0	99	1	0	209	962
8:45 AM	10	2	0	0	1	5	4	0	5	89	10	0	2	100	3	0	231	941

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	28	0	0	4	12	68	0	28	412	32	0	4	644	8	0	1280
Heavy Trucks	4	0	0		0	0	0		0	36	0		0	68	0		108
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

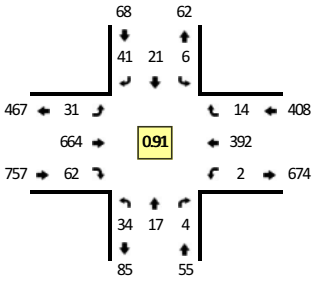
Comments:

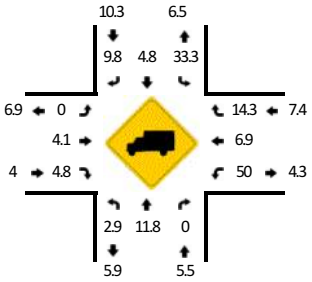
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

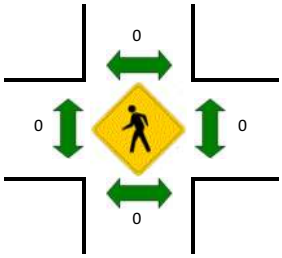
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: W Rebound Rd/Riverside Rd -- Rock Hill Hwy | **QC JOB #:** 15818404
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

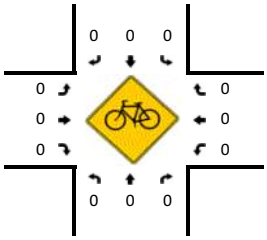
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

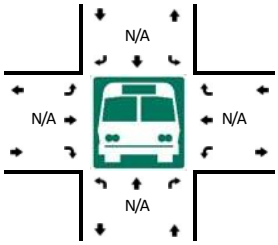




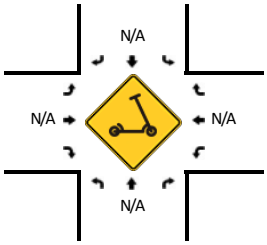












15-Min Count Period Beginning At	W Rebound Rd/Riverside Rd (Northbound)				W Rebound Rd/Riverside Rd (Southbound)				Rock Hill Hwy (Eastbound)				Rock Hill Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	13	6	0	0	2	4	6	0	9	140	19	0	0	84	3	0	286	
4:15 PM	12	4	0	0	1	9	7	0	11	151	24	0	0	87	3	0	309	
4:30 PM	6	3	1	0	0	3	4	0	10	148	23	0	0	97	1	0	296	
4:45 PM	9	3	0	0	1	1	12	0	11	154	16	0	0	101	0	0	308	1199
5:00 PM	5	5	1	0	0	7	10	0	7	176	20	0	0	83	5	0	319	1232
5:15 PM	9	7	2	0	2	7	12	0	7	169	9	0	1	123	4	0	352	1275
5:30 PM	11	2	1	0	3	6	7	0	6	165	17	0	1	85	5	0	309	1288
5:45 PM	9	3	0	0	0	7	3	0	5	116	13	0	0	70	1	0	227	1207

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	28	8	0	8	28	48	0	28	676	36	0	4	492	16	0	1408
Heavy Trucks	4	0	0		4	4	4		0	16	0		0	40	0		72
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

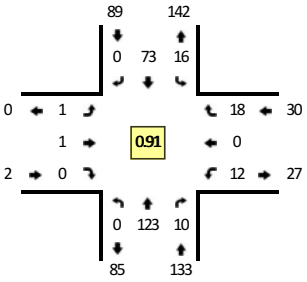
Comments:

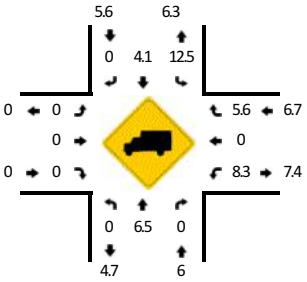
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

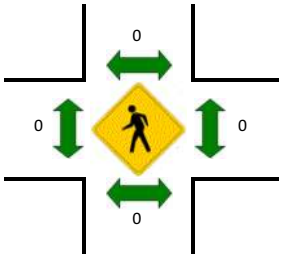
LOCATION: Riverside Rd -- University Dr | **QC JOB #:** 15818405
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

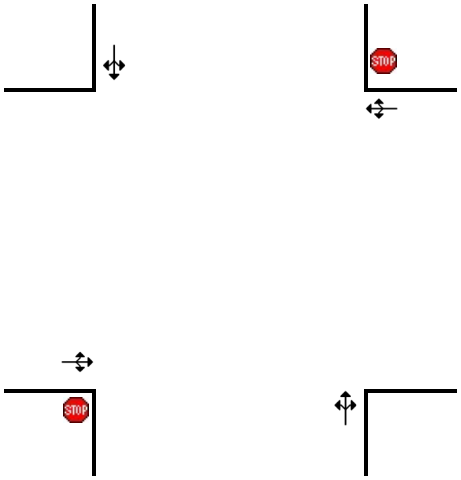
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

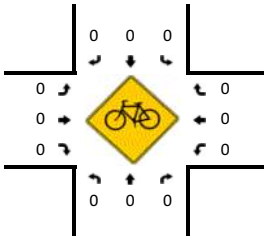


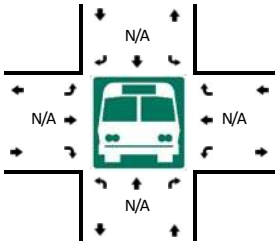


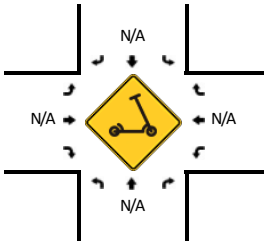
Quality Counts
DATA THAT DRIVES COMMUNITIES











15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				University Dr (Eastbound)				University Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	37	1	0	3	15	0	0	0	0	0	0	4	0	3	0	63	
7:15 AM	0	23	4	0	2	26	0	0	0	1	0	0	2	0	3	0	61	
7:30 AM	0	25	4	0	5	19	0	0	0	0	0	0	1	0	6	0	60	
7:45 AM	0	38	1	0	6	13	0	0	1	0	0	0	5	0	6	0	70	254
8:00 AM	0	25	0	0	3	10	0	0	0	0	1	0	3	0	3	0	45	236
8:15 AM	0	8	2	0	2	15	0	0	0	0	0	0	1	0	6	0	34	209
8:30 AM	0	16	1	0	3	17	0	0	0	0	0	0	4	0	4	0	45	194
8:45 AM	0	15	0	0	2	18	0	0	0	0	0	0	1	0	3	0	39	163

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	152	4	0	24	52	0	0	4	0	0	0	20	0	24	0	280
Heavy Trucks	0	20	0		0	0	0		0	0	0		4	0	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 6/3/2022 8:45 AM

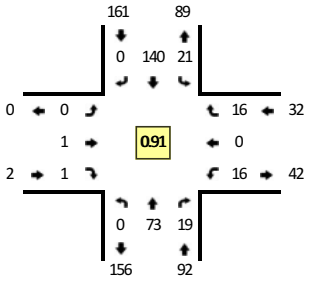
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

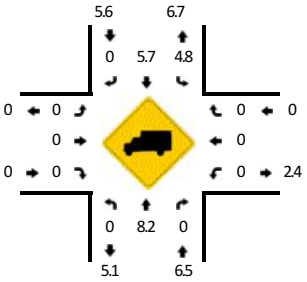
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

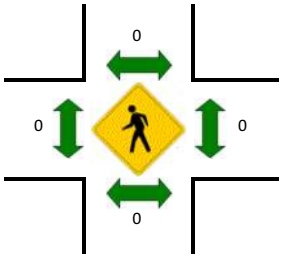
LOCATION: Riverside Rd -- University Dr
CITY/STATE: Lancaster, SC

QC JOB #: 15818406
DATE: Thu, May 19 2022

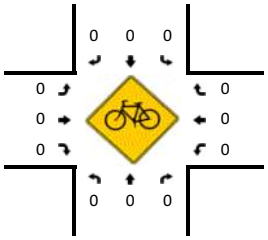
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

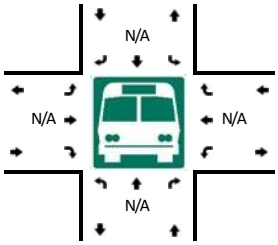




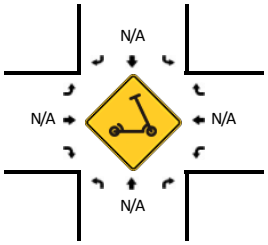












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				University Dr (Eastbound)				University Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	18	2	1	5	24	0	0	0	0	0	0	3	0	1	0	54	
4:15 PM	0	20	0	0	6	32	1	0	1	0	0	0	4	0	2	0	66	
4:30 PM	0	21	5	0	8	34	0	0	0	0	0	0	6	0	4	1	79	
4:45 PM	0	17	4	0	5	29	0	0	0	1	1	0	5	0	2	0	64	263
5:00 PM	0	19	2	0	2	43	0	0	0	0	0	0	3	0	2	0	71	280
5:15 PM	0	16	8	0	6	34	0	0	0	0	0	0	1	0	8	0	73	287
5:30 PM	0	16	6	0	12	23	0	0	0	0	0	0	4	0	4	0	65	273
5:45 PM	0	12	4	0	8	33	0	0	0	0	0	0	6	0	4	0	67	276

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	84	20	0	32	136	0	0	0	0	0	0	24	0	16	4	316
Heavy Trucks	0	8	0		4	8	0		0	0	0		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 6/3/2022 8:45 AM

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

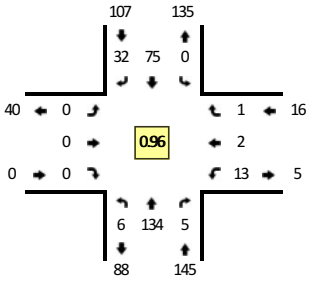
Type of peak hour being reported: Intersection Peak

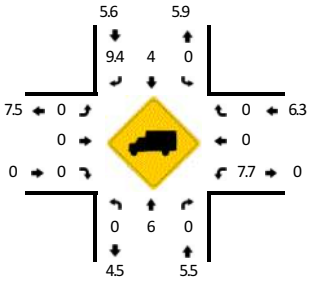
Method for determining peak hour: Total Entering Volume

LOCATION: Riverside Rd -- S Lake Dr
CITY/STATE: Lancaster, SC

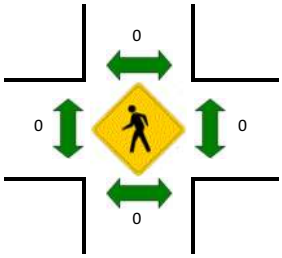
QC JOB #: 15818407
DATE: Thu, May 19 2022

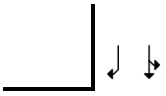
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

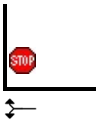


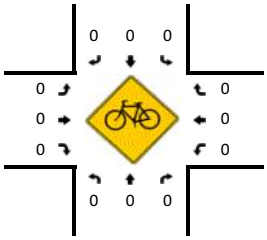


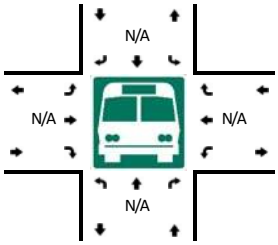
Quality Counts
DATA THAT DRIVES COMMUNITIES



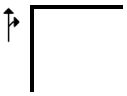


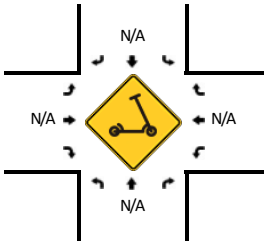












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				S Lake Dr (Eastbound)				S Lake Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	39	0	0	0	19	7	0	0	0	0	0	2	1	1	0	70	
7:15 AM	0	25	2	0	0	18	11	0	0	0	0	0	4	0	0	0	60	
7:30 AM	1	35	2	0	0	20	7	0	0	0	0	0	3	1	0	0	69	
7:45 AM	4	35	1	0	0	18	7	0	0	0	0	0	4	0	0	0	69	268
8:00 AM	2	25	0	0	1	11	8	0	0	0	0	0	4	0	1	0	52	250
8:15 AM	4	11	3	0	0	7	11	0	0	0	0	0	1	0	0	0	37	227
8:30 AM	2	15	2	1	0	11	13	0	0	0	0	0	0	0	1	0	45	203
8:45 AM	2	14	0	0	0	8	13	0	0	0	0	0	1	0	0	0	38	172

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	156	0	0	0	76	28	0	0	0	0	0	8	4	4	0	280
Heavy Trucks	0	8	0		0	4	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

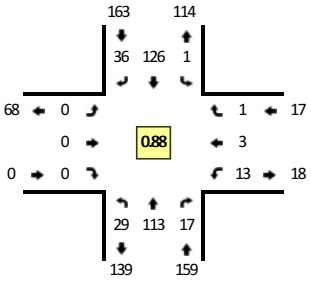
Report generated on 6/3/2022 8:45 AM

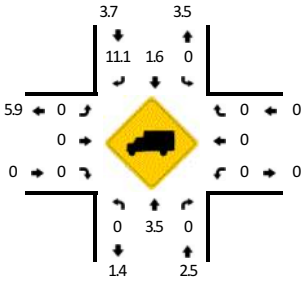
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

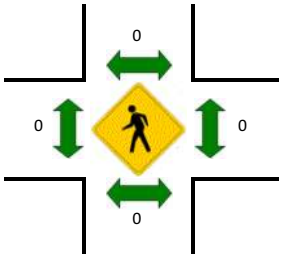
LOCATION: Riverside Rd -- S Lake Dr | **QC JOB #:** 15818408
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

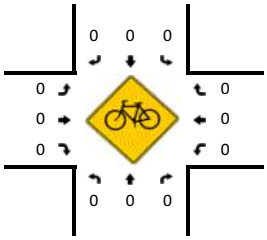


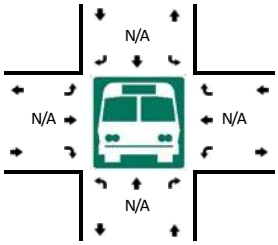


Quality Counts
DATA THAT DRIVES COMMUNITIES

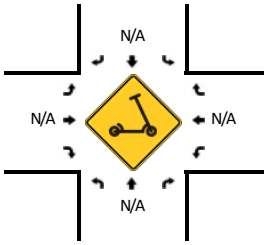












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				S Lake Dr (Eastbound)				S Lake Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	24	3	0	0	19	14	0	0	0	0	0	2	1	0	0	66	
4:15 PM	2	21	5	0	0	35	12	0	0	0	0	0	3	0	0	0	78	
4:30 PM	5	37	5	0	1	39	7	0	0	0	0	0	2	0	0	0	96	
4:45 PM	4	19	3	0	0	30	7	0	0	0	0	0	5	1	0	0	69	309
5:00 PM	13	28	3	0	0	27	12	0	0	0	0	0	2	1	0	0	86	329
5:15 PM	7	29	6	0	0	30	10	0	0	0	0	0	4	1	1	0	88	339
5:30 PM	1	30	9	0	0	32	9	0	0	0	0	0	2	0	0	0	83	326
5:45 PM	2	22	0	0	0	23	8	0	0	0	0	0	3	0	0	0	58	315

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	148	20	0	4	156	28	0	0	0	0	0	8	0	0	0	384
Heavy Trucks	0	4	0		0	8	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

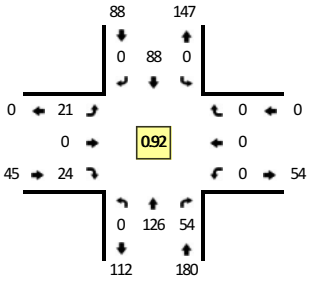
Comments:

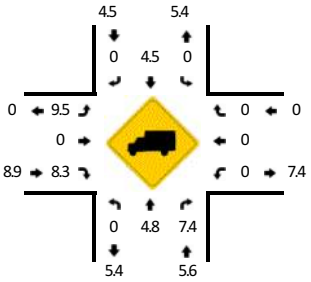
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

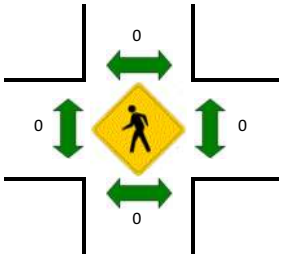
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Riverside Rd -- Chester Hwy WB Off Ramp | **QC JOB #:** 15818409
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

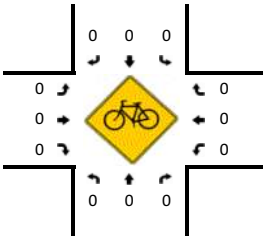
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

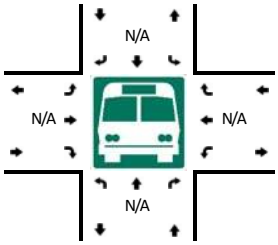


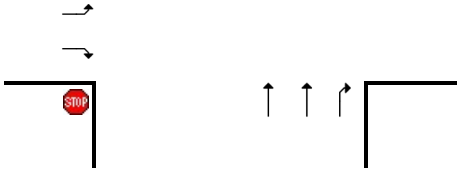


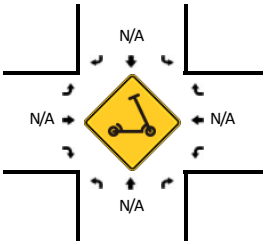












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				Chester Hwy WB Off Ramp (Eastbound)				Chester Hwy WB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	39	12	0	0	22	0	0	1	0	5	0	0	0	0	0	79	
7:15 AM	0	25	15	0	0	21	0	0	3	0	4	0	0	0	0	0	68	
7:30 AM	0	32	11	0	0	23	0	0	6	0	9	0	0	0	0	0	81	
7:45 AM	0	30	16	0	0	22	0	0	11	0	6	0	0	0	0	0	85	313
8:00 AM	0	23	8	0	0	15	0	0	4	0	2	0	0	0	0	0	52	286
8:15 AM	0	14	12	0	0	8	0	0	4	0	7	0	0	0	0	0	45	263
8:30 AM	0	17	11	1	0	12	0	0	2	0	4	0	0	0	0	0	47	229
8:45 AM	0	14	4	0	0	9	0	0	2	0	10	0	0	0	0	0	39	183

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	120	64	0	0	88	0	0	44	0	24	0	0	0	0	0	340
Heavy Trucks	0	8	8		0	8	0		8	0	0		0	0	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

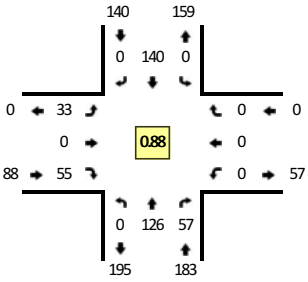
Comments:

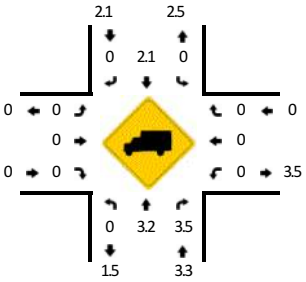
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

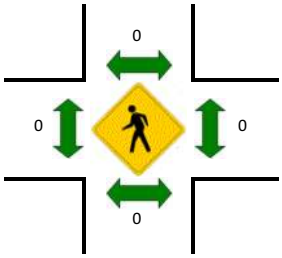
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Riverside Rd -- Chester Hwy WB Off Ramp | **QC JOB #:** 15818410
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

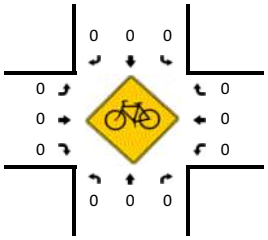
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

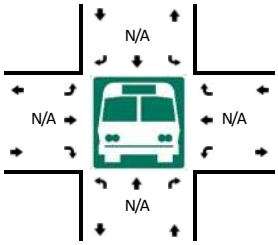


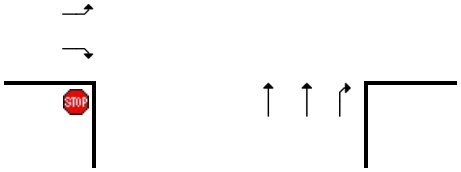


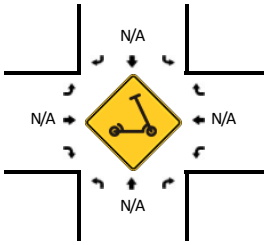












15-Min Count Period Beginning At	Riverside Rd (Northbound)				Riverside Rd (Southbound)				Chester Hwy WB Off Ramp (Eastbound)				Chester Hwy WB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	24	14	0	0	21	0	0	6	0	16	0	0	0	0	0	81	
4:15 PM	0	22	13	0	0	37	0	0	6	0	11	0	0	0	0	0	89	
4:30 PM	0	35	7	0	0	41	0	0	14	0	12	0	0	0	0	0	109	
4:45 PM	0	22	13	0	0	35	0	0	3	0	11	0	0	0	0	0	84	363
5:00 PM	0	39	26	0	0	31	0	0	4	0	17	0	0	0	0	0	117	399
5:15 PM	0	30	11	0	0	33	0	0	12	0	15	0	0	0	0	0	101	411
5:30 PM	0	32	9	0	0	34	0	0	8	0	8	0	0	0	0	0	91	393
5:45 PM	0	19	8	0	0	26	0	0	5	0	14	0	0	0	0	0	72	381

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	156	104	0	0	124	0	0	16	0	68	0	0	0	0	0	468
Heavy Trucks	0	8	4		0	0	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

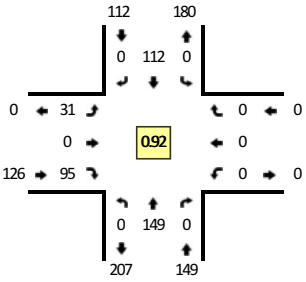
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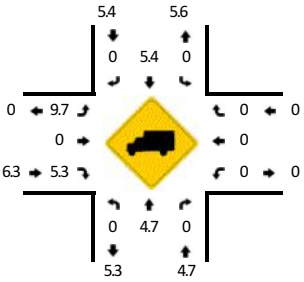
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

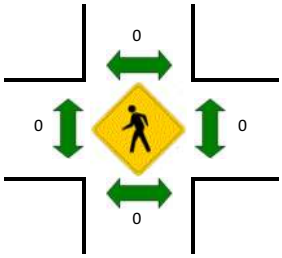
LOCATION: Riverside Rd/W Meeting St -- Chester Hwy EB Off Ramp | **QC JOB #:** 15818411
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

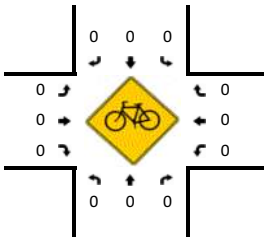


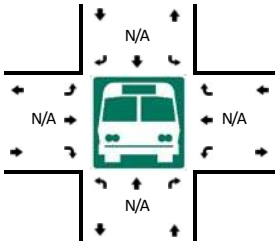


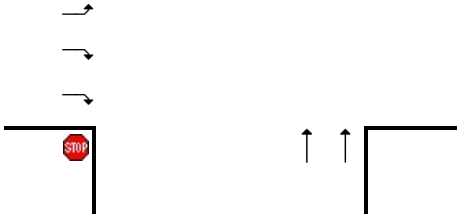
Quality Counts
DATA THAT DRIVES COMMUNITIES

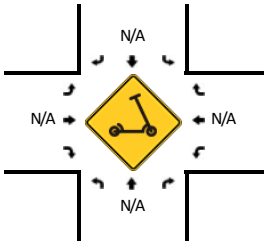












15-Min Count Period Beginning At	Riverside Rd/W Meeting St (Northbound)				Riverside Rd/W Meeting St (Southbound)				Chester Hwy EB Off Ramp (Eastbound)				Chester Hwy EB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	43	0	0	0	26	0	0	9	0	19	0	0	0	0	0	97	
7:15 AM	0	35	0	0	0	24	0	0	5	0	18	0	0	0	0	0	82	
7:30 AM	0	33	0	0	0	34	0	0	9	0	27	0	0	0	0	0	103	
7:45 AM	0	38	0	0	0	28	0	0	8	0	31	0	0	0	0	0	105	387
8:00 AM	0	26	0	0	0	17	0	0	5	0	21	0	0	0	0	0	69	359
8:15 AM	0	24	0	0	0	14	0	0	3	0	31	0	0	0	0	0	72	349
8:30 AM	0	27	0	0	0	17	0	0	2	0	15	0	0	0	0	0	61	307
8:45 AM	0	9	0	0	0	19	0	0	9	0	20	0	0	0	0	0	57	259

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	152	0	0	0	112	0	0	32	0	124	0	0	0	0	0	420
Heavy Trucks	0	12	0		0	8	0		4	0	4		0	0	0		28
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

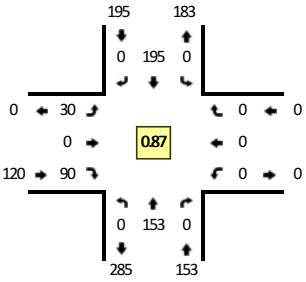
Comments:

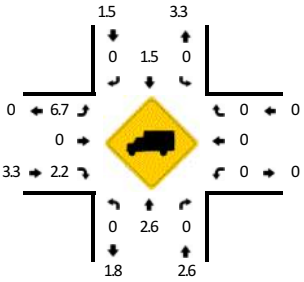
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

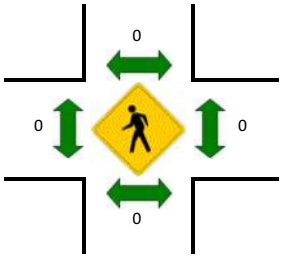
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

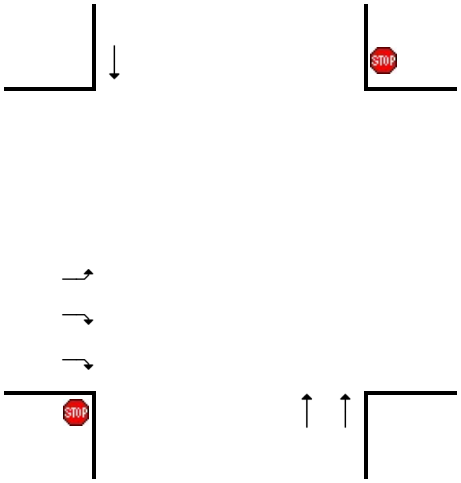
LOCATION: Riverside Rd/W Meeting St -- Chester Hwy EB Off Ramp | **QC JOB #:** 15818412
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

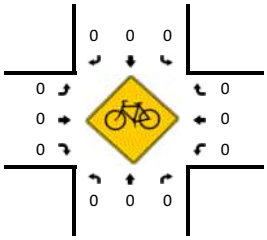
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

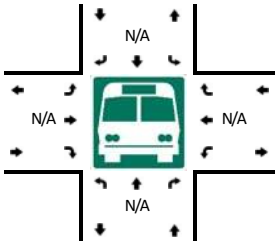


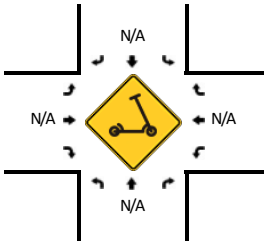












15-Min Count Period Beginning At	Riverside Rd/W Meeting St (Northbound)				Riverside Rd/W Meeting St (Southbound)				Chester Hwy EB Off Ramp (Eastbound)				Chester Hwy EB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	28	0	0	0	39	0	0	9	0	26	0	0	0	0	0	102	
4:15 PM	0	29	0	0	0	49	0	0	7	0	18	0	0	0	0	0	103	
4:30 PM	0	33	0	0	0	56	0	0	9	0	23	0	0	0	0	0	121	
4:45 PM	0	26	0	0	0	45	0	0	9	0	28	0	0	0	0	0	108	434
5:00 PM	0	59	0	0	0	43	0	0	7	0	25	0	0	0	0	0	134	466
5:15 PM	0	35	0	0	0	51	0	0	5	0	14	0	0	0	0	0	105	468
5:30 PM	0	33	0	0	0	43	0	0	8	0	27	0	0	0	0	0	111	458
5:45 PM	0	24	0	0	0	40	0	0	5	0	19	0	0	0	0	0	88	438

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	236	0	0	0	172	0	0	28	0	100	0	0	0	0	0	536
Heavy Trucks	0	12	0		0	0	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

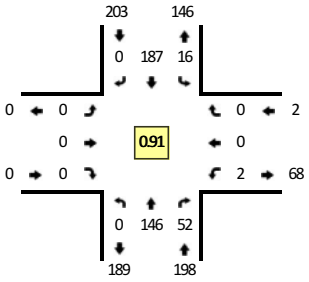
Comments:

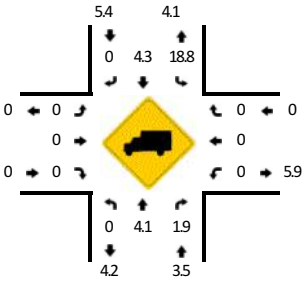
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

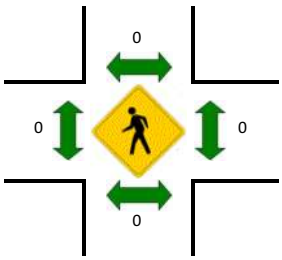
LOCATION: W Meeting St -- Chester Hwy | **QC JOB #:** 15818413
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

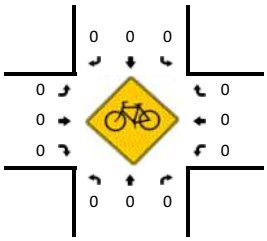


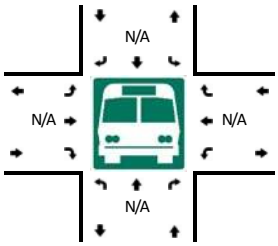


Quality Counts
DATA THAT DRIVES COMMUNITIES

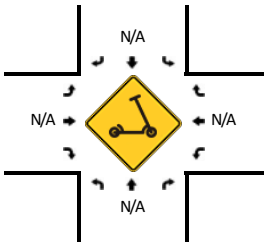












15-Min Count Period Beginning At	W Meeting St (Northbound)				W Meeting St (Southbound)				Chester Hwy (Eastbound)				Chester Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	43	13	0	3	43	0	0	0	0	0	0	1	0	0	0	103	
7:15 AM	0	36	13	0	4	32	0	0	0	0	0	0	1	0	0	0	86	
7:30 AM	0	32	14	0	7	58	0	0	0	0	0	0	0	0	0	0	111	
7:45 AM	0	35	12	0	2	54	0	0	0	0	0	0	0	0	0	0	103	403
8:00 AM	0	26	12	0	3	36	0	0	0	0	0	0	1	0	0	0	78	378
8:15 AM	0	24	12	0	2	42	0	0	0	0	0	0	0	0	0	0	80	372
8:30 AM	0	26	8	0	2	29	0	0	0	0	0	0	0	0	0	0	65	326
8:45 AM	0	7	5	0	3	36	0	0	0	0	0	0	0	0	0	0	51	274

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	128	56	0	28	232	0	0	0	0	0	0	0	0	0	0	444
Heavy Trucks	0	8	0		4	12	0		0	0	0		0	0	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

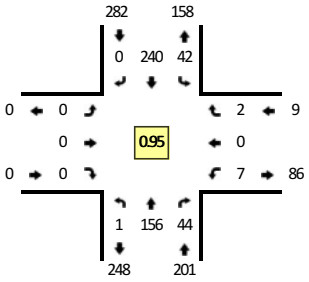
Comments:

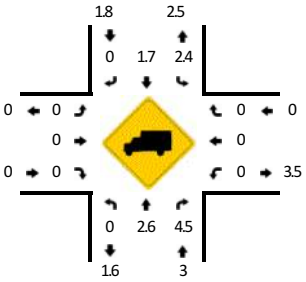
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

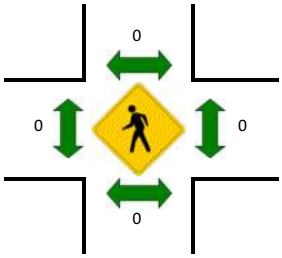
LOCATION: W Meeting St -- Chester Hwy | **QC JOB #:** 15818414
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

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

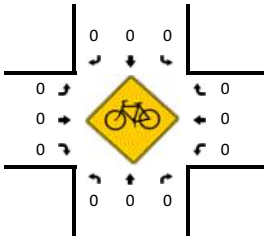


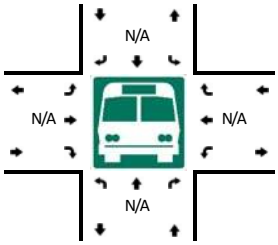


Quality Counts
DATA THAT DRIVES COMMUNITIES

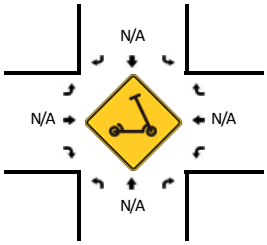












15-Min Count Period Beginning At	W Meeting St (Northbound)				W Meeting St (Southbound)				Chester Hwy (Eastbound)				Chester Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	29	9	0	6	62	0	0	0	0	0	0	3	0	1	0	110	
4:15 PM	0	27	9	0	12	54	0	0	0	0	0	0	0	0	0	0	102	
4:30 PM	0	35	14	0	12	62	0	0	0	0	0	0	3	0	0	0	126	
4:45 PM	0	29	17	0	13	66	0	0	0	0	0	0	1	0	0	0	126	464
5:00 PM	0	56	7	0	8	56	0	0	0	0	0	0	2	0	1	0	130	484
5:15 PM	0	36	6	1	9	56	0	0	0	0	0	0	1	0	1	0	110	492
5:30 PM	0	29	9	0	8	56	0	0	0	0	0	0	1	0	0	0	103	469
5:45 PM	0	21	10	0	5	55	0	0	0	0	0	0	1	0	0	0	92	435

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	224	28	0	32	224	0	0	0	0	0	0	8	0	4	0	520
Heavy Trucks	0	12	0		4	0	0		0	0	0		0	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

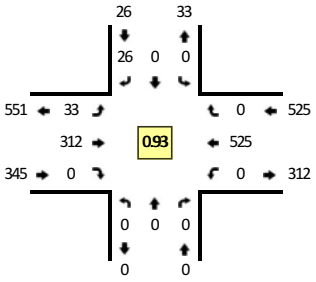
Comments:

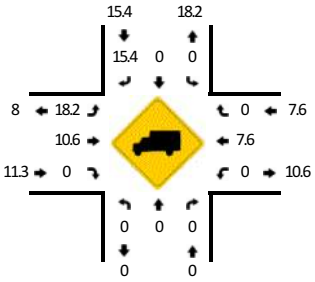
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

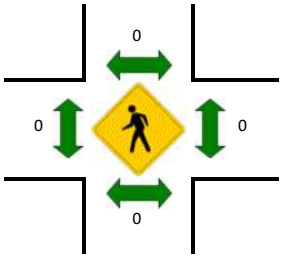
LOCATION: Rockhill Hwy -- Charlotte Hwy | **QC JOB #:** 15818415
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

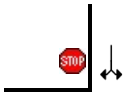
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

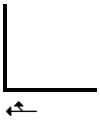


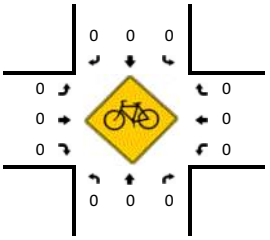


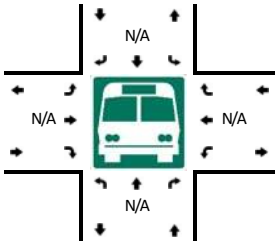
Quality Counts
DATA THAT DRIVES COMMUNITIES

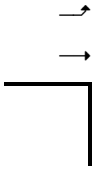




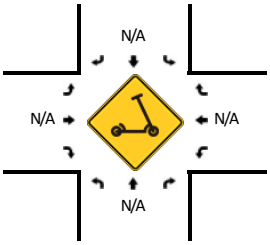












15-Min Count Period Beginning At	Rockhill Hwy (Northbound)				Rockhill Hwy (Southbound)				Charlotte Hwy (Eastbound)				Charlotte Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	6	0	7	53	0	0	0	142	0	0	208	
7:15 AM	0	0	0	0	0	0	9	0	9	78	0	0	0	129	0	0	225	
7:30 AM	0	0	0	0	0	0	7	0	5	83	0	0	0	145	0	0	240	
7:45 AM	0	0	0	0	0	0	4	0	12	98	0	0	0	109	0	0	223	896
8:00 AM	0	0	0	0	0	0	6	0	4	88	0	0	0	96	0	0	194	882
8:15 AM	0	0	0	0	0	0	3	0	3	79	0	0	0	105	0	0	190	847
8:30 AM	0	0	0	0	0	0	12	0	4	85	0	0	0	100	0	0	201	808
8:45 AM	0	0	0	0	0	0	4	0	7	91	0	0	0	89	0	0	191	776

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	28	0	20	332	0	0	0	580	0	0	960
Heavy Trucks	0	0	0		0	0	0		12	40	0		0	64	0		116
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

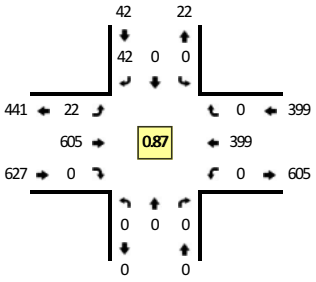
Comments:

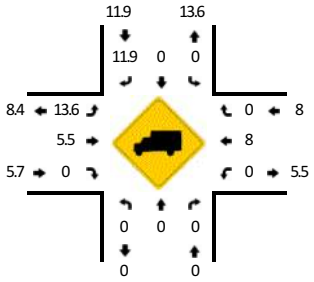
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

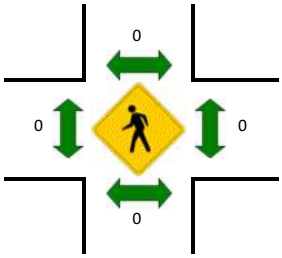
LOCATION: Rockhill Hwy -- Charlotte Hwy | **QC JOB #:** 15818416
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

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

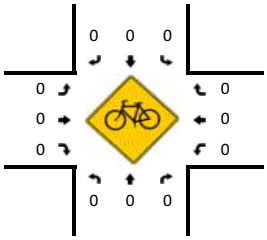


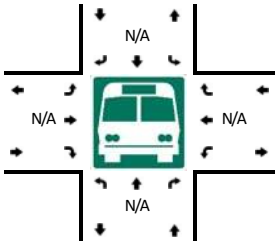


Quality Counts
DATA THAT DRIVES COMMUNITIES

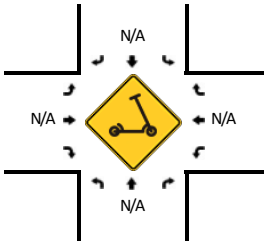












15-Min Count Period Beginning At	Rockhill Hwy (Northbound)				Rockhill Hwy (Southbound)				Charlotte Hwy (Eastbound)				Charlotte Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	6	0	3	127	0	0	0	95	0	0	231	
4:15 PM	0	0	0	0	0	0	7	0	5	145	0	0	0	72	1	0	230	
4:30 PM	0	0	0	0	0	0	13	0	6	149	0	0	0	89	0	0	257	
4:45 PM	0	0	0	0	0	0	8	0	7	126	0	0	0	98	0	0	239	957
5:00 PM	0	0	0	0	0	0	8	0	2	164	0	0	0	90	0	0	264	990
5:15 PM	0	0	0	0	0	0	13	0	7	166	0	0	0	122	0	0	308	1068
5:30 PM	0	0	0	0	0	0	8	0	10	145	0	0	0	58	1	0	222	1033
5:45 PM	0	0	0	0	0	0	4	0	7	120	0	0	0	75	0	0	206	1000

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	52	0	28	664	0	0	0	488	0	0	1232
Heavy Trucks	0	0	0		0	0	4		0	28	0		0	36	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

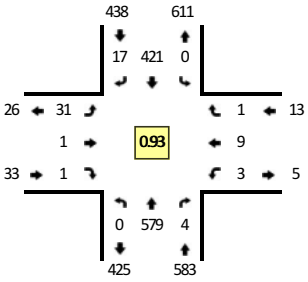
Comments:

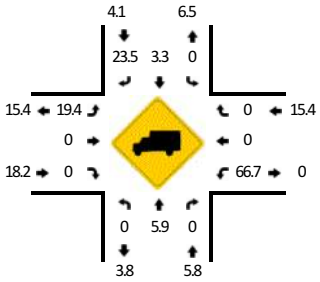
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

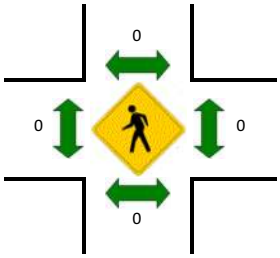
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Charlotte Hwy -- Rockhill Hwy/Old Church Rd | **QC JOB #:** 15818417
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

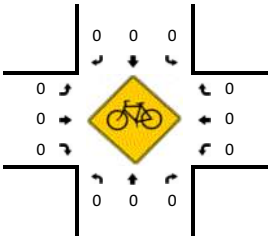
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

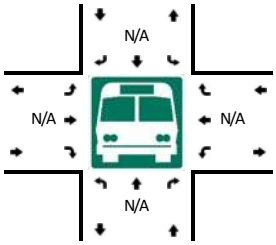




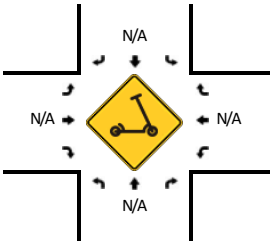












15-Min Count Period Beginning At	Charlotte Hwy (Northbound)				Charlotte Hwy (Southbound)				Rockhill Hwy/Old Church Rd (Eastbound)				Rockhill Hwy/Old Church Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	166	1	0	0	71	3	0	7	0	0	0	2	3	0	0	253	
7:15 AM	0	153	1	0	0	111	8	0	9	0	0	0	1	1	1	0	285	
7:30 AM	0	140	1	0	0	134	3	0	5	0	0	0	0	4	0	0	287	
7:45 AM	0	120	1	0	0	105	3	0	10	1	1	0	0	1	0	0	242	1067
8:00 AM	1	116	1	2	0	95	4	0	4	0	0	0	0	1	0	0	224	1038
8:15 AM	0	116	0	0	0	101	4	0	3	0	0	0	0	0	0	0	224	977
8:30 AM	1	115	0	0	0	81	7	0	4	0	0	0	0	4	1	0	213	903
8:45 AM	1	98	0	0	0	95	2	0	7	0	0	0	0	1	0	0	204	865

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	560	4	0	0	536	12	0	20	0	0	0	0	16	0	0	1148
Heavy Trucks	0	32	0		0	16	0		12	0	0		0	0	0		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

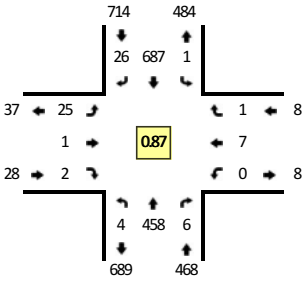
Comments:

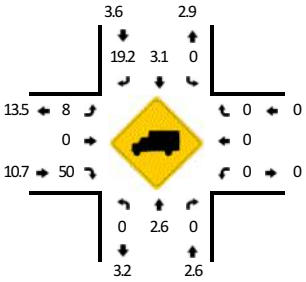
Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

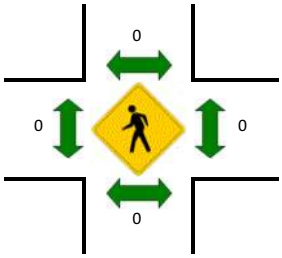
LOCATION: Charlotte Hwy -- Rockhill Hwy/Old Church Rd | **QC JOB #:** 15818418
CITY/STATE: Van Wyck, SC | **DATE:** Thu, May 19 2022

Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

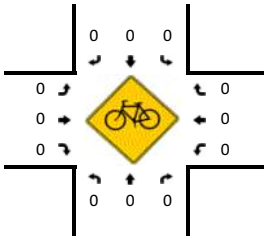


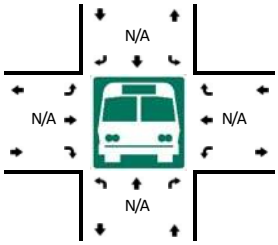


Quality Counts
DATA THAT DRIVES COMMUNITIES

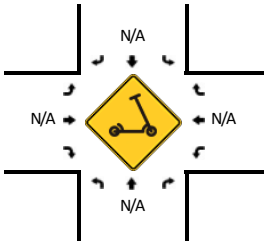












15-Min Count Period Beginning At	Charlotte Hwy (Northbound)				Charlotte Hwy (Southbound)				Rockhill Hwy/Old Church Rd (Eastbound)				Rockhill Hwy/Old Church Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	107	2	0	0	157	4	0	3	0	0	0	0	2	0	0	275	
4:15 PM	1	92	3	1	0	163	5	0	5	1	0	0	0	2	0	0	273	
4:30 PM	2	106	0	0	0	155	8	0	2	2	1	0	0	3	0	0	279	
4:45 PM	1	107	1	0	0	165	5	0	7	0	0	0	0	2	1	0	289	1116
5:00 PM	0	97	0	0	0	175	7	0	3	0	0	0	0	1	0	0	283	1124
5:15 PM	2	152	1	0	0	177	9	0	7	0	0	0	0	2	0	0	350	1201
5:30 PM	1	102	4	0	1	170	5	0	8	1	2	0	0	2	0	0	296	1218
5:45 PM	0	83	1	0	0	126	2	0	3	1	3	0	0	2	1	0	222	1151

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	608	4	0	0	708	36	0	28	0	0	0	0	8	0	0	1400
Heavy Trucks	0	4	0		0	20	4		0	0	0		0	0	0		28
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

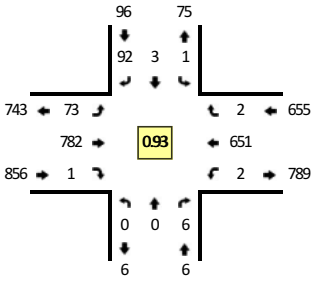
Comments:

Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

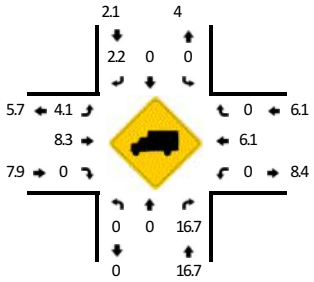
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

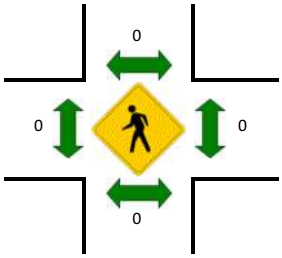
LOCATION: University Dr -- Charlotte Hwy | **QC JOB #:** 15818419
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

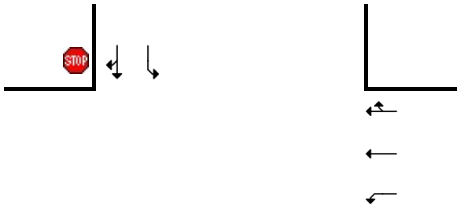
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

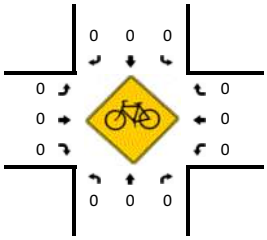


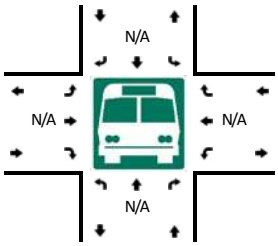




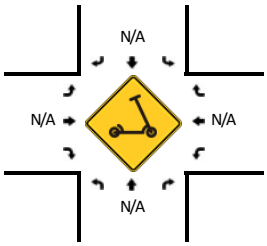












15-Min Count Period Beginning At	University Dr (Northbound)				University Dr (Southbound)				Charlotte Hwy (Eastbound)				Charlotte Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	1	0	0	0	19	0	12	210	0	0	0	144	0	0	386	
7:15 AM	0	0	2	0	0	0	28	0	16	207	0	0	1	133	0	0	387	
7:30 AM	0	0	2	0	0	1	20	0	22	188	0	0	0	173	0	0	406	
7:45 AM	0	0	1	0	1	2	25	0	23	177	1	0	1	201	2	0	434	1613
8:00 AM	0	1	2	0	0	0	29	0	15	167	1	0	3	145	0	0	363	1590
8:15 AM	0	0	1	0	1	2	32	0	21	159	0	0	0	181	0	0	397	1600
8:30 AM	0	2	2	0	2	0	20	0	30	178	1	0	0	141	3	0	379	1573
8:45 AM	1	0	5	0	1	2	12	0	17	121	1	0	1	157	1	0	319	1458

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	4	0	4	8	100	0	92	708	4	0	4	804	8	0	1736
Heavy Trucks	0	0	0		0	0	0		4	60	0		0	32	0		96
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

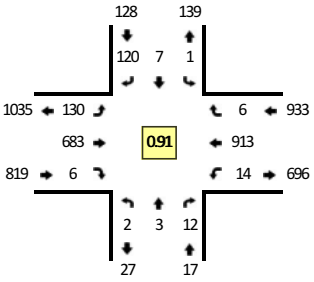
Comments:

Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

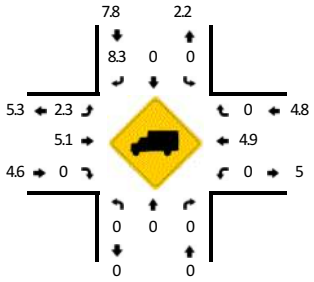
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

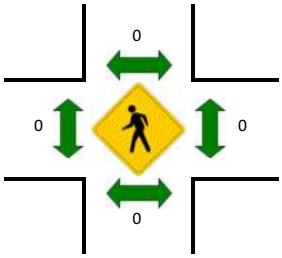
LOCATION: University Dr -- Charlotte Hwy | **QC JOB #:** 15818420
CITY/STATE: Lancaster, SC | **DATE:** Thu, May 19 2022

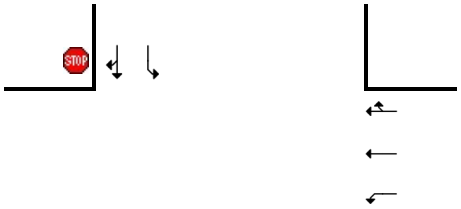
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

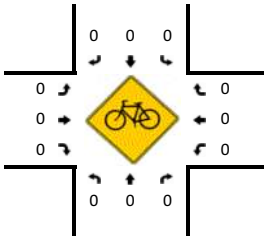


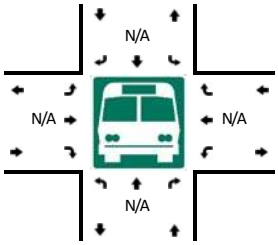




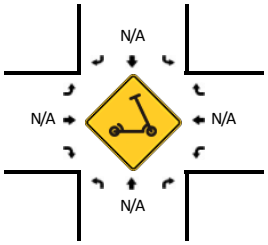












15-Min Count Period Beginning At	University Dr (Northbound)				University Dr (Southbound)				Charlotte Hwy (Eastbound)				Charlotte Hwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	3	0	0	3	30	0	24	160	2	0	3	180	3	0	409	
4:15 PM	1	2	3	0	0	1	26	0	40	164	1	0	3	217	1	0	459	
4:30 PM	1	1	3	0	0	1	38	0	30	157	1	0	3	242	1	0	478	
4:45 PM	0	0	2	0	0	2	29	0	29	157	3	0	4	208	2	0	436	1782
5:00 PM	0	0	4	0	1	3	27	0	31	205	1	0	4	246	2	0	524	1897
5:15 PM	1	0	3	0	0	2	25	0	24	159	2	0	7	231	2	0	456	1894
5:30 PM	2	2	2	0	0	4	25	0	28	132	2	0	6	238	1	0	442	1858
5:45 PM	2	1	8	0	1	3	13	0	27	132	0	0	1	205	1	0	394	1816

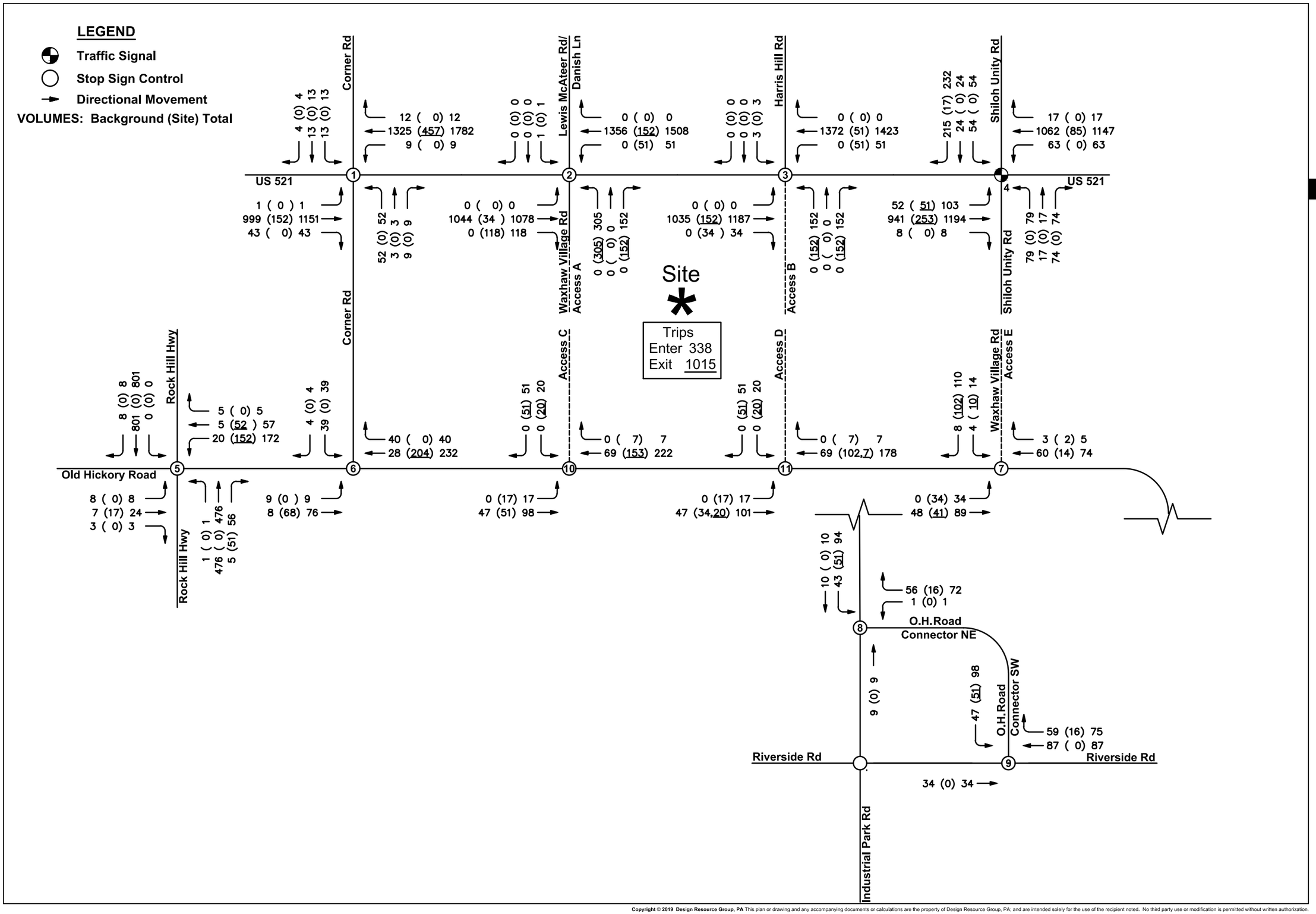
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	16	0	4	12	108	0	124	820	4	0	16	984	8	0	2096
Heavy Trucks	0	0	0		0	0	8		0	36	0		0	44	0		88
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 6/3/2022 8:45 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Approved Developments

Kimley»Horn
Riverchase Estates
Traffic Impact Analysis
Site Traffic
Distribution and
Assignment
Figure
3
LEGEND
XX AM Peak-Hour Traffic Volumes
(XX) PM Peak-Hour Traffic Volumes
Stop Control
Yield Control
NOT TO
SCALE
SITE
Access 1
Cobblestone
Way
Riverside
Road
Firetower
Road
University
Drive
South Lake
Drive
SC 9 WB
On Ramp
SC 9 WB
Off Ramp
SC 9 EB
On Ramp
SC 9 EB
Off Ramp
W Meeting Street
Old Church
Road
521
75
5
9
A



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NORMAN PROPERTY TIA

LANCASTER, SC

LENNAR CAROLINAS, LLC
11230 CARMEL COMMONS BLVD
CHARLOTTE, NC 28226

2029 PHASE 2 AM BUILD PEAK HOUR TRAFFIC VOLUMES

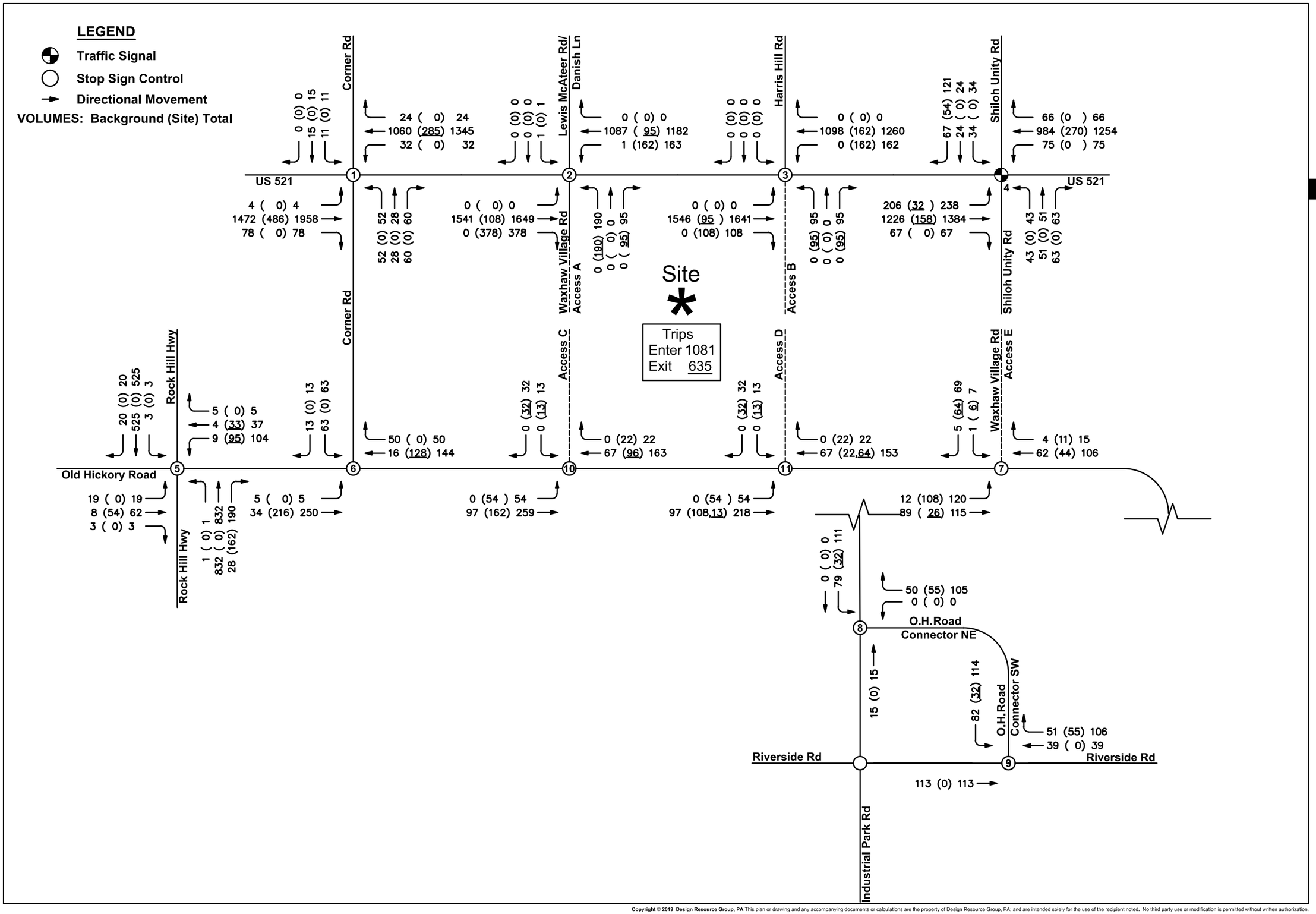
SCALE: NTS

PROJECT #: 640-004
DRAWN BY: SA
CHECKED BY: MW

JUNE 2019

REVISIONS:
1. Revised per KHA comments 6/3/2019

Figure 9



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NORMAN PROPERTY TIA

LANCASTER, SC

LENNAR CAROLINAS, LLC
11230 CARMEL COMMONS BLVD
CHARLOTTE, NC 28226

2029 PHASE 2
PM BUILD PEAK
HOUR TRAFFIC
VOLUMES

SCALE: NTS

PROJECT #: 640-004
DRAWN BY: SA
CHECKED BY: MW

JUNE 2019

REVISIONS:
1. Revised per KHA comments 6/3/2019

Figure 10

Intersection Volume Development

INTERSECTION VOLUME DEVELOPMENT

Riverside Road and Cobblestone Way
AM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Cobblestone Way Eastbound				Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	4	87	0	0	0	38	15	0	23	0	2	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	4	87	0	0	0	38	15	0	23	0	2	0	0	0	0	0
Conflicting Peds	3		0	0	0		3	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.50	0.78	0.90	0.90	0.90	0.79	0.75	0.90	0.58	0.90	0.25	0.90	0.00	0.00	0.00	0.00
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.00	0.00	0.00
Heavy Vehicle %	25%	6%	2%	2%	2%	8%	20%	2%	2%	2%	2%	2%	0%	0%	0%	0%
Annual Growth Rate	0.0%	2.5%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.000	1.379	1.000	1.000	1.000	1.379	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	4	120	0	0	0	52	15	0	23	0	2	0	0	0	0	0
Percent Inbound Assignment	30%	15%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	15%	0%	0%	35%	0%	30%	0%	0%	0%	0%	0%
Project Trips	39	20	0	0	0	56	46	0	130	0	111	0	0	0	0	0
Project Trips (Total)	39	20	0	0	0	56	46	0	130	0	111	0	0	0	0	0
2035 Buildout Total	43	140	0	0	0	108	61	0	153	0	113	0	0	0	0	0

PM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Cobblestone Way Eastbound				Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	4	35	0	0	0	83	20	0	15	0	3	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	4	35	0	0	0	83	20	0	15	0	3	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.50	0.73	0.90	0.90	0.90	0.80	0.71	0.90	0.54	0.90	0.75	0.90	0.00	0.00	0.00	0.00
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.00	0.00	0.00
Heavy Vehicle %	25%	6%	2%	2%	2%	6%	10%	2%	13%	2%	2%	2%	0%	0%	0%	0%
Annual Growth Rate	0.0%	2.5%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.000	1.379	1.000	1.000	1.000	1.379	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	4	48	0	0	0	114	20	0	15	0	3	0	0	0	0	0
Percent Inbound Assignment	30%	15%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	15%	0%	0%	35%	0%	30%	0%	0%	0%	0%	0%
Project Trips	135	67	0	0	0	40	157	0	92	0	79	0	0	0	0	0
Project Trips (Total)	135	67	0	0	0	40	157	0	92	0	79	0	0	0	0	0
2035 Buildout Total	139	115	0	0	0	154	177	0	107	0	82	0	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

Riverside Road/West Rebound Road and SC-5
AM PEAK HOUR

Description	Riverside Road Northbound				West Rebound Road Southbound				SC-5 Eastbound				SC-5 Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	82	24	1	0	3	16	40	0	24	317	39	0	2	586	9	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	82	24	1	0	3	16	40	0	24	317	39	0	2	586	9	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.68	0.67	0.25	0.90	0.75	0.67	0.59	0.90	0.75	0.77	0.70	0.90	0.50	0.90	0.75	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	5%	2%	2%	2%	2%	6%	3%	2%	4%	**11%**	8%	2%	**50%**	8%	**11%**	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	113	33	1	0	4	22	55	0	33	437	54	0	3	808	12	0
Norman Property	0	0	0	0	0	0	0	0	0	51	0	0	0	152	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	51	0	0	0	152	0	0
2035 Background Traffic	113	33	1	0	4	22	55	0	33	488	54	0	3	960	12	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	25%	0%	15%	0%	0%	0%
Percent Outbound Assignment	25%	15%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	93	56	56	0	0	20	0	0	0	0	33	0	20	0	0	0
Project Trips (Total)	92	56	56	0	0	20	0	0	0	0	32	0	20	0	0	0
2035 Buildout Total	205	89	57	0	4	42	55	0	33	488	86	0	23	960	12	0

PM PEAK HOUR

Description	Riverside Road Northbound				West Rebound Road Southbound				SC-5 Eastbound				SC-5 Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	34	17	4	0	6	21	41	0	31	664	62	0	2	392	14	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	34	17	4	0	6	21	41	0	31	664	62	0	2	392	14	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.77	0.61	0.50	0.90	0.50	0.75	0.85	0.90	0.71	0.94	0.78	0.90	0.50	0.80	0.70	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	3%	**12%**	2%	2%	**33%**	5%	**10%**	2%	2%	4%	5%	2%	**50%**	7%	**14%**	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	47	23	6	0	8	29	57	0	43	915	85	0	3	540	19	0
Norman Property	0	0	0	0	0	0	0	0	0	162	0	0	0	95	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	162	0	0	0	95	0	0
2035 Background Traffic	47	23	6	0	8	29	57	0	43	1,077	85	0	3	635	19	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	25%	0%	15%	0%	0%	0%
Percent Outbound Assignment	25%	15%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	66	40	40	0	0	67	0	0	0	0	112	0	67	0	0	0
Project Trips (Total)	65	40	40	0	0	67	0	0	0	0	113	0	67	0	0	0
2035 Buildout Total	112	63	46	0	8	96	57	0	43	1,077	198	0	70	635	19	0

INTERSECTION VOLUME DEVELOPMENT

Riverside Road and Antique Lane/University Drive
AM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Antique Lane Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	123	10	0	16	73	0	0	1	1	0	0	12	0	18	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	123	10	0	16	73	0	0	1	1	0	0	12	0	18	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.81	0.63	0.90	0.67	0.70	0.90	0.90	0.25	0.25	0.90	0.90	0.60	0.90	0.75	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	7%	2%	2%	13%	4%	2%	2%	2%	2%	2%	2%	8%	2%	6%	2%
Annual Growth Rate	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	2.5%	2.5%
Growth Factor #1	1.000	1.379	1.379	1.379	1.379	1.379	1.000	1.379	1.000	1.000	1.000	1.000	1.379	1.000	1.379	1.379
2035 Background Traffic (No AD)	0	170	14	0	22	101	0	0	1	1	0	0	17	0	25	0
Norman Property	0	16	0	0	0	51	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	16	0	0	0	51	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	186	14	0	22	152	0	0	1	1	0	0	17	0	25	0
Percent Inbound Assignment	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Percent Outbound Assignment	0%	0%	0%	0%	5%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	52	0	0	19	148	0	0	0	0	0	0	0	0	7	0
Project Trips (Total)	0	52	0	0	19	148	0	0	0	0	0	0	0	0	7	0
2035 Buildout Total	0	238	14	0	41	300	0	0	1	1	0	0	17	0	32	0

PM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Antique Lane Eastbound				University Drive Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	73	19	0	21	140	0	0	0	1	1	0	15	0	16	1
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	-1
2022 Existing Traffic	0	73	19	0	21	140	0	0	0	1	1	0	16	0	16	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.87	0.59	0.90	0.66	0.81	0.90	0.90	0.90	0.25	0.25	0.90	0.63	0.90	0.50	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	8%	2%	2%	5%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%	2.5%	2.5%
Growth Factor #1	1.000	1.379	1.379	1.379	1.379	1.379	1.000	1.379	1.000	1.000	1.000	1.000	1.379	1.000	1.379	1.379
2035 Background Traffic (No AD)	0	101	26	0	29	193	0	0	0	1	1	0	22	0	22	0
Norman Property	0	55	0	0	0	32	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	55	0	0	0	32	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	156	26	0	29	225	0	0	0	1	1	0	22	0	22	0
Percent Inbound Assignment	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
Percent Outbound Assignment	0%	0%	0%	0%	5%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	180	0	0	13	106	0	0	0	0	0	0	0	0	22	0
Project Trips (Total)	0	180	0	0	13	106	0	0	0	0	0	0	0	0	22	0
2035 Buildout Total	0	336	26	0	42	331	0	0	0	1	1	0	22	0	44	0

INTERSECTION VOLUME DEVELOPMENT

Riverside Road and SC-9 WB On-Ramp/South Lake Drive
AM PEAK HOUR

	Riverside Road Northbound				Riverside Road Southbound				SC-9 WB On-Ramp Eastbound				South Lake Drive Westbound			
Description	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	6	134	5	0	0	75	32	0	0	0	0	0	13	2	1	0
Balanced Volumes	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	6	136	5	0	0	75	32	0	0	0	0	0	13	2	1	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.38	0.86	0.63	0.90	0.90	0.94	0.73	0.90	0.90	0.90	0.90	0.90	0.81	0.50	0.25	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	6%	2%	2%	2%	4%	9%	2%	2%	2%	2%	2%	8%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	8	187	7	0	0	103	44	0	0	0	0	0	18	3	1	0
Norman Property	0	16	0	0	0	36	15	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	16	0	0	0	36	15	0	0	0	0	0	0	0	0	0
2035 Background Traffic	8	203	7	0	0	139	59	0	0	0	0	0	18	3	1	0
Percent Inbound Assignment	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	52	0	0	0	93	56	0	0	0	0	0	0	0	0	0
Project Trips (Total)	0	52	0	0	0	93	55	0	0	0	0	0	0	0	0	0
2035 Buildout Total	8	255	7	0	0	232	114	0	0	0	0	0	18	3	1	0

PM PEAK HOUR

	Riverside Road Northbound				Riverside Road Southbound				SC-9 WB On-Ramp Eastbound				South Lake Drive Westbound			
Description	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	29	113	17	0	1	126	36	0	0	0	0	0	13	3	1	0
Balanced Volumes	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	29	113	17	0	1	127	36	0	0	0	0	0	13	3	1	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.56	0.76	0.71	0.90	0.25	0.81	0.75	0.90	0.90	0.90	0.90	0.90	0.65	0.75	0.25	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	4%	2%	2%	2%	2%	**11%**	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	40	156	23	0	1	175	50	0	0	0	0	0	18	4	1	0
Norman Property	0	55	0	0	0	25	7	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	55	0	0	0	25	7	0	0	0	0	0	0	0	0	0
2035 Background Traffic	40	211	23	0	1	200	57	0	0	0	0	0	18	4	1	0
Percent Inbound Assignment	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	180	0	0	0	66	40	0	0	0	0	0	0	0	0	0
Project Trips (Total)	0	180	0	0	0	66	40	0	0	0	0	0	0	0	0	0
2035 Buildout Total	40	391	23	0	1	266	97	0	0	0	0	0	18	4	1	0

INTERSECTION VOLUME DEVELOPMENT

Riverside Road and SC-9 Westbound Ramps
AM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				SC-9 Westbound Ramps Eastbound				SC-9 Westbound Ramps Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	126	54	0	0	88	0	0	21	0	24	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	126	54	0	0	88	0	0	21	0	24	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.81	0.84	0.90	0.90	0.96	0.90	0.90	0.48	0.90	0.67	0.90	0.90	0.90	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	5%	7%	2%	2%	5%	2%	2%	10%	2%	8%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000
2035 Background Traffic (No AD)	0	174	74	0	0	121	0	0	29	0	33	0	0	0	0	0
Norman Property	0	13	0	0	0	36	0	0	3	0	0	0	0	0	0	0
Approved Development Trips	0	13	0	0	0	36	0	0	3	0	0	0	0	0	0	0
2035 Background Traffic	0	187	74	0	0	157	0	0	32	0	33	0	0	0	0	0
Percent Inbound Assignment	0%	25%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	33	0	0	0	93	0	0	20	0	0	0	0	0	0	0
Project Trips (Total)	0	33	0	0	0	93	0	0	19	0	0	0	0	0	0	0
2035 Buildout Total	0	220	74	0	0	250	0	0	51	0	33	0	0	0	0	0

PM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				SC-9 Westbound Ramps Eastbound				SC-9 Westbound Ramps Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	126	57	0	0	140	0	0	33	0	55	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	126	57	0	0	140	0	0	33	0	55	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.81	0.55	0.90	0.90	0.85	0.90	0.90	0.59	0.90	0.81	0.90	0.90	0.90	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	3%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000
2035 Background Traffic (No AD)	0	174	79	0	0	193	0	0	45	0	76	0	0	0	0	0
Norman Property	0	44	0	0	0	25	0	0	11	0	0	0	0	0	0	0
Approved Development Trips	0	44	0	0	0	25	0	0	11	0	0	0	0	0	0	0
2035 Background Traffic	0	218	79	0	0	218	0	0	56	0	76	0	0	0	0	0
Percent Inbound Assignment	0%	25%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	112	0	0	0	66	0	0	67	0	0	0	0	0	0	0
Project Trips (Total)	0	112	0	0	0	66	0	0	68	0	0	0	0	0	0	0
2035 Buildout Total	0	330	79	0	0	284	0	0	124	0	76	0	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

West Meeting Street/Riverside Road and SC-9 Eastbound Off-Ramp
AM PEAK HOUR

	West Meeting Street				Riverside Road				SC-9 Eastbound Off-Ramp							
	Northbound				**Southbound**				**Eastbound**				**Westbound**			
Description	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	149	0	0	0	112	0	0	31	0	95	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	149	0	0	0	112	0	0	31	0	95	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.87	0.90	0.90	0.90	0.82	0.90	0.90	0.86	0.90	0.77	0.90	0.90	0.90	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	5%	2%	2%	2%	5%	2%	2%	**10%**	2%	5%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000
2035 Background Traffic (No AD)	0	205	0	0	0	154	0	0	43	0	131	0	0	0	0	0
Norman Property	0	11	0	0	0	36	0	0	2	0	0	0	0	0	0	0
Approved Development Trips	0	11	0	0	0	36	0	0	2	0	0	0	0	0	0	0
2035 Background Traffic	0	216	0	0	0	190	0	0	45	0	131	0	0	0	0	0
Percent Inbound Assignment	0%	10%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	13	0	0	0	93	0	0	20	0	0	0	0	0	0	0
Project Trips (Total)	0	13	0	0	0	93	0	0	20	0	0	0	0	0	0	0
2035 Buildout Total	0	229	0	0	0	283	0	0	65	0	131	0	0	0	0	0

PM PEAK HOUR

	West Meeting Street				Riverside Road				SC-9 Eastbound Off-Ramp							
	Northbound				**Southbound**				**Eastbound**				**Westbound**			
Description	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	153	0	0	0	195	0	0	30	0	90	0	0	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	153	0	0	0	195	0	0	30	0	90	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.65	0.90	0.90	0.90	0.87	0.90	0.90	0.83	0.90	0.80	0.90	0.90	0.90	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	3%	2%	2%	2%	2%	2%	2%	7%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000
2035 Background Traffic (No AD)	0	211	0	0	0	269	0	0	41	0	124	0	0	0	0	0
Norman Property	0	37	0	0	0	25	0	0	7	0	0	0	0	0	0	0
Approved Development Trips	0	37	0	0	0	25	0	0	7	0	0	0	0	0	0	0
2035 Background Traffic	0	248	0	0	0	294	0	0	48	0	124	0	0	0	0	0
Percent Inbound Assignment	0%	10%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	45	0	0	0	66	0	0	67	0	0	0	0	0	0	0
Project Trips (Total)	0	45	0	0	0	66	0	0	67	0	0	0	0	0	0	0
2035 Buildout Total	0	293	0	0	0	360	0	0	115	0	124	0	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

West Meeting Street and SC-9 Eastbound On-Ramp
AM PEAK HOUR

Description	West Meeting Street Northbound				West Meeting Street Southbound				Eastbound				SC-9 Eastbound On-Ramp Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	146	52	0	16	187	0	0	0	0	0	0	2	0	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	146	52	0	16	187	0	0	0	0	0	0	2	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.85	0.93	0.90	0.57	0.81	0.90	0.90	0.90	0.90	0.90	0.90	0.50	0.90	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	4%	2%	2%	19%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	0	201	72	0	22	258	0	0	0	0	0	0	3	0	0	0
Norman Property	0	11	0	0	3	33	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	11	0	0	3	33	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	212	72	0	25	291	0	0	0	0	0	0	3	0	0	0
Percent Inbound Assignment	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	15%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	13	0	0	56	37	0	0	0	0	0	0	0	0	0	0
Project Trips (Total)	0	13	0	0	56	37	0	0	0	0	0	0	0	0	0	0
2035 Buildout Total	0	225	72	0	81	328	0	0	0	0	0	0	3	0	0	0

PM PEAK HOUR

Description	West Meeting Street Northbound				West Meeting Street Southbound				Eastbound				SC-9 Eastbound On-Ramp Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	156	44	1	42	240	0	0	0	0	0	0	7	0	2	0
Balanced Volumes	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	157	44	0	42	240	0	0	0	0	0	0	7	0	2	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.70	0.65	0.25	0.81	0.91	0.90	0.90	0.90	0.90	0.90	0.90	0.58	0.90	0.50	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	3%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	0	216	61	0	58	331	0	0	0	0	0	0	10	0	3	0
Norman Property	0	37	0	0	5	20	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	37	0	0	5	20	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	253	61	0	63	351	0	0	0	0	0	0	10	0	3	0
Percent Inbound Assignment	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	15%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	45	0	0	40	26	0	0	0	0	0	0	0	0	0	0
Project Trips (Total)	0	45	0	0	40	26	0	0	0	0	0	0	0	0	0	0
2035 Buildout Total	0	298	61	0	103	377	0	0	0	0	0	0	10	0	3	0

INTERSECTION VOLUME DEVELOPMENT

SC-5 and SC-5/US-521 Off-Ramp
AM PEAK HOUR

Description	Northbound				SC-5 Southbound				SC-5 Eastbound				US-521 Off-Ramp Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	0	0	0	0	0	26	0	33	312	0	0	0	525	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	0	0	0	0	0	26	0	33	312	0	0	0	525	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.72	0.90	0.69	0.80	0.90	0.90	0.90	0.91	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	**15%**	2%	**18%**	**11%**	2%	2%	2%	8%	2%	2%
Annual Growth Rate	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	0	0	0	0	0	0	36	0	45	430	0	0	0	724	0	0
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	0	0	0	0	0	36	0	45	430	0	0	0	724	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	5%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	5%	0%	0%	0%	0%	0%	0%
Project Trips	0	0	0	0	0	0	13	0	37	19	0	0	0	7	0	0
Project Trips (Total)	0	0	0	0	0	0	13	0	37	19	0	0	0	7	0	0
2035 Buildout Total	0	0	0	0	0	0	49	0	82	449	0	0	0	731	0	0

PM PEAK HOUR

Description	Northbound				SC-5 Southbound				SC-5 Eastbound				US-521 Off-Ramp Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	0	0	0	0	0	42	0	22	605	0	0	0	399	0	0
Balanced Volumes	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
2022 Existing Traffic	0	0	0	0	0	0	42	0	28	605	0	0	0	399	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.81	0.90	0.79	0.91	0.90	0.90	0.90	0.82	0.90	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	**12%**	2%	**14%**	5%	2%	2%	2%	8%	2%	2%
Annual Growth Rate	0.0%	0.0%	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.000	1.000	1.000	1.000	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	0	0	0	0	0	0	58	0	39	834	0	0	0	550	0	0
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	0	0	0	0	0	58	0	39	834	0	0	0	550	0	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	5%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	5%	0%	0%	0%	0%	0%	0%
Project Trips	0	0	0	0	0	0	45	0	26	13	0	0	0	22	0	0
Project Trips (Total)	0	0	0	0	0	0	45	0	26	14	0	0	0	22	0	0
2035 Buildout Total	0	0	0	0	0	0	103	0	65	848	0	0	0	572	0	0

INTERSECTION VOLUME DEVELOPMENT

US-521 and SC-5/Old Church Road
AM PEAK HOUR

Description	US-521 Northbound				US-521 Southbound				SC-5 Eastbound				Old Church Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	579	4	0	0	421	17	0	31	1	1	0	3	9	1	0
Balanced Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	579	4	0	0	421	17	0	31	1	1	0	3	9	1	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 Existing PHF	0.90	0.87	1.00	0.90	0.90	0.79	0.53	0.90	0.78	0.25	0.25	0.90	0.38	0.56	0.25	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	6%	2%	2%	2%	3%	**24%**	2%	**19%**	2%	2%	2%	**67%**	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	0	798	6	0	0	580	23	0	43	1	1	0	4	12	1	0
Norman Property	0	457	0	0	0	152	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	457	0	0	0	152	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	1,255	6	0	0	732	23	0	43	1	1	0	4	12	1	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	0	0	0	0	0	13	0	37	0	0	0	0	0	0	0
Project Trips (Total)	0	0	0	0	0	0	13	0	37	0	0	0	0	0	0	0
2035 Buildout Total	0	1,255	6	0	0	732	36	0	80	1	1	0	4	12	1	0

PM PEAK HOUR

Description	US-521 Northbound				US-521 Southbound				SC-5 Eastbound				Old Church Road Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	4	458	6	0	1	687	26	0	25	1	2	0	0	7	1	0
Balanced Volumes	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	4	458	6	0	1	687	31	0	25	1	2	0	0	7	1	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2022 PHF	0.50	0.75	0.38	0.90	0.25	0.97	0.72	0.90	0.78	0.25	0.25	0.90	0.90	0.88	0.25	0.90
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicle %	2%	3%	2%	2%	2%	3%	**19%**	2%	8%	2%	**50%**	2%	2%	2%	2%	2%
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth Factor #1	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379	1.379
2035 Background Traffic (No AD)	6	631	8	0	1	947	43	0	34	1	3	0	0	10	1	0
Norman Property	0	285	0	0	0	486	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	285	0	0	0	486	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	6	916	8	0	1	1,433	43	0	34	1	3	0	0	10	1	0
Percent Inbound Assignment	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Project Trips	0	0	0	0	0	0	45	0	26	0	0	0	0	0	0	0
Project Trips (Total)	0	0	0	0	0	0	45	0	26	0	0	0	0	0	0	0
2035 Buildout Total	6	916	8	0	1	1,433	88	0	60	1	3	0	0	10	1	0

INTERSECTION VOLUME DEVELOPMENT

Riverside Road at Access 1
AM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Access 1 Eastbound				Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balanced Volumes	0	110	0	0	0	53	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	110	0	0	0	53	0	0	0	0	0	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.00	0.00	0.00
Heavy Vehicle %	2%	5%	2%	2%	2%	11%	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%
Annual Growth Rate	0.0%	2.5%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.000	1.379	1.000	1.000	1.000	1.379	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	152	0	0	0	73	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	15%	0%	0%	0%	0%	35%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	35%	0%	0%	0%	0%	0%	0%	20%	0%	15%	0%	0%	0%	0%	0%
Project Trips	20	130	0	0	0	46	26	0	74	0	56	0	0	0	0	0
Project Trips (Total)	20	130	0	0	0	46	26	0	74	0	56	0	0	0	0	0
2035 Buildout Total	20	282	0	0	0	119	26	0	74	0	56	0	0	0	0	0

PM PEAK HOUR

Description	Riverside Road Northbound				Riverside Road Southbound				Access 1 Eastbound				0 Westbound			
	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn	Left	Through	Right	U-turn
Observed Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balanced Volumes	0	50	0	0	0	103	0	0	0	0	0	0	0	0	0	0
2022 Existing Traffic	0	50	0	0	0	103	0	0	0	0	0	0	0	0	0	0
Conflicting Peds	0		0	0	0		0	0	0		0	0	0		0	0
Conflicting Bikes			0				0				0				0	
2035 PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.00	0.00	0.00	0.00
Heavy Vehicle %	2%	8%	2%	2%	2%	7%	2%	2%	2%	2%	2%	2%	0%	0%	0%	0%
Annual Growth Rate	0.0%	2.5%	0.0%	0.0%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor #1	1.000	1.379	1.000	1.000	1.000	1.379	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Norman Property	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2035 Background Traffic	0	69	0	0	0	142	0	0	0	0	0	0	0	0	0	0
Percent Inbound Assignment	15%	0%	0%	0%	0%	35%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Percent Outbound Assignment	0%	35%	0%	0%	0%	0%	0%	0%	20%	0%	15%	0%	0%	0%	0%	0%
Project Trips	67	92	0	0	0	157	90	0	53	0	40	0	0	0	0	0
Project Trips (Total)	67	92	0	0	0	157	90	0	53	0	40	0	0	0	0	0
2035 Buildout Total	67	161	0	0	0	299	90	0	53	0	40	0	0	0	0	0

Intersection Capacity Analysis

2022 Existing Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	2	4	87	38	15
Future Volume (vph)	23	2	4	87	38	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1444	1792	1759	1346
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1444	1792	1759	1346
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.58	0.25	0.50	0.78	0.79	0.75
Heavy Vehicles (%)	2%	2%	25%	6%	8%	20%
Adj. Flow (vph)	40	8	8	112	48	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	8	8	112	48	20
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	2	4	87	38	15
Future Vol, veh/h	23	2	4	87	38	15
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	58	25	50	78	79	75
Heavy Vehicles, %	2	2	25	6	8	20
Mvmt Flow	40	8	8	112	48	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	179	51	71	0	-	0
Stage 1	51	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	811	1017	1395	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	801	1014	1391	-	-	-
Mov Cap-2 Maneuver	801	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1391	-	801	1014	-	-
HCM Lane V/C Ratio	0.006	-	0.05	0.008	-	-
HCM Control Delay (s)	7.6	-	9.7	8.6	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	317	39	2	586	9	82	24	1	3	16	40
Future Volume (vph)	24	317	39	2	586	9	82	24	1	3	16	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.998			0.997			0.904	
Flt Protected		0.997						0.964			0.998	
Satd. Flow (prot)	0	1693	0	0	1751	0	0	1752	0	0	1653	0
Flt Permitted		0.997						0.964			0.998	
Satd. Flow (perm)	0	1693	0	0	1751	0	0	1752	0	0	1653	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.75	0.77	0.70	0.50	0.90	0.75	0.68	0.67	0.25	0.75	0.67	0.59
Heavy Vehicles (%)	4%	11%	8%	50%	8%	11%	5%	2%	2%	2%	6%	3%
Adj. Flow (vph)	32	412	56	4	651	12	121	36	4	4	24	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	500	0	0	667	0	0	161	0	0	96	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	28

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	317	39	2	586	9	82	24	1	3	16	40
Future Vol, veh/h	24	317	39	2	586	9	82	24	1	3	16	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	77	70	50	90	75	68	67	25	75	67	59
Heavy Vehicles, %	4	11	8	50	8	11	5	2	2	2	6	3
Mvmt Flow	32	412	56	4	651	12	121	36	4	4	24	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	468	0	0	1215	1175	440	1189	1197	657
Stage 1	-	-	-	-	-	-	504	504	-	665	665	-
Stage 2	-	-	-	-	-	-	711	671	-	524	532	-
Critical Hdwy	4.14	-	-	4.6	-	-	7.15	6.52	6.22	7.12	6.56	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Follow-up Hdwy	2.236	-	-	2.65	-	-	3.545	4.018	3.318	3.518	4.054	3.327
Pot Cap-1 Maneuver	916	-	-	883	-	-	156	192	617	165	183	463
Stage 1	-	-	-	-	-	-	545	541	-	449	452	-
Stage 2	-	-	-	-	-	-	419	455	-	537	519	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	916	-	-	883	-	-	~ 114	181	617	133	173	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 114	181	-	133	173	-
Stage 1	-	-	-	-	-	-	519	515	-	427	449	-
Stage 2	-	-	-	-	-	-	336	452	-	473	494	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	232.6	22.2
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	127	916	-	-	883	-	-	304
HCM Lane V/C Ratio	1.263	0.035	-	-	0.005	-	-	0.315
HCM Control Delay (s)	232.6	9.1	0	-	9.1	0	-	22.2
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	10.1	0.1	-	-	0	-	-	1.3

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	0	12	0	18	0	123	10	16	73	0
Future Volume (vph)	1	1	0	12	0	18	0	123	10	16	73	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.926			0.987				
Flt Protected		0.976			0.978						0.991	
Satd. Flow (prot)	0	1818	0	0	1609	0	0	1760	0	0	1782	0
Flt Permitted		0.976			0.978						0.991	
Satd. Flow (perm)	0	1818	0	0	1609	0	0	1760	0	0	1782	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.25	0.25	0.90	0.60	0.90	0.75	0.90	0.81	0.63	0.67	0.70	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	2%	6%	2%	7%	2%	13%	4%	2%
Adj. Flow (vph)	4	4	0	20	0	24	0	152	16	24	104	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	44	0	0	168	0	0	128	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	0	12	0	18	0	123	10	16	73	0
Future Vol, veh/h	1	1	0	12	0	18	0	123	10	16	73	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	90	60	90	75	90	81	63	67	70	90
Heavy Vehicles, %	2	2	2	8	2	6	2	7	2	13	4	2
Mvmt Flow	4	4	0	20	0	24	0	152	16	24	104	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	324	320	104	314	312	160	104	0	0	168	0	0
Stage 1	152	152	-	160	160	-	-	-	-	-	-	-
Stage 2	172	168	-	154	152	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.52	6.26	4.12	-	-	4.23	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.018	3.354	2.218	-	-	2.317	-	-
Pot Cap-1 Maneuver	629	597	951	627	603	875	1488	-	-	1346	-	-
Stage 1	850	772	-	828	766	-	-	-	-	-	-	-
Stage 2	830	759	-	834	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	603	586	951	614	592	875	1488	-	-	1346	-	-
Mov Cap-2 Maneuver	603	586	-	614	592	-	-	-	-	-	-	-
Stage 1	850	757	-	828	766	-	-	-	-	-	-	-
Stage 2	807	759	-	814	757	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	10.2	0	1.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1488	-	-	594	733	1346	-	-
HCM Lane V/C Ratio	-	-	-	0.013	0.06	0.018	-	-
HCM Control Delay (s)	0	-	-	11.1	10.2	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	2	1	6	136	5	0	75	32
Future Volume (vph)	0	0	0	13	2	1	6	136	5	0	75	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.977			0.994			0.952	
Flt Protected					0.968			0.996				
Satd. Flow (prot)	0	0	0	0	1695	0	0	1783	0	0	1710	0
Flt Permitted					0.968			0.996				
Satd. Flow (perm)	0	0	0	0	1695	0	0	1783	0	0	1710	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.81	0.50	0.25	0.38	0.86	0.63	0.90	0.94	0.73
Heavy Vehicles (%)	2%	2%	2%	8%	2%	2%	2%	6%	2%	2%	4%	9%
Adj. Flow (vph)	0	0	0	16	4	4	16	158	8	0	80	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	24	0	0	182	0	0	124	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.4%		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	0	13	2	1	6	136	5	0	75	32
Future Vol, veh/h	0	0	0	13	2	1	6	136	5	0	75	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	81	50	25	38	86	63	90	94	73
Heavy Vehicles, %	2	2	2	8	2	2	2	6	2	2	4	9
Mvmt Flow	0	0	0	16	4	4	16	158	8	0	80	44

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	296	318	162	124	0	0	166	0	0
Stage 1	194	194	-	-	-	-	-	-	-
Stage 2	102	124	-	-	-	-	-	-	-
Critical Hdwy	6.48	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.48	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.48	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	683	598	883	1463	-	-	1412	-	-
Stage 1	825	740	-	-	-	-	-	-	-
Stage 2	907	793	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	675	0	883	1463	-	-	1412	-	-
Mov Cap-2 Maneuver	675	0	-	-	-	-	-	-	-
Stage 1	815	0	-	-	-	-	-	-	-
Stage 2	907	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1463	-	-	708	1412	-	-
HCM Lane V/C Ratio	0.011	-	-	0.034	-	-	-
HCM Control Delay (s)	7.5	0	-	10.3	0	-	-
HCM Lane LOS	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	0	24	0	0	0	0	126	54	0	88	0
Future Volume (vph)	21	0	24	0	0	0	0	126	54	0	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.939						0.956				
Flt Protected		0.973										
Satd. Flow (prot)	0	1591	0	0	0	0	0	3269	0	0	1810	0
Flt Permitted		0.973										
Satd. Flow (perm)	0	1591	0	0	0	0	0	3269	0	0	1810	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.48	0.90	0.67	0.90	0.90	0.90	0.90	0.81	0.84	0.90	0.96	0.90
Heavy Vehicles (%)	10%	2%	8%	2%	2%	2%	2%	5%	7%	2%	5%	2%
Adj. Flow (vph)	44	0	36	0	0	0	0	156	64	0	92	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	0	0	0	220	0	0	92	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.2%		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	21	0	24	0	0	0	0	126	54	0	88	0
Future Vol, veh/h	21	0	24	0	0	0	0	126	54	0	88	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	48	90	67	90	90	90	90	81	84	90	96	90
Heavy Vehicles, %	10	2	8	2	2	2	2	5	7	2	5	2
Mvmt Flow	44	0	36	0	0	0	0	156	64	0	92	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	170	312	92				-	0	0	-	-	0
Stage 1	92	92	-				-	-	-	-	-	-
Stage 2	78	220	-				-	-	-	-	-	-
Critical Hdwy	6.75	6.53	6.32				-	-	-	-	-	-
Critical Hdwy Stg 1	5.55	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.95	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.595	4.019	3.376				-	-	-	-	-	-
Pot Cap-1 Maneuver	792	602	947				0	-	-	0	-	0
Stage 1	910	818	-				0	-	-	0	-	0
Stage 2	915	721	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	792	0	947				-	-	-	-	-	-
Mov Cap-2 Maneuver	792	0	-				-	-	-	-	-	-
Stage 1	910	0	-				-	-	-	-	-	-
Stage 2	915	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	6.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	2104	-
HCM Lane V/C Ratio	-	-	0.038	-
HCM Control Delay (s)	-	-	6.8	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	31	0	0	149	112	0
Future Volume (vph)	31	0	0	149	112	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1641	0	0	3438	1810	0
Flt Permitted	0.950					
Satd. Flow (perm)	1641	0	0	3438	1810	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.86	0.90	0.90	0.87	0.82	0.90
Heavy Vehicles (%)	10%	2%	2%	5%	5%	2%
Adj. Flow (vph)	36	0	0	171	137	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	171	137	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	0	0	149	112	0
Future Vol, veh/h	31	0	0	149	112	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	90	90	87	82	90
Heavy Vehicles, %	10	2	2	5	5	2
Mvmt Flow	36	0	0	171	137	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	223	-	-	0	-	0
Stage 1	137	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.75	-	-	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.95	-	-	-	-	-
Follow-up Hdwy	3.595	-	-	-	-	-
Pot Cap-1 Maneuver	735	0	0	-	-	0
Stage 1	867	0	0	-	-	0
Stage 2	907	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	735	-	-	-	-	-
Mov Cap-2 Maneuver	735	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	735	-
HCM Lane V/C Ratio	-	0.049	-
HCM Control Delay (s)	-	10.2	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	2	0	146	52	16	187
Future Volume (vph)	2	0	146	52	16	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.963			
Flt Protected	0.950					0.995
Satd. Flow (prot)	1770	0	3359	0	0	3401
Flt Permitted	0.950					0.995
Satd. Flow (perm)	1770	0	3359	0	0	3401
Link Speed (mph)	25		45			45
Link Distance (ft)	1055		1007			534
Travel Time (s)	28.8		15.3			8.1
Peak Hour Factor	0.50	0.90	0.85	0.93	0.57	0.81
Heavy Vehicles (%)	2%	2%	4%	2%	19%	4%
Adj. Flow (vph)	4	0	172	56	28	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	228	0	0	259
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	146	52	16	187
Future Vol, veh/h	2	0	146	52	16	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	90	85	93	57	81
Heavy Vehicles, %	2	2	4	2	19	4
Mvmt Flow	4	0	172	56	28	231

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	344	86	0	-	172	0
Stage 1	172	-	-	-	-	-
Stage 2	172	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.48	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.39	-
Pot Cap-1 Maneuver	626	956	-	0	1287	-
Stage 1	841	-	-	0	-	-
Stage 2	841	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	610	956	-	-	1287	-
Mov Cap-2 Maneuver	610	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	820	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	610	1287	-
HCM Lane V/C Ratio	-	0.007	0.022	-
HCM Control Delay (s)	-	10.9	7.9	0.1
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	33	312	525	0	0	26
Future Volume (vph)	33	312	525	0	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1530	1712	1759	0	0	1429
Flt Permitted	0.950					
Satd. Flow (perm)	1530	1712	1759	0	0	1429
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.69	0.80	0.91	0.90	0.90	0.72
Heavy Vehicles (%)	18%	11%	8%	2%	2%	15%
Adj. Flow (vph)	48	390	577	0	0	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	390	577	0	0	36
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	312	525	0	0	26
Future Vol, veh/h	33	312	525	0	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	80	91	90	90	72
Heavy Vehicles, %	18	11	8	2	2	15
Mvmt Flow	48	390	577	0	0	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	577	0	-	0	-	577
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.28	-	-	-	-	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.362	-	-	-	-	3.435
Pot Cap-1 Maneuver	922	-	-	0	0	493
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	922	-	-	-	-	493
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	922	-	-	493
HCM Lane V/C Ratio	0.052	-	-	0.073
HCM Control Delay (s)	9.1	-	-	12.9
HCM Lane LOS	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	32	1	3	9	0	0	0	0	0	421	17
Future Volume (vph)	0	32	1	3	9	0	0	0	0	0	421	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.988									0.992	
Flt Protected					0.984							
Satd. Flow (prot)	0	1610	0	0	1512	0	0	0	0	0	3437	0
Flt Permitted					0.984							
Satd. Flow (perm)	0	1610	0	0	1512	0	0	0	0	0	3437	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.76	0.25	0.38	0.56	0.90	0.90	0.90	0.90	0.90	0.79	0.53
Heavy Vehicles (%)	2%	18%	2%	67%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	42	4	8	16	0	0	0	0	0	533	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	24	0	0	0	0	0	565	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	32	1	3	9	0	0	0	0	0	421	17
Future Vol, veh/h	0	32	1	3	9	0	0	0	0	0	421	17
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	76	25	38	56	90	90	90	90	90	79	53
Heavy Vehicles, %	2	18	2	67	2	2	2	2	2	2	3	24
Mvmt Flow	0	42	4	8	16	0	0	0	0	0	533	32

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	549	283	288	565	-			0	0	0
Stage 1	-	549	-	0	0	-			-	-	-
Stage 2	-	0	-	288	565	-			-	-	-
Critical Hdwy	-	6.86	6.94	8.84	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.86	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	7.84	5.54	-			-	-	-
Follow-up Hdwy	-	4.18	3.32	4.17	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	409	714	501	433	0			-	-	-
Stage 1	0	477	-	-	-	0			-	-	-
Stage 2	0	-	-	542	506	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	409	714	462	433	-			-	-	-
Mov Cap-2 Maneuver	-	451	-	466	478	-			-	-	-
Stage 1	-	477	-	-	-	-			-	-	-
Stage 2	-	-	-	491	506	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	13.6	13	0
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	466	474	-	-	-
HCM Lane V/C Ratio	0.099	0.051	-	-	-
HCM Control Delay (s)	13.6	13	0	-	-
HCM Lane LOS	B	B	A	-	-
HCM 95th %tile Q(veh)	0.3	0.2	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	31	95	0	0	0	0
Future Volume (vph)	31	95	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.989				
Satd. Flow (prot)	0	3364	0	0	0	0
Flt Permitted		0.989				
Satd. Flow (perm)	0	3364	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.86	0.77	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	2%	2%	2%
Adj. Flow (vph)	36	123	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	159	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	95	0	149	112	0
Future Volume (vph)	0	95	0	149	112	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3438	0	2707	1719	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3438	0	2707	1719	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.77	0.90	0.87	0.82	0.90
Heavy Vehicles (%)	2%	5%	2%	5%	5%	2%
Adj. Flow (vph)	0	123	0	171	137	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	123	0	171	137	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	1	0	0	12	1	0	579	4	0	0	0
Future Volume (vph)	31	1	0	0	12	1	0	579	4	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.980			0.999				
Flt Protected		0.957										
Satd. Flow (prot)	0	1548	0	0	1610	0	0	3403	0	0	0	0
Flt Permitted		0.957										
Satd. Flow (perm)	0	1548	0	0	1610	0	0	3403	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.78	0.25	0.90	0.90	0.52	0.25	0.90	0.87	1.00	0.90	0.90	0.90
Heavy Vehicles (%)	19%	2%	2%	2%	18%	2%	2%	6%	2%	2%	2%	2%
Adj. Flow (vph)	40	4	0	0	23	4	0	666	4	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	27	0	0	670	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	1	0	0	12	1	0	579	4	0	0	0
Future Vol, veh/h	31	1	0	0	12	1	0	579	4	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	25	90	90	52	25	90	87	100	90	90	90
Heavy Vehicles, %	19	2	2	2	18	2	2	6	2	2	2	2
Mvmt Flow	40	4	0	0	23	4	0	666	4	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	345	670	-	-	668	335	0	0	0
Stage 1	0	0	-	-	668	-	-	-	-
Stage 2	345	670	-	-	0	-	-	-	-
Critical Hdwy	7.88	6.54	-	-	6.86	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.86	-	-	-	-
Critical Hdwy Stg 2	6.88	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.69	4.02	-	-	4.18	3.32	2.22	-	-
Pot Cap-1 Maneuver	544	377	0	0	347	661	-	-	-
Stage 1	-	-	0	0	417	-	-	-	-
Stage 2	599	454	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	513	377	-	-	347	661	-	-	-
Mov Cap-2 Maneuver	513	377	-	-	347	-	-	-	-
Stage 1	-	-	-	-	417	-	-	-	-
Stage 2	562	454	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	12.9	15.4	0
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	497	373
HCM Lane V/C Ratio	-	-	-	0.088	0.073
HCM Control Delay (s)	0	-	-	12.9	15.4
HCM Lane LOS	A	-	-	B	C
HCM 95th %tile Q(veh)	-	-	-	0.3	0.2

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	3	4	35	83	20
Future Volume (vph)	15	3	4	35	83	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1597	1583	1444	1792	1792	1468
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1597	1583	1444	1792	1792	1468
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Peak Hour Factor	0.54	0.75	0.50	0.73	0.80	0.71
Heavy Vehicles (%)	13%	2%	25%	6%	6%	10%
Adj. Flow (vph)	28	4	8	48	104	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	4	8	48	104	28
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	3	4	35	83	20
Future Vol, veh/h	15	3	4	35	83	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	75	50	73	80	71
Heavy Vehicles, %	13	2	25	6	6	10
Mvmt Flow	28	4	8	48	104	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	168	104	132	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	64	-	-	-	-	-
Critical Hdwy	6.53	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	798	951	1323	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	793	951	1323	-	-	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	888	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1323	-	793	951	-	-
HCM Lane V/C Ratio	0.006	-	0.035	0.004	-	-
HCM Control Delay (s)	7.7	-	9.7	8.8	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	664	62	2	392	14	34	17	4	6	21	41
Future Volume (vph)	31	664	62	2	392	14	34	17	4	6	21	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.995			0.986			0.926	
Flt Protected		0.997						0.973			0.993	
Satd. Flow (prot)	0	1798	0	0	1757	0	0	1719	0	0	1566	0
Flt Permitted		0.997						0.973			0.993	
Satd. Flow (perm)	0	1798	0	0	1757	0	0	1719	0	0	1566	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.71	0.94	0.78	0.50	0.80	0.70	0.77	0.61	0.50	0.50	0.75	0.85
Heavy Vehicles (%)	2%	4%	5%	50%	7%	14%	3%	12%	2%	33%	5%	10%
Adj. Flow (vph)	44	706	79	4	490	20	44	28	8	12	28	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	829	0	0	514	0	0	80	0	0	88	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.4%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	664	62	2	392	14	34	17	4	6	21	41
Future Vol, veh/h	31	664	62	2	392	14	34	17	4	6	21	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	94	78	50	80	70	77	61	50	50	75	85
Heavy Vehicles, %	2	4	5	50	7	14	3	12	2	33	5	10
Mvmt Flow	44	706	79	4	490	20	44	28	8	12	28	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	510	0	0	785	0	0	1380	1352	746	1360	1381	500
Stage 1	-	-	-	-	-	-	834	834	-	508	508	-
Stage 2	-	-	-	-	-	-	546	518	-	852	873	-
Critical Hdwy	4.12	-	-	4.6	-	-	7.13	6.62	6.22	7.43	6.55	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Follow-up Hdwy	2.218	-	-	2.65	-	-	3.527	4.108	3.318	3.797	4.045	3.39
Pot Cap-1 Maneuver	1055	-	-	656	-	-	121	143	413	108	142	555
Stage 1	-	-	-	-	-	-	361	370	-	494	534	-
Stage 2	-	-	-	-	-	-	520	517	-	314	364	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1055	-	-	656	-	-	87	131	413	83	130	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	131	-	83	130	-
Stage 1	-	-	-	-	-	-	334	342	-	457	529	-
Stage 2	-	-	-	-	-	-	446	512	-	262	337	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	100.5	37.3
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	108	1055	-	-	656	-	-	197
HCM Lane V/C Ratio	0.741	0.041	-	-	0.006	-	-	0.448
HCM Control Delay (s)	100.5	8.6	0	-	10.5	0	-	37.3
HCM Lane LOS	F	A	A	-	B	A	-	E
HCM 95th %tile Q(veh)	4	0.1	-	-	0	-	-	2.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	1	16	0	16	0	73	19	21	140	0
Future Volume (vph)	0	1	1	16	0	16	0	73	19	21	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.924			0.963				
Flt Protected					0.979						0.992	
Satd. Flow (prot)	0	1736	0	0	1685	0	0	1721	0	0	1781	0
Flt Permitted					0.979						0.992	
Satd. Flow (perm)	0	1736	0	0	1685	0	0	1721	0	0	1781	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.90	0.25	0.25	0.63	0.90	0.50	0.90	0.87	0.59	0.66	0.81	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	8%	2%	5%	6%	2%
Adj. Flow (vph)	0	4	4	25	0	32	0	84	32	32	173	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	57	0	0	116	0	0	205	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	1	16	0	16	0	73	19	21	140	0
Future Vol, veh/h	0	1	1	16	0	16	0	73	19	21	140	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	25	25	63	90	50	90	87	59	66	81	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	5	6	2
Mvmt Flow	0	4	4	25	0	32	0	84	32	32	173	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	353	353	173	341	337	100	173	0	0	116	0	0
Stage 1	237	237	-	100	100	-	-	-	-	-	-	-
Stage 2	116	116	-	241	237	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.245	-	-
Pot Cap-1 Maneuver	602	572	871	613	584	956	1404	-	-	1454	-	-
Stage 1	766	709	-	906	812	-	-	-	-	-	-	-
Stage 2	889	800	-	762	709	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	571	558	871	596	570	956	1404	-	-	1454	-	-
Mov Cap-2 Maneuver	571	558	-	596	570	-	-	-	-	-	-	-
Stage 1	766	692	-	906	812	-	-	-	-	-	-	-
Stage 2	859	800	-	736	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.2	0	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1404	-	-	680	754	1454	-	-
HCM Lane V/C Ratio	-	-	-	0.012	0.076	0.022	-	-
HCM Control Delay (s)	0	-	-	10.4	10.2	7.5	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	3	1	29	113	17	1	126	36
Future Volume (vph)	0	0	0	13	3	1	29	113	17	1	126	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.981			0.986			0.969	
Flt Protected					0.966			0.989			0.999	
Satd. Flow (prot)	0	0	0	0	1765	0	0	1793	0	0	1767	0
Flt Permitted					0.966			0.989			0.999	
Satd. Flow (perm)	0	0	0	0	1765	0	0	1793	0	0	1767	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.65	0.75	0.25	0.56	0.76	0.71	0.25	0.81	0.75
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%	11%
Adj. Flow (vph)	0	0	0	20	4	4	52	149	24	4	156	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	28	0	0	225	0	0	208	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	13	3	1	29	113	17	1	126	36
Future Vol, veh/h	0	0	0	13	3	1	29	113	17	1	126	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	65	75	25	56	76	71	25	81	75
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	11
Mvmt Flow	0	0	0	20	4	4	52	149	24	4	156	48

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	453	477	161	204	0	0	173	0	0
Stage 1	265	265	-	-	-	-	-	-	-
Stage 2	188	212	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	565	487	884	1368	-	-	1404	-	-
Stage 1	779	689	-	-	-	-	-	-	-
Stage 2	844	727	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	540	0	884	1368	-	-	1404	-	-
Mov Cap-2 Maneuver	540	0	-	-	-	-	-	-	-
Stage 1	746	0	-	-	-	-	-	-	-
Stage 2	841	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	1.8	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1368	-	-	577	1404	-	-
HCM Lane V/C Ratio	0.038	-	-	0.049	0.003	-	-
HCM Control Delay (s)	7.7	0	-	11.6	7.6	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	0	55	0	0	0	0	126	57	0	140	0
Future Volume (vph)	33	0	55	0	0	0	0	126	57	0	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.926						0.940				
Flt Protected		0.978										
Satd. Flow (prot)	0	1687	0	0	0	0	0	3282	0	0	1863	0
Flt Permitted		0.978										
Satd. Flow (perm)	0	1687	0	0	0	0	0	3282	0	0	1863	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.59	0.90	0.81	0.90	0.90	0.90	0.90	0.81	0.55	0.90	0.85	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	2%
Adj. Flow (vph)	56	0	68	0	0	0	0	156	104	0	165	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	124	0	0	0	0	0	260	0	0	165	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	0	55	0	0	0	0	126	57	0	140	0
Future Vol, veh/h	33	0	55	0	0	0	0	126	57	0	140	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	59	90	81	90	90	90	90	81	55	90	85	90
Heavy Vehicles, %	2	2	2	2	2	2	2	3	4	2	2	2
Mvmt Flow	56	0	68	0	0	0	0	156	104	0	165	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	243	425	165	-	0	0	-	-	0
Stage 1	165	165	-	-	-	-	-	-	-
Stage 2	78	260	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	-	-	-
Pot Cap-1 Maneuver	735	520	879	0	-	-	0	-	0
Stage 1	864	761	-	0	-	-	0	-	0
Stage 2	936	692	-	0	-	-	0	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	735	0	879	-	-	-	-	-	-
Mov Cap-2 Maneuver	735	0	-	-	-	-	-	-	-
Stage 1	864	0	-	-	-	-	-	-	-
Stage 2	936	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	1603	-
HCM Lane V/C Ratio	-	-	0.077	-
HCM Control Delay (s)	-	-	7.4	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	30	0	0	153	195	0
Future Volume (vph)	30	0	0	153	195	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1687	0	0	3505	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	1687	0	0	3505	1863	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.83	0.90	0.90	0.65	0.87	0.90
Heavy Vehicles (%)	7%	2%	2%	3%	2%	2%
Adj. Flow (vph)	36	0	0	235	224	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	235	224	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	0	0	153	195	0
Future Vol, veh/h	30	0	0	153	195	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	90	90	65	87	90
Heavy Vehicles, %	7	2	2	3	2	2
Mvmt Flow	36	0	0	235	224	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	342	-	-	0	-	0
Stage 1	224	-	-	-	-	-
Stage 2	118	-	-	-	-	-
Critical Hdwy	6.705	-	-	-	-	-
Critical Hdwy Stg 1	5.505	-	-	-	-	-
Critical Hdwy Stg 2	5.905	-	-	-	-	-
Follow-up Hdwy	3.5665	-	-	-	-	-
Pot Cap-1 Maneuver	629	0	0	-	-	0
Stage 1	799	0	0	-	-	0
Stage 2	881	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	629	-	-	-	-	-
Mov Cap-2 Maneuver	629	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	881	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	629	-
HCM Lane V/C Ratio	-	0.057	-
HCM Control Delay (s)	-	11.1	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	2	157	44	42	240
Future Volume (vph)	7	2	157	44	42	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.966		0.965			
Flt Protected	0.964					0.992
Satd. Flow (prot)	1735	0	3367	0	0	3511
Flt Permitted	0.964					0.992
Satd. Flow (perm)	1735	0	3367	0	0	3511
Link Speed (mph)	25		45			45
Link Distance (ft)	1052		1007			534
Travel Time (s)	28.7		15.3			8.1
Peak Hour Factor	0.58	0.50	0.70	0.65	0.81	0.91
Heavy Vehicles (%)	2%	2%	3%	5%	2%	2%
Adj. Flow (vph)	12	4	224	68	52	264
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	292	0	0	316
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	2	157	44	42	240
Future Vol, veh/h	7	2	157	44	42	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	50	70	65	81	91
Heavy Vehicles, %	2	2	3	5	2	2
Mvmt Flow	12	4	224	68	52	264

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	460	112	0	-	224	0
Stage 1	224	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	530	920	-	0	1342	-
Stage 1	792	-	-	0	-	-
Stage 2	781	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	506	920	-	-	1342	-
Mov Cap-2 Maneuver	506	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	746	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	570	1342	-
HCM Lane V/C Ratio	-	0.028	0.039	-
HCM Control Delay (s)	-	11.5	7.8	0.1
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.1	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	28	605	399	0	0	42
Future Volume (vph)	28	605	399	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1583	1810	1759	0	0	1467
Flt Permitted	0.950					
Satd. Flow (perm)	1583	1810	1759	0	0	1467
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.79	0.91	0.82	0.90	0.90	0.81
Heavy Vehicles (%)	14%	5%	8%	2%	2%	12%
Adj. Flow (vph)	35	665	487	0	0	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	665	487	0	0	52
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	605	399	0	0	42
Future Vol, veh/h	28	605	399	0	0	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	79	91	82	90	90	81
Heavy Vehicles, %	14	5	8	2	2	12
Mvmt Flow	35	665	487	0	0	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	487	0	-	0	-	487
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.24	-	-	-	-	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.326	-	-	-	-	3.408
Pot Cap-1 Maneuver	1017	-	-	0	0	561
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	1017	-	-	-	-	561
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1017	-	-	561
HCM Lane V/C Ratio	0.035	-	-	0.092
HCM Control Delay (s)	8.7	-	-	12.1
HCM Lane LOS	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	26	2	0	11	0	0	0	0	1	687	31
Future Volume (vph)	0	26	2	0	11	0	0	0	0	1	687	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.974									0.991	
Flt Protected												
Satd. Flow (prot)	0	1595	0	0	1863	0	0	0	0	0	3443	0
Flt Permitted												
Satd. Flow (perm)	0	1595	0	0	1863	0	0	0	0	0	3443	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.76	0.25	0.90	0.88	0.90	0.90	0.90	0.90	0.25	0.97	0.72
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	34	8	0	13	0	0	0	0	4	708	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	13	0	0	0	0	0	755	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	26	2	0	11	0	0	0	0	1	687	31
Future Vol, veh/h	0	26	2	0	11	0	0	0	0	1	687	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	76	25	90	88	90	90	90	90	25	97	72
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	34	8	0	13	0	0	0	0	4	708	43

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	738	376	379	759	-			0	0	0
Stage 1	-	738	-	0	0	-			-	-	-
Stage 2	-	0	-	379	759	-			-	-	-
Critical Hdwy	-	6.66	7.9	7.54	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.66	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-
Follow-up Hdwy	-	4.08	3.8	3.52	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	332	503	553	334	0			-	-	-
Stage 1	0	408	-	-	-	0			-	-	-
Stage 2	0	-	-	615	413	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	332	503	507	334	-			-	-	-
Mov Cap-2 Maneuver	-	383	-	525	387	-			-	-	-
Stage 1	-	408	-	-	-	-			-	-	-
Stage 2	-	-	-	554	413	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	15	14.6	
HCM LOS	C	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	401	387	-	-	-
HCM Lane V/C Ratio	0.105	0.032	-	-	-
HCM Control Delay (s)	15	14.6	-	-	-
HCM Lane LOS	C	B	-	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	90	0	0	0	0
Future Volume (vph)	30	90	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.988				
Satd. Flow (prot)	0	3456	0	0	0	0
Flt Permitted		0.988				
Satd. Flow (perm)	0	3456	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.83	0.80	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Adj. Flow (vph)	36	113	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	149	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	90	0	153	195	0
Future Volume (vph)	0	90	0	153	195	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	0	2760	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	0	2760	1770	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.80	0.90	0.65	0.87	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%
Adj. Flow (vph)	0	113	0	235	224	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	113	0	235	224	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	2	0	0	7	1	4	458	6	0	0	0
Future Volume (vph)	25	2	0	0	7	1	4	458	6	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.955			0.996				
Flt Protected		0.962						0.999				
Satd. Flow (prot)	0	1711	0	0	1779	0	0	3489	0	0	0	0
Flt Permitted		0.962						0.999				
Satd. Flow (perm)	0	1711	0	0	1779	0	0	3489	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.78	0.25	0.90	0.90	0.88	0.25	0.50	0.75	0.38	0.90	0.90	0.90
Heavy Vehicles (%)	8%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	32	8	0	0	8	4	8	611	16	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	12	0	0	635	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		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	25	2	0	0	7	1	4	458	6	0	0	0
Future Vol, veh/h	25	2	0	0	7	1	4	458	6	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	25	90	90	88	25	50	75	38	90	90	90
Heavy Vehicles, %	8	2	2	2	2	2	2	3	2	2	2	2
Mvmt Flow	32	8	0	0	8	4	8	611	16	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	326	643	-	-	635	314	0	0	0
Stage 1	0	0	-	-	635	-	-	-	-
Stage 2	326	643	-	-	0	-	-	-	-
Critical Hdwy	7.66	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.66	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.58	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	588	390	0	0	394	682	-	-	-
Stage 1	-	-	0	0	471	-	-	-	-
Stage 2	644	467	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	576	390	-	-	394	682	-	-	-
Mov Cap-2 Maneuver	576	390	-	-	394	-	-	-	-
Stage 1	-	-	-	-	471	-	-	-	-
Stage 2	629	467	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	12.4	13.1	
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	526	459
HCM Lane V/C Ratio	-	-	-	0.076	0.026
HCM Control Delay (s)	-	-	-	12.4	13.1
HCM Lane LOS	-	-	-	B	B
HCM 95th %tile Q(veh)	-	-	-	0.2	0.1

2035 Background Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	23	2	4	120	52	15
Future Volume (vph)	23	2	4	120	52	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1444	1792	1759	1346
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1444	1792	1759	1346
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	25%	6%	8%	20%
Adj. Flow (vph)	26	2	4	133	58	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	2	4	133	58	17
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	2	4	120	52	15
Future Vol, veh/h	23	2	4	120	52	15
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	25	6	8	20
Mvmt Flow	26	2	4	133	58	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	202	61	78	0	-	0
Stage 1	61	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	787	1004	1387	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	780	1001	1383	-	-	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1383	-	780	1001	-	-
HCM Lane V/C Ratio	0.003	-	0.033	0.002	-	-
HCM Control Delay (s)	7.6	-	9.8	8.6	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	488	54	3	960	12	113	33	1	4	22	55
Future Volume (vph)	33	488	54	3	960	12	113	33	1	4	22	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.998			0.999			0.907	
Flt Protected		0.997						0.963			0.998	
Satd. Flow (prot)	0	1695	0	0	1753	0	0	1752	0	0	1657	0
Flt Permitted		0.997						0.963			0.998	
Satd. Flow (perm)	0	1695	0	0	1753	0	0	1752	0	0	1657	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	11%	8%	50%	8%	11%	5%	2%	2%	2%	6%	3%
Adj. Flow (vph)	37	542	60	3	1067	13	126	37	1	4	24	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	639	0	0	1083	0	0	164	0	0	89	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	139.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	488	54	3	960	12	113	33	1	4	22	55
Future Vol, veh/h	33	488	54	3	960	12	113	33	1	4	22	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	11	8	50	8	11	5	2	2	2	6	3
Mvmt Flow	37	542	60	3	1067	13	126	37	1	4	24	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1080	0	0	602	0	0	1768	1732	572	1745	1756	1074
Stage 1	-	-	-	-	-	-	646	646	-	1080	1080	-
Stage 2	-	-	-	-	-	-	1122	1086	-	665	676	-
Critical Hdwy	4.14	-	-	4.6	-	-	7.15	6.52	6.22	7.12	6.56	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Follow-up Hdwy	2.236	-	-	2.65	-	-	3.545	4.018	3.318	3.518	4.054	3.327
Pot Cap-1 Maneuver	638	-	-	779	-	-	~ 64	88	520	68	83	266
Stage 1	-	-	-	-	-	-	455	467	-	264	290	-
Stage 2	-	-	-	-	-	-	247	292	-	449	447	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	638	-	-	779	-	-	~ 34	79	520	40	75	266
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 34	79	-	40	75	-
Stage 1	-	-	-	-	-	-	415	426	-	241	287	-
Stage 2	-	-	-	-	-	-	172	289	-	373	408	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	$ 1644.4	73.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	39	638	-	-	779	-	-	135
HCM Lane V/C Ratio	4.188	0.057	-	-	0.004	-	-	0.667
HCM Control Delay (s)	$ 1644.4	11	0	-	9.6	0	-	73.4
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	18.8	0.2	-	-	0	-	-	3.6

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	0	17	0	25	0	186	14	22	152	0
Future Volume (vph)	1	1	0	17	0	25	0	186	14	22	152	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.920			0.990				
Flt Protected		0.976			0.980						0.994	
Satd. Flow (prot)	0	1818	0	0	1604	0	0	1764	0	0	1797	0
Flt Permitted		0.976			0.980						0.994	
Satd. Flow (perm)	0	1818	0	0	1604	0	0	1764	0	0	1797	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	2%	6%	2%	7%	2%	13%	4%	2%
Adj. Flow (vph)	1	1	0	19	0	28	0	207	16	24	169	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	47	0	0	223	0	0	193	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	0	17	0	25	0	186	14	22	152	0
Future Vol, veh/h	1	1	0	17	0	25	0	186	14	22	152	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	2	6	2	7	2	13	4	2
Mvmt Flow	1	1	0	19	0	28	0	207	16	24	169	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	446	440	169	433	432	215	169	0	0	223	0	0
Stage 1	217	217	-	215	215	-	-	-	-	-	-	-
Stage 2	229	223	-	218	217	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.52	6.26	4.12	-	-	4.23	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.018	3.354	2.218	-	-	2.317	-	-
Pot Cap-1 Maneuver	523	511	875	523	516	815	1409	-	-	1283	-	-
Stage 1	785	723	-	774	725	-	-	-	-	-	-	-
Stage 2	774	719	-	771	723	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	497	500	875	514	505	815	1409	-	-	1283	-	-
Mov Cap-2 Maneuver	497	500	-	514	505	-	-	-	-	-	-	-
Stage 1	785	708	-	774	725	-	-	-	-	-	-	-
Stage 2	748	719	-	754	708	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	10.9	0	1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1409	-	-	498	659	1283	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.071	0.019	-	-
HCM Control Delay (s)	0	-	-	12.3	10.9	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	18	3	1	8	203	7	0	139	59
Future Volume (vph)	0	0	0	18	3	1	8	203	7	0	139	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994			0.996			0.959	
Flt Protected					0.960			0.998				
Satd. Flow (prot)	0	0	0	0	1694	0	0	1786	0	0	1727	0
Flt Permitted					0.960			0.998				
Satd. Flow (perm)	0	0	0	0	1694	0	0	1786	0	0	1727	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	2%	2%	2%	6%	2%	2%	4%	9%
Adj. Flow (vph)	0	0	0	20	3	1	9	226	8	0	154	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	24	0	0	243	0	0	220	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	18	3	1	8	203	7	0	139	59
Future Vol, veh/h	0	0	0	18	3	1	8	203	7	0	139	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	2	2	2	6	2	2	4	9
Mvmt Flow	0	0	0	20	3	1	9	226	8	0	154	66

Major/Minor	Minor1		Major1				Major2			
Conflicting Flow All	435	468	230	220	0	0	234	0	0	
Stage 1	248	248	-	-	-	-	-	-	-	
Stage 2	187	220	-	-	-	-	-	-	-	
Critical Hdwy	6.48	6.52	6.22	4.12	-	-	4.12	-	-	
Critical Hdwy Stg 1	5.48	5.52	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.48	5.52	-	-	-	-	-	-	-	
Follow-up Hdwy	3.572	4.018	3.318	2.218	-	-	2.218	-	-	
Pot Cap-1 Maneuver	567	493	809	1349	-	-	1333	-	-	
Stage 1	779	701	-	-	-	-	-	-	-	
Stage 2	831	721	-	-	-	-	-	-	-	
Platoon blocked, %					-	-		-	-	
Mov Cap-1 Maneuver	562	0	809	1349	-	-	1333	-	-	
Mov Cap-2 Maneuver	562	0	-	-	-	-	-	-	-	
Stage 1	773	0	-	-	-	-	-	-	-	
Stage 2	831	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1349	-	-	571	1333	-	-
HCM Lane V/C Ratio	0.007	-	-	0.043	-	-	-
HCM Control Delay (s)	7.7	0	-	11.6	0	-	-
HCM Lane LOS	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	0	33	0	0	0	0	187	74	0	157	0
Future Volume (vph)	32	0	33	0	0	0	0	187	74	0	157	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.932						0.958				
Flt Protected		0.976										
Satd. Flow (prot)	0	1586	0	0	0	0	0	3276	0	0	1810	0
Flt Permitted		0.976										
Satd. Flow (perm)	0	1586	0	0	0	0	0	3276	0	0	1810	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	8%	2%	2%	2%	2%	5%	7%	2%	5%	2%
Adj. Flow (vph)	36	0	37	0	0	0	0	208	82	0	174	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	73	0	0	0	0	0	290	0	0	174	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.7%		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	32	0	33	0	0	0	0	187	74	0	157	0
Future Vol, veh/h	32	0	33	0	0	0	0	187	74	0	157	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	10	2	8	2	2	2	2	5	7	2	5	2
Mvmt Flow	36	0	37	0	0	0	0	208	82	0	174	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	278	464	174				-	0	0	-	-	0
Stage 1	174	174	-				-	-	-	-	-	-
Stage 2	104	290	-				-	-	-	-	-	-
Critical Hdwy	6.75	6.53	6.32				-	-	-	-	-	-
Critical Hdwy Stg 1	5.55	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.95	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.595	4.019	3.376				-	-	-	-	-	-
Pot Cap-1 Maneuver	681	495	852				0	-	-	0	-	0
Stage 1	834	754	-				0	-	-	0	-	0
Stage 2	888	672	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	681	0	852				-	-	-	-	-	-
Mov Cap-2 Maneuver	681	0	-				-	-	-	-	-	-
Stage 1	834	0	-				-	-	-	-	-	-
Stage 2	888	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	1678	-
HCM Lane V/C Ratio	-	-	0.043	-
HCM Control Delay (s)	-	-	7.2	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	0	0	216	190	0
Future Volume (vph)	45	0	0	216	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1641	0	0	3438	1810	0
Flt Permitted	0.950					
Satd. Flow (perm)	1641	0	0	3438	1810	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	5%	5%	2%
Adj. Flow (vph)	50	0	0	240	211	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	0	240	211	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	45	0	0	216	190	0
Future Vol, veh/h	45	0	0	216	190	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	2	2	5	5	2
Mvmt Flow	50	0	0	240	211	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	331	-	-	0	-	0
Stage 1	211	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.75	-	-	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.95	-	-	-	-	-
Follow-up Hdwy	3.595	-	-	-	-	-
Pot Cap-1 Maneuver	632	0	0	-	-	0
Stage 1	802	0	0	-	-	0
Stage 2	871	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	632	-	-	-	-	-
Mov Cap-2 Maneuver	632	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	632	-
HCM Lane V/C Ratio	-	0.079	-
HCM Control Delay (s)	-	11.2	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	212	72	25	291
Future Volume (vph)	3	0	212	72	25	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.962			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1770	0	3356	0	0	3418
Flt Permitted	0.950					0.996
Satd. Flow (perm)	1770	0	3356	0	0	3418
Link Speed (mph)	25		45			45
Link Distance (ft)	1054		1007			534
Travel Time (s)	28.7		15.3			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	19%	4%
Adj. Flow (vph)	3	0	236	80	28	323
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	316	0	0	351
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	212	72	25	291
Future Vol, veh/h	3	0	212	72	25	291
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	19	4
Mvmt Flow	3	0	236	80	28	323

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	454	118	0	-	236	0
Stage 1	236	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.48	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.39	-
Pot Cap-1 Maneuver	535	912	-	0	1213	-
Stage 1	781	-	-	0	-	-
Stage 2	797	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	520	912	-	-	1213	-
Mov Cap-2 Maneuver	520	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	520	1213	-
HCM Lane V/C Ratio	-	0.006	0.023	-
HCM Control Delay (s)	-	12	8	0.1
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	430	724	0	0	36
Future Volume (vph)	45	430	724	0	0	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1530	1712	1759	0	0	1429
Flt Permitted	0.950					
Satd. Flow (perm)	1530	1712	1759	0	0	1429
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	18%	11%	8%	2%	2%	15%
Adj. Flow (vph)	50	478	804	0	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	478	804	0	0	40
Sign Control		Free	Free		Stop	

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	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	430	724	0	0	36
Future Vol, veh/h	45	430	724	0	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	18	11	8	2	2	15
Mvmt Flow	50	478	804	0	0	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	804	0	-	0	-	804
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.28	-	-	-	-	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.362	-	-	-	-	3.435
Pot Cap-1 Maneuver	754	-	-	0	0	363
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	754	-	-	-	-	363
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	754	-	-	363
HCM Lane V/C Ratio	0.066	-	-	0.11
HCM Control Delay (s)	10.1	-	-	16.1
HCM Lane LOS	B	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	0.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	1	4	12	0	0	0	0	0	732	23
Future Volume (vph)	0	44	1	4	12	0	0	0	0	0	732	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.997									0.995	
Flt Protected					0.988							
Satd. Flow (prot)	0	1610	0	0	1600	0	0	0	0	0	3465	0
Flt Permitted					0.988							
Satd. Flow (perm)	0	1610	0	0	1600	0	0	0	0	0	3465	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	18%	2%	67%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	49	1	4	13	0	0	0	0	0	813	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	17	0	0	0	0	0	839	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	44	1	4	12	0	0	0	0	0	732	23
Future Vol, veh/h	0	44	1	4	12	0	0	0	0	0	732	23
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	18	2	67	2	2	2	2	2	2	3	24
Mvmt Flow	0	49	1	4	13	0	0	0	0	0	813	26

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	826	420	431	839	-			0	0	0
Stage 1	-	826	-	0	0	-			-	-	-
Stage 2	-	0	-	431	839	-			-	-	-
Critical Hdwy	-	6.86	6.94	8.84	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.86	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	7.84	5.54	-			-	-	-
Follow-up Hdwy	-	4.18	3.32	4.17	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	278	582	381	300	0			-	-	-
Stage 1	0	349	-	-	-	0			-	-	-
Stage 2	0	-	-	429	379	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	278	582	336	300	-			-	-	-
Mov Cap-2 Maneuver	-	326	-	349	353	-			-	-	-
Stage 1	-	349	-	-	-	-			-	-	-
Stage 2	-	-	-	368	379	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	17.9	15.8	0
HCM LOS	C	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	329	352	-	-	-
HCM Lane V/C Ratio	0.152	0.051	-	-	-
HCM Control Delay (s)	17.9	15.8	0	-	-
HCM Lane LOS	C	C	A	-	-
HCM 95th %tile Q(veh)	0.5	0.2	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	131	0	0	0	0
Future Volume (vph)	45	131	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.987				
Satd. Flow (prot)	0	3353	0	0	0	0
Flt Permitted		0.987				
Satd. Flow (perm)	0	3353	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	2%	2%	2%
Adj. Flow (vph)	50	146	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	196	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	131	0	216	190	0
Future Volume (vph)	0	131	0	216	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3438	0	2707	1719	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3438	0	2707	1719	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	2%	5%	5%	2%
Adj. Flow (vph)	0	146	0	240	211	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	146	0	240	211	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1	0	0	16	1	0	1255	6	0	0	0
Future Volume (vph)	43	1	0	0	16	1	0	1255	6	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.993			0.999				
Flt Protected		0.953										
Satd. Flow (prot)	0	1526	0	0	1610	0	0	3403	0	0	0	0
Flt Permitted		0.953										
Satd. Flow (perm)	0	1526	0	0	1610	0	0	3403	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	19%	2%	2%	2%	18%	2%	2%	6%	2%	2%	2%	2%
Adj. Flow (vph)	48	1	0	0	18	1	0	1394	7	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	19	0	0	1401	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.7%		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	43	1	0	0	16	1	0	1255	6	0	0	0
Future Vol, veh/h	43	1	0	0	16	1	0	1255	6	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	19	2	2	2	18	2	2	6	2	2	2	2
Mvmt Flow	48	1	0	0	18	1	0	1394	7	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	706	1401	-	-	1398	701	0	0	0
Stage 1	0	0	-	-	1398	-	-	-	-
Stage 2	706	1401	-	-	0	-	-	-	-
Critical Hdwy	7.88	6.54	-	-	6.86	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.86	-	-	-	-
Critical Hdwy Stg 2	6.88	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.69	4.02	-	-	4.18	3.32	2.22	-	-
Pot Cap-1 Maneuver	292	139	0	0	121	381	-	-	-
Stage 1	-	-	0	0	179	-	-	-	-
Stage 2	356	205	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	258	139	-	-	121	381	-	-	-
Mov Cap-2 Maneuver	258	139	-	-	121	-	-	-	-
Stage 1	-	-	-	-	179	-	-	-	-
Stage 2	320	205	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	22.6	38.5	0
HCM LOS	C	E	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	253	126
HCM Lane V/C Ratio	-	-	-	0.193	0.15
HCM Control Delay (s)	0	-	-	22.6	38.5
HCM Lane LOS	A	-	-	C	E
HCM 95th %tile Q(veh)	-	-	-	0.7	0.5

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	3	4	48	114	20
Future Volume (vph)	15	3	4	48	114	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1597	1583	1444	1792	1792	1468
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1597	1583	1444	1792	1792	1468
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	2%	25%	6%	6%	10%
Adj. Flow (vph)	17	3	4	53	127	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	3	4	53	127	22
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	3	4	48	114	20
Future Vol, veh/h	15	3	4	48	114	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	13	2	25	6	6	10
Mvmt Flow	17	3	4	53	127	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	188	127	149	0	-	0
Stage 1	127	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.53	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	777	923	1303	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	775	923	1303	-	-	-
Mov Cap-2 Maneuver	775	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1303	-	775	923	-	-
HCM Lane V/C Ratio	0.003	-	0.022	0.004	-	-
HCM Control Delay (s)	7.8	-	9.7	8.9	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1077	85	3	635	19	47	23	6	8	29	57
Future Volume (vph)	43	1077	85	3	635	19	47	23	6	8	29	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991			0.996			0.989			0.918	
Flt Protected		0.998						0.970			0.996	
Satd. Flow (prot)	0	1807	0	0	1762	0	0	1725	0	0	1573	0
Flt Permitted		0.998						0.970			0.996	
Satd. Flow (perm)	0	1807	0	0	1762	0	0	1725	0	0	1573	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	5%	50%	7%	14%	3%	12%	2%	33%	5%	10%
Adj. Flow (vph)	48	1197	94	3	706	21	52	26	7	9	32	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1339	0	0	730	0	0	85	0	0	104	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 110.4%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	146.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	1077	85	3	635	19	47	23	6	8	29	57
Future Vol, veh/h	43	1077	85	3	635	19	47	23	6	8	29	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	5	50	7	14	3	12	2	33	5	10
Mvmt Flow	48	1197	94	3	706	21	52	26	7	9	32	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	727	0	0	1291	0	0	2110	2073	1244	2080	2110	717
Stage 1	-	-	-	-	-	-	1340	1340	-	723	723	-
Stage 2	-	-	-	-	-	-	770	733	-	1357	1387	-
Critical Hdwy	4.12	-	-	4.6	-	-	7.13	6.62	6.22	7.43	6.55	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Follow-up Hdwy	2.218	-	-	2.65	-	-	3.527	4.108	3.318	3.797	4.045	3.39
Pot Cap-1 Maneuver	876	-	-	404	-	-	~ 37	51	213	32	50	416
Stage 1	-	-	-	-	-	-	187	211	-	373	426	-
Stage 2	-	-	-	-	-	-	392	412	-	158	207	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	876	-	-	404	-	-	~ 8	40	213	13	39	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 8	40	-	13	39	-
Stage 1	-	-	-	-	-	-	149	169	-	298	420	-
Stage 2	-	-	-	-	-	-	303	407	-	104	165	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	$ 3335.2	$ 464.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	12	876	-	-	404	-	-	63
HCM Lane V/C Ratio	7.037	0.055	-	-	0.008	-	-	1.658
HCM Control Delay (s)	$ 3335.2	9.3	0	-	14	0	-	$ 464.2
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	11.8	0.2	-	-	0	-	-	9.4

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	1	22	0	22	0	156	26	29	225	0
Future Volume (vph)	0	1	1	22	0	22	0	156	26	29	225	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.932			0.981				
Flt Protected					0.976						0.994	
Satd. Flow (prot)	0	1736	0	0	1694	0	0	1740	0	0	1784	0
Flt Permitted					0.976						0.994	
Satd. Flow (perm)	0	1736	0	0	1694	0	0	1740	0	0	1784	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	8%	2%	5%	6%	2%
Adj. Flow (vph)	0	1	1	24	0	24	0	173	29	32	250	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	48	0	0	202	0	0	282	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	1	22	0	22	0	156	26	29	225	0
Future Vol, veh/h	0	1	1	22	0	22	0	156	26	29	225	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	5	6	2
Mvmt Flow	0	1	1	24	0	24	0	173	29	32	250	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	514	516	250	503	502	188	250	0	0	202	0	0
Stage 1	314	314	-	188	188	-	-	-	-	-	-	-
Stage 2	200	202	-	315	314	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.245	-	-
Pot Cap-1 Maneuver	471	463	789	479	471	854	1316	-	-	1352	-	-
Stage 1	697	656	-	814	745	-	-	-	-	-	-	-
Stage 2	802	734	-	696	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	448	450	789	468	458	854	1316	-	-	1352	-	-
Mov Cap-2 Maneuver	448	450	-	468	458	-	-	-	-	-	-	-
Stage 1	697	638	-	814	745	-	-	-	-	-	-	-
Stage 2	779	734	-	675	638	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.3	11.5	0	0.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1316	-	-	573	605	1352	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.081	0.024	-	-
HCM Control Delay (s)	0	-	-	11.3	11.5	7.7	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	18	4	1	40	211	23	1	200	57
Future Volume (vph)	0	0	0	18	4	1	40	211	23	1	200	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.995			0.988			0.970	
Flt Protected					0.962			0.993				
Satd. Flow (prot)	0	0	0	0	1783	0	0	1800	0	0	1772	0
Flt Permitted					0.962			0.993				
Satd. Flow (perm)	0	0	0	0	1783	0	0	1800	0	0	1772	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%	11%
Adj. Flow (vph)	0	0	0	20	4	1	44	234	26	1	222	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	25	0	0	304	0	0	286	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	18	4	1	40	211	23	1	200	57
Future Vol, veh/h	0	0	0	18	4	1	40	211	23	1	200	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	11
Mvmt Flow	0	0	0	20	4	1	44	234	26	1	222	63

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	591	622	247	285	0	0	260	0	0
Stage 1	335	335	-	-	-	-	-	-	-
Stage 2	256	287	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	470	403	792	1277	-	-	1304	-	-
Stage 1	725	643	-	-	-	-	-	-	-
Stage 2	787	674	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	451	0	792	1277	-	-	1304	-	-
Mov Cap-2 Maneuver	451	0	-	-	-	-	-	-	-
Stage 1	696	0	-	-	-	-	-	-	-
Stage 2	786	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	461	1304	-	-
HCM Lane V/C Ratio	0.035	-	-	0.055	0.001	-	-
HCM Control Delay (s)	7.9	0	-	13.3	7.8	0	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	0	76	0	0	0	0	218	79	0	218	0
Future Volume (vph)	56	0	76	0	0	0	0	218	79	0	218	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.922						0.960				
Flt Protected		0.979										
Satd. Flow (prot)	0	1681	0	0	0	0	0	3356	0	0	1863	0
Flt Permitted		0.979										
Satd. Flow (perm)	0	1681	0	0	0	0	0	3356	0	0	1863	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	2%
Adj. Flow (vph)	62	0	84	0	0	0	0	242	88	0	242	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	0	0	0	330	0	0	242	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	0	76	0	0	0	0	218	79	0	218	0
Future Vol, veh/h	56	0	76	0	0	0	0	218	79	0	218	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	3	4	2	2	2
Mvmt Flow	62	0	84	0	0	0	0	242	88	0	242	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	363	572	242	-	0	0	-	-	0
Stage 1	242	242	-	-	-	-	-	-	-
Stage 2	121	330	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	-	-	-
Pot Cap-1 Maneuver	623	429	796	0	-	-	0	-	0
Stage 1	797	705	-	0	-	-	0	-	0
Stage 2	892	645	-	0	-	-	0	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	623	0	796	-	-	-	-	-	-
Mov Cap-2 Maneuver	623	0	-	-	-	-	-	-	-
Stage 1	797	0	-	-	-	-	-	-	-
Stage 2	892	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	1383	-
HCM Lane V/C Ratio	-	-	0.106	-
HCM Control Delay (s)	-	-	7.9	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	0	0	248	294	0
Future Volume (vph)	48	0	0	248	294	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1687	0	0	3505	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	1687	0	0	3505	1863	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	2%	2%	3%	2%	2%
Adj. Flow (vph)	53	0	0	276	327	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	53	0	0	276	327	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	0	0	248	294	0
Future Vol, veh/h	48	0	0	248	294	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	7	2	2	3	2	2
Mvmt Flow	53	0	0	276	327	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	465	-	-	0	-	0
Stage 1	327	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.705	-	-	-	-	-
Critical Hdwy Stg 1	5.505	-	-	-	-	-
Critical Hdwy Stg 2	5.905	-	-	-	-	-
Follow-up Hdwy	3.5665	-	-	-	-	-
Pot Cap-1 Maneuver	530	0	0	-	-	0
Stage 1	717	0	0	-	-	0
Stage 2	861	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	530	-	-	-	-	-
Mov Cap-2 Maneuver	530	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	861	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	530	-
HCM Lane V/C Ratio	-	0.101	-
HCM Control Delay (s)	-	12.6	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	3	253	61	63	351
Future Volume (vph)	10	3	253	61	63	351
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.971		0.971			
Flt Protected	0.962					0.992
Satd. Flow (prot)	1740	0	3390	0	0	3511
Flt Permitted	0.962					0.992
Satd. Flow (perm)	1740	0	3390	0	0	3511
Link Speed (mph)	25		45			45
Link Distance (ft)	1053		1007			534
Travel Time (s)	28.7		15.3			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	5%	2%	2%
Adj. Flow (vph)	11	3	281	68	70	390
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	349	0	0	460
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	3	253	61	63	351
Future Vol, veh/h	10	3	253	61	63	351
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	5	2	2
Mvmt Flow	11	3	281	68	70	390

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	616	141	0	-	281	0
Stage 1	281	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	422	881	-	0	1278	-
Stage 1	741	-	-	0	-	-
Stage 2	697	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	392	881	-	-	1278	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	648	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.3	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	450	1278	-
HCM Lane V/C Ratio	-	0.032	0.055	-
HCM Control Delay (s)	-	13.3	8	0.2
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0.1	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	39	834	550	0	0	58
Future Volume (vph)	39	834	550	0	0	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1583	1810	1759	0	0	1467
Flt Permitted	0.950					
Satd. Flow (perm)	1583	1810	1759	0	0	1467
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	5%	8%	2%	2%	12%
Adj. Flow (vph)	43	927	611	0	0	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	927	611	0	0	64
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	834	550	0	0	58
Future Vol, veh/h	39	834	550	0	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	5	8	2	2	12
Mvmt Flow	43	927	611	0	0	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	611	0	-	0	-	611
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.24	-	-	-	-	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.326	-	-	-	-	3.408
Pot Cap-1 Maneuver	912	-	-	0	0	476
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	912	-	-	-	-	476
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	912	-	-	476
HCM Lane V/C Ratio	0.048	-	-	0.135
HCM Control Delay (s)	9.1	-	-	13.7
HCM Lane LOS	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	35	3	0	16	0	0	0	0	1	1433	43
Future Volume (vph)	0	35	3	0	16	0	0	0	0	1	1433	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.990									0.996	
Flt Protected												
Satd. Flow (prot)	0	1695	0	0	1863	0	0	0	0	0	3475	0
Flt Permitted												
Satd. Flow (perm)	0	1695	0	0	1863	0	0	0	0	0	3475	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	39	3	0	18	0	0	0	0	1	1592	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	0	0	18	0	0	0	0	0	1641	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	35	3	0	16	0	0	0	0	1	1433	43
Future Vol, veh/h	0	35	3	0	16	0	0	0	0	1	1433	43
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	39	3	0	18	0	0	0	0	1	1592	48

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	1618	820	818	1642	-			0	0	0
Stage 1	-	1618	-	0	0	-			-	-	-
Stage 2	-	0	-	818	1642	-			-	-	-
Critical Hdwy	-	6.66	7.9	7.54	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.66	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-
Follow-up Hdwy	-	4.08	3.8	3.52	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	97	234	268	99	0			-	-	-
Stage 1	0	151	-	-	-	0			-	-	-
Stage 2	0	-	-	336	156	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	97	234	199	99	-			-	-	-
Mov Cap-2 Maneuver	-	123	-	230	125	-			-	-	-
Stage 1	-	151	-	-	-	-			-	-	-
Stage 2	-	-	-	246	156	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	46.4	38.5	
HCM LOS	E	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	128	125	-	-	-
HCM Lane V/C Ratio	0.33	0.142	-	-	-
HCM Control Delay (s)	46.4	38.5	-	-	-
HCM Lane LOS	E	E	-	-	-
HCM 95th %tile Q(veh)	1.3	0.5	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	48	124	0	0	0	0
Future Volume (vph)	48	124	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.986				
Satd. Flow (prot)	0	3443	0	0	0	0
Flt Permitted		0.986				
Satd. Flow (perm)	0	3443	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Adj. Flow (vph)	53	138	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	191	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	124	0	248	294	0
Future Volume (vph)	0	124	0	248	294	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	0	2760	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	0	2760	1770	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%
Adj. Flow (vph)	0	138	0	276	327	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	138	0	276	327	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	2	0	0	10	1	6	916	8	0	0	0
Future Volume (vph)	34	2	0	0	10	1	6	916	8	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.989			0.999				
Flt Protected		0.955										
Satd. Flow (prot)	0	1685	0	0	1842	0	0	3502	0	0	0	0
Flt Permitted		0.955										
Satd. Flow (perm)	0	1685	0	0	1842	0	0	3502	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	38	2	0	0	11	1	7	1018	9	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	40	0	0	12	0	0	1034	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.1%		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	34	2	0	0	10	1	6	916	8	0	0	0
Future Vol, veh/h	34	2	0	0	10	1	6	916	8	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	8	2	2	2	2	2	2	3	2	2	2	2
Mvmt Flow	38	2	0	0	11	1	7	1018	9	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	529	1041	-	-	1037	514	0	0	0
Stage 1	0	0	-	-	1037	-	-	-	-
Stage 2	529	1041	-	-	0	-	-	-	-
Critical Hdwy	7.66	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.66	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.58	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	420	229	0	0	230	505	-	-	-
Stage 1	-	-	0	0	307	-	-	-	-
Stage 2	486	305	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	404	229	-	-	230	505	-	-	-
Mov Cap-2 Maneuver	404	229	-	-	230	-	-	-	-
Stage 1	-	-	-	-	307	-	-	-	-
Stage 2	467	305	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	15.3	20.7	
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	388	242
HCM Lane V/C Ratio	-	-	-	0.103	0.051
HCM Control Delay (s)	-	-	-	15.3	20.7
HCM Lane LOS	-	-	-	C	C
HCM 95th %tile Q(veh)	-	-	-	0.3	0.2

2035 Build-out Conditions

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	153	113	43	140	108	61
Future Volume (vph)	153	113	43	140	108	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1444	1792	1759	1346
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1444	1792	1759	1346
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Confl. Peds. (#/hr)			3			3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	25%	6%	8%	20%
Adj. Flow (vph)	170	126	48	156	120	68
Shared Lane Traffic (%)						
Lane Group Flow (vph)	170	126	48	156	120	68
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	153	113	43	140	108	61
Future Vol, veh/h	153	113	43	140	108	61
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	25	6	8	20
Mvmt Flow	170	126	48	156	120	68

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	375	123	191	0	-	0
Stage 1	123	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	626	928	1256	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	598	925	1252	-	-	-
Mov Cap-2 Maneuver	598	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1252	-	598	925	-	-
HCM Lane V/C Ratio	0.038	-	0.284	0.136	-	-
HCM Control Delay (s)	8	-	13.4	9.5	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0.5	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Future Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.998			0.978			0.926	
Flt Protected		0.997			0.999			0.972			0.998	
Satd. Flow (prot)	0	1686	0	0	1738	0	0	1741	0	0	1685	0
Flt Permitted		0.997			0.999			0.972			0.998	
Satd. Flow (perm)	0	1686	0	0	1738	0	0	1741	0	0	1685	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	11%	8%	50%	8%	11%	5%	2%	2%	2%	6%	3%
Adj. Flow (vph)	37	542	96	26	1067	13	228	99	63	4	47	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	675	0	0	1106	0	0	390	0	0	112	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 91.3%		ICU Level of Service F	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1282.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	488	86	23	960	12	205	89	57	4	42	55
Future Vol, veh/h	33	488	86	23	960	12	205	89	57	4	42	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	4	11	8	50	8	11	5	2	2	2	6	3
Mvmt Flow	37	542	96	26	1067	13	228	99	63	4	47	61

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1080	0	0	638	0	0	1844	1796	590	1871	1838	1074
Stage 1	-	-	-	-	-	-	664	664	-	1126	1126	-
Stage 2	-	-	-	-	-	-	1180	1132	-	745	712	-
Critical Hdwy	4.14	-	-	4.6	-	-	7.15	6.52	6.22	7.12	6.56	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.12	5.56	-
Follow-up Hdwy	2.236	-	-	2.65	-	-	3.545	4.018	3.318	3.518	4.054	3.327
Pot Cap-1 Maneuver	638	-	-	753	-	-	~ 57	~ 80	508	55	74	266
Stage 1	-	-	-	-	-	-	445	458	-	249	275	-
Stage 2	-	-	-	-	-	-	229	278	-	406	430	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	638	-	-	753	-	-	~ 15	~ 66	508	-	61	266
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 15	~ 66	-	-	61	-
Stage 1	-	-	-	-	-	-	405	416	-	226	251	-
Stage 2	-	-	-	-	-	-	~ 131	254	-	246	391	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.2	$ 7504.6	
HCM LOS			F	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	638	-	-	753	-	-	-
HCM Lane V/C Ratio	16.957	0.057	-	-	0.034	-	-	-
HCM Control Delay (s)	$ 7504.6	11	0	-	9.9	0	-	-
HCM Lane LOS	F	B	A	-	A	A	-	-
HCM 95th %tile Q(veh)	48.9	0.2	-	-	0.1	-	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	0	17	0	32	0	238	14	41	300	0
Future Volume (vph)	1	1	0	17	0	32	0	238	14	41	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.912			0.992				
Flt Protected		0.976			0.983						0.994	
Satd. Flow (prot)	0	1818	0	0	1597	0	0	1766	0	0	1797	0
Flt Permitted		0.976			0.983						0.994	
Satd. Flow (perm)	0	1818	0	0	1597	0	0	1766	0	0	1797	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	2%	6%	2%	7%	2%	13%	4%	2%
Adj. Flow (vph)	1	1	0	19	0	36	0	264	16	46	333	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	55	0	0	280	0	0	379	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	0	17	0	32	0	238	14	41	300	0
Future Vol, veh/h	1	1	0	17	0	32	0	238	14	41	300	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	2	6	2	7	2	13	4	2
Mvmt Flow	1	1	0	19	0	36	0	264	16	46	333	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	715	705	333	698	697	272	333	0	0	280	0	0
Stage 1	425	425	-	272	272	-	-	-	-	-	-	-
Stage 2	290	280	-	426	425	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.52	6.26	4.12	-	-	4.23	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.018	3.354	2.218	-	-	2.317	-	-
Pot Cap-1 Maneuver	346	361	709	347	365	757	1226	-	-	1222	-	-
Stage 1	607	586	-	721	685	-	-	-	-	-	-	-
Stage 2	718	679	-	595	586	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	318	344	709	334	348	757	1226	-	-	1222	-	-
Mov Cap-2 Maneuver	318	344	-	334	348	-	-	-	-	-	-	-
Stage 1	607	559	-	721	685	-	-	-	-	-	-	-
Stage 2	684	679	-	567	559	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	12.6	0	1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1226	-	-	330	526	1222	-	-
HCM Lane V/C Ratio	-	-	-	0.007	0.104	0.037	-	-
HCM Control Delay (s)	0	-	-	16	12.6	8.1	0	-
HCM Lane LOS	A	-	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	18	3	1	8	255	7	0	232	114
Future Volume (vph)	0	0	0	18	3	1	8	255	7	0	232	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994			0.996			0.955	
Flt Protected					0.960			0.999				
Satd. Flow (prot)	0	0	0	0	1694	0	0	1787	0	0	1717	0
Flt Permitted					0.960			0.999				
Satd. Flow (perm)	0	0	0	0	1694	0	0	1787	0	0	1717	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	2%	2%	2%	6%	2%	2%	4%	9%
Adj. Flow (vph)	0	0	0	20	3	1	9	283	8	0	258	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	24	0	0	300	0	0	385	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.3%		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	0	18	3	1	8	255	7	0	232	114
Future Vol, veh/h	0	0	0	18	3	1	8	255	7	0	232	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	2	2	2	6	2	2	4	9
Mvmt Flow	0	0	0	20	3	1	9	283	8	0	258	127

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	627	690	287	385	0	0	291	0	0
Stage 1	305	305	-	-	-	-	-	-	-
Stage 2	322	385	-	-	-	-	-	-	-
Critical Hdwy	6.48	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.48	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.48	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	438	368	752	1173	-	-	1271	-	-
Stage 1	734	662	-	-	-	-	-	-	-
Stage 2	721	611	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	434	0	752	1173	-	-	1271	-	-
Mov Cap-2 Maneuver	434	0	-	-	-	-	-	-	-
Stage 1	727	0	-	-	-	-	-	-	-
Stage 2	721	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1173	-	-	444	1271	-	-
HCM Lane V/C Ratio	0.008	-	-	0.055	-	-	-
HCM Control Delay (s)	8.1	0	-	13.6	0	-	-
HCM Lane LOS	A	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	33	0	0	0	0	220	74	0	250	0
Future Volume (vph)	51	0	33	0	0	0	0	220	74	0	250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.947						0.962				
Flt Protected		0.971										
Satd. Flow (prot)	0	1600	0	0	0	0	0	3292	0	0	1810	0
Flt Permitted		0.971										
Satd. Flow (perm)	0	1600	0	0	0	0	0	3292	0	0	1810	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	8%	2%	2%	2%	2%	5%	7%	2%	5%	2%
Adj. Flow (vph)	57	0	37	0	0	0	0	244	82	0	278	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	0	0	0	326	0	0	278	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.7%		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	51	0	33	0	0	0	0	220	74	0	250	0
Future Vol, veh/h	51	0	33	0	0	0	0	220	74	0	250	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	10	2	8	2	2	2	2	5	7	2	5	2
Mvmt Flow	57	0	37	0	0	0	0	244	82	0	278	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	400	604	278				-	0	0	-	-	0
Stage 1	278	278	-				-	-	-	-	-	-
Stage 2	122	326	-				-	-	-	-	-	-
Critical Hdwy	6.75	6.53	6.32				-	-	-	-	-	-
Critical Hdwy Stg 1	5.55	5.53	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.95	5.53	-				-	-	-	-	-	-
Follow-up Hdwy	3.595	4.019	3.376				-	-	-	-	-	-
Pot Cap-1 Maneuver	574	412	744				0	-	-	0	-	0
Stage 1	747	680	-				0	-	-	0	-	0
Stage 2	869	648	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	574	0	744				-	-	-	-	-	-
Mov Cap-2 Maneuver	574	0	-				-	-	-	-	-	-
Stage 1	747	0	-				-	-	-	-	-	-
Stage 2	869	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	1894	-
HCM Lane V/C Ratio	-	-	0.049	-
HCM Control Delay (s)	-	-	7	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	0	229	283	0
Future Volume (vph)	65	0	0	229	283	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1641	0	0	3438	1810	0
Flt Permitted	0.950					
Satd. Flow (perm)	1641	0	0	3438	1810	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	2%	2%	5%	5%	2%
Adj. Flow (vph)	72	0	0	254	314	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	254	314	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	0	0	229	283	0
Future Vol, veh/h	65	0	0	229	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	10	2	2	5	5	2
Mvmt Flow	72	0	0	254	314	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	441	-	-	0	-	0
Stage 1	314	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.75	-	-	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.95	-	-	-	-	-
Follow-up Hdwy	3.595	-	-	-	-	-
Pot Cap-1 Maneuver	542	0	0	-	-	0
Stage 1	719	0	0	-	-	0
Stage 2	864	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	542	-	-	-	-	-
Mov Cap-2 Maneuver	542	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	542	-
HCM Lane V/C Ratio	-	0.133	-
HCM Control Delay (s)	-	12.7	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.5	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	225	72	81	328
Future Volume (vph)	3	0	225	72	81	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.964			
Flt Protected	0.950					0.990
Satd. Flow (prot)	1770	0	3362	0	0	3341
Flt Permitted	0.950					0.990
Satd. Flow (perm)	1770	0	3362	0	0	3341
Link Speed (mph)	25		45			45
Link Distance (ft)	1055		1007			534
Travel Time (s)	28.8		15.3			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	2%	19%	4%
Adj. Flow (vph)	3	0	250	80	90	364
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	330	0	0	454
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	225	72	81	328
Future Vol, veh/h	3	0	225	72	81	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	4	2	19	4
Mvmt Flow	3	0	250	80	90	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	612	125	0	-	250	0
Stage 1	250	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.48	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.39	-
Pot Cap-1 Maneuver	425	902	-	0	1198	-
Stage 1	768	-	-	0	-	-
Stage 2	675	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	385	902	-	-	1198	-
Mov Cap-2 Maneuver	385	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	385	1198	-
HCM Lane V/C Ratio	-	0.009	0.075	-
HCM Control Delay (s)	-	14.4	8.2	0.3
HCM Lane LOS	-	B	A	A
HCM 95th %tile Q(veh)	-	0	0.2	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	82	449	731	0	0	49
Future Volume (vph)	82	449	731	0	0	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1530	1712	1759	0	0	1429
Flt Permitted	0.950					
Satd. Flow (perm)	1530	1712	1759	0	0	1429
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	18%	11%	8%	2%	2%	15%
Adj. Flow (vph)	91	499	812	0	0	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	499	812	0	0	54
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	449	731	0	0	49
Future Vol, veh/h	82	449	731	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	18	11	8	2	2	15
Mvmt Flow	91	499	812	0	0	54

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	812	0	-	0	-	812
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.28	-	-	-	-	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.362	-	-	-	-	3.435
Pot Cap-1 Maneuver	749	-	-	0	0	360
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	749	-	-	-	-	360
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	749	-	-	360
HCM Lane V/C Ratio	0.122	-	-	0.151
HCM Control Delay (s)	10.5	-	-	16.8
HCM Lane LOS	B	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	0.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	81	1	4	12	0	0	0	0	0	732	36
Future Volume (vph)	0	81	1	4	12	0	0	0	0	0	732	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.999									0.993	
Flt Protected					0.988							
Satd. Flow (prot)	0	1611	0	0	1600	0	0	0	0	0	3447	0
Flt Permitted					0.988							
Satd. Flow (perm)	0	1611	0	0	1600	0	0	0	0	0	3447	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	18%	2%	67%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	90	1	4	13	0	0	0	0	0	813	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	17	0	0	0	0	0	853	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	81	1	4	12	0	0	0	0	0	732	36
Future Vol, veh/h	0	81	1	4	12	0	0	0	0	0	732	36
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	18	2	67	2	2	2	2	2	2	3	24
Mvmt Flow	0	90	1	4	13	0	0	0	0	0	813	40

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	833	427	452	853	-			0	0	0
Stage 1	-	833	-	0	0	-			-	-	-
Stage 2	-	0	-	452	853	-			-	-	-
Critical Hdwy	-	6.86	6.94	8.84	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.86	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	7.84	5.54	-			-	-	-
Follow-up Hdwy	-	4.18	3.32	4.17	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	275	576	365	295	0			-	-	-
Stage 1	0	346	-	-	-	0			-	-	-
Stage 2	0	-	-	414	374	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	275	576	286	295	-			-	-	-
Mov Cap-2 Maneuver	-	323	-	290	348	-			-	-	-
Stage 1	-	346	-	-	-	-			-	-	-
Stage 2	-	-	-	306	374	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	20.3	16.5	0
HCM LOS	C	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	325	331	-	-	-
HCM Lane V/C Ratio	0.28	0.054	-	-	-
HCM Control Delay (s)	20.3	16.5	0	-	-
HCM Lane LOS	C	C	A	-	-
HCM 95th %tile Q(veh)	1.1	0.2	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	74	56	20	282	119	26
Future Volume (vph)	74	56	20	282	119	26
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	0.942				0.976	
Flt Protected	0.972			0.997		
Satd. Flow (prot)	1706	0	0	1807	1695	0
Flt Permitted	0.972			0.997		
Satd. Flow (perm)	1706	0	0	1807	1695	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	1002			860	504	
Travel Time (s)	27.3			13.0	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	11%	2%
Adj. Flow (vph)	82	62	22	313	132	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	0	335	161	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	74	56	20	282	119	26
Future Vol, veh/h	74	56	20	282	119	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	11	2
Mvmt Flow	82	62	22	313	132	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	504	147	161	0	-	0
Stage 1	147	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	528	900	1418	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	518	900	1418	-	-	-
Mov Cap-2 Maneuver	518	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	634	-	-
HCM Lane V/C Ratio	0.016	-	0.228	-	-
HCM Control Delay (s)	7.6	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	131	0	0	0	0
Future Volume (vph)	65	131	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.984				
Satd. Flow (prot)	0	3331	0	0	0	0
Flt Permitted		0.984				
Satd. Flow (perm)	0	3331	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	10%	5%	2%	2%	2%	2%
Adj. Flow (vph)	72	146	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	218	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	131	0	229	283	0
Future Volume (vph)	0	131	0	229	283	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3438	0	2707	1719	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3438	0	2707	1719	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	5%	2%	5%	5%	2%
Adj. Flow (vph)	0	146	0	254	314	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	146	0	254	314	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1	0	0	16	1	0	1255	6	0	0	0
Future Volume (vph)	80	1	0	0	16	1	0	1255	6	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.993			0.999				
Flt Protected		0.953										
Satd. Flow (prot)	0	1524	0	0	1610	0	0	3403	0	0	0	0
Flt Permitted		0.953										
Satd. Flow (perm)	0	1524	0	0	1610	0	0	3403	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	19%	2%	2%	2%	18%	2%	2%	6%	2%	2%	2%	2%
Adj. Flow (vph)	89	1	0	0	18	1	0	1394	7	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	19	0	0	1401	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	1	0	0	16	1	0	1255	6	0	0	0
Future Vol, veh/h	80	1	0	0	16	1	0	1255	6	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	19	2	2	2	18	2	2	6	2	2	2	2
Mvmt Flow	89	1	0	0	18	1	0	1394	7	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	706	1401	-	-	1398	701	0	0	0
Stage 1	0	0	-	-	1398	-	-	-	-
Stage 2	706	1401	-	-	0	-	-	-	-
Critical Hdwy	7.88	6.54	-	-	6.86	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.86	-	-	-	-
Critical Hdwy Stg 2	6.88	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.69	4.02	-	-	4.18	3.32	2.22	-	-
Pot Cap-1 Maneuver	292	139	0	0	121	381	-	-	-
Stage 1	-	-	0	0	179	-	-	-	-
Stage 2	356	205	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	258	139	-	-	121	381	-	-	-
Mov Cap-2 Maneuver	258	139	-	-	121	-	-	-	-
Stage 1	-	-	-	-	179	-	-	-	-
Stage 2	320	205	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	26.6	38.5	0
HCM LOS	D	E	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	255	126
HCM Lane V/C Ratio	-	-	-	0.353	0.15
HCM Control Delay (s)	0	-	-	26.6	38.5
HCM Lane LOS	A	-	-	D	E
HCM 95th %tile Q(veh)	-	-	-	1.5	0.5

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	107	82	139	115	154	177
Future Volume (vph)	107	82	139	115	154	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75	0	175			200
Storage Lanes	1	1	1			1
Taper Length (ft)	50		175			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1597	1583	1444	1792	1792	1468
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1597	1583	1444	1792	1792	1468
Link Speed (mph)	25			45	45	
Link Distance (ft)	1000			1005	1015	
Travel Time (s)	27.3			15.2	15.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	2%	25%	6%	6%	10%
Adj. Flow (vph)	119	91	154	128	171	197
Shared Lane Traffic (%)						
Lane Group Flow (vph)	119	91	154	128	171	197
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	107	82	139	115	154	177
Future Vol, veh/h	107	82	139	115	154	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	175	-	-	200
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	13	2	25	6	6	10
Mvmt Flow	119	91	154	128	171	197

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	607	171	368	0	-	0
Stage 1	171	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.53	6.22	4.35	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.318	2.425	-	-	-
Pot Cap-1 Maneuver	442	873	1074	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	379	873	1074	-	-	-
Mov Cap-2 Maneuver	379	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	629	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1074	-	379	873	-	-
HCM Lane V/C Ratio	0.144	-	0.314	0.104	-	-
HCM Control Delay (s)	8.9	-	18.8	9.6	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	1.3	0.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Future Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.996			0.972			0.952	
Flt Protected		0.998			0.995			0.975			0.997	
Satd. Flow (prot)	0	1785	0	0	1691	0	0	1709	0	0	1667	0
Flt Permitted		0.998			0.995			0.975			0.997	
Satd. Flow (perm)	0	1785	0	0	1691	0	0	1709	0	0	1667	0
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	5%	50%	7%	14%	3%	12%	2%	33%	5%	10%
Adj. Flow (vph)	48	1197	220	78	706	21	124	70	51	9	107	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1465	0	0	805	0	0	245	0	0	179	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 109.4%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	1077	198	70	635	19	112	63	46	8	96	57
Future Vol, veh/h	43	1077	198	70	635	19	112	63	46	8	96	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	4	5	50	7	14	3	12	2	33	5	10
Mvmt Flow	48	1197	220	78	706	21	124	70	51	9	107	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	727	0	0	1417	0	0	2361	2286	1307	2337	2386	717
Stage 1	-	-	-	-	-	-	1403	1403	-	873	873	-
Stage 2	-	-	-	-	-	-	958	883	-	1464	1513	-
Critical Hdwy	4.12	-	-	4.6	-	-	7.13	6.62	6.22	7.43	6.55	6.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.62	-	6.43	5.55	-
Follow-up Hdwy	2.218	-	-	2.65	-	-	3.527	4.108	3.318	3.797	4.045	3.39
Pot Cap-1 Maneuver	876	-	-	358	-	-	~ 24	~ 37	195	21	~ 33	416
Stage 1	-	-	-	-	-	-	172	197	-	305	364	-
Stage 2	-	-	-	-	-	-	308	350	-	136	180	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	876	-	-	358	-	-	-	~ 17	195	-	~ 15	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 17	-	-	~ 15	-
Stage 1	-	-	-	-	-	-	~ 122	140	-	216	230	-
Stage 2	-	-	-	-	-	-	~ 89	222	-	36	128	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	876	-	-	358	-	-	-
HCM Lane V/C Ratio	-	0.055	-	-	0.217	-	-	-
HCM Control Delay (s)	-	9.3	0	-	17.8	0	-	-
HCM Lane LOS	-	A	A	-	C	A	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-	0.8	-	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	1	22	0	44	0	336	26	42	331	0
Future Volume (vph)	0	1	1	22	0	44	0	336	26	42	331	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.932			0.909			0.990				
Flt Protected					0.984						0.994	
Satd. Flow (prot)	0	1736	0	0	1666	0	0	1749	0	0	1784	0
Flt Permitted					0.984						0.994	
Satd. Flow (perm)	0	1736	0	0	1666	0	0	1749	0	0	1784	0
Link Speed (mph)		25			45			45			45	
Link Distance (ft)		1020			1063			1010			1092	
Travel Time (s)		27.8			16.1			15.3			16.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	8%	2%	5%	6%	2%
Adj. Flow (vph)	0	1	1	24	0	49	0	373	29	47	368	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2	0	0	73	0	0	402	0	0	415	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	1	22	0	44	0	336	26	42	331	0
Future Vol, veh/h	0	1	1	22	0	44	0	336	26	42	331	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	5	6	2
Mvmt Flow	0	1	1	24	0	49	0	373	29	47	368	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	874	864	368	851	850	388	368	0	0	402	0	0
Stage 1	462	462	-	388	388	-	-	-	-	-	-	-
Stage 2	412	402	-	463	462	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.245	-	-
Pot Cap-1 Maneuver	270	292	677	280	298	660	1191	-	-	1141	-	-
Stage 1	580	565	-	636	609	-	-	-	-	-	-	-
Stage 2	617	600	-	579	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	240	277	677	268	283	660	1191	-	-	1141	-	-
Mov Cap-2 Maneuver	240	277	-	268	283	-	-	-	-	-	-	-
Stage 1	580	536	-	636	609	-	-	-	-	-	-	-
Stage 2	571	600	-	547	536	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	14.7	0	0.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	393	444	1141	-	-
HCM Lane V/C Ratio	-	-	-	0.006	0.165	0.041	-	-
HCM Control Delay (s)	0	-	-	14.2	14.7	8.3	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.6	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	18	4	1	40	391	23	1	266	97
Future Volume (vph)	0	0	0	18	4	1	40	391	23	1	266	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.995			0.993			0.964	
Flt Protected					0.962			0.996				
Satd. Flow (prot)	0	0	0	0	1783	0	0	1812	0	0	1754	0
Flt Permitted					0.962			0.996				
Satd. Flow (perm)	0	0	0	0	1783	0	0	1812	0	0	1754	0
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		1065			1045			143			1032	
Travel Time (s)		29.0			20.4			2.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%	11%
Adj. Flow (vph)	0	0	0	20	4	1	44	434	26	1	296	108
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	25	0	0	504	0	0	405	0
Sign Control		Free			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
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	0	18	4	1	40	391	23	1	266	97
Future Vol, veh/h	0	0	0	18	4	1	40	391	23	1	266	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	4	2	2	2	11
Mvmt Flow	0	0	0	20	4	1	44	434	26	1	296	108

Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	887	941	447	404	0	0	460	0	0
Stage 1	535	535	-	-	-	-	-	-	-
Stage 2	352	406	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	315	263	612	1155	-	-	1101	-	-
Stage 1	587	524	-	-	-	-	-	-	-
Stage 2	712	598	-	-	-	-	-	-	-
Platoon blocked, %					-	-		-	-
Mov Cap-1 Maneuver	299	0	612	1155	-	-	1101	-	-
Mov Cap-2 Maneuver	299	0	-	-	-	-	-	-	-
Stage 1	557	0	-	-	-	-	-	-	-
Stage 2	711	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1155	-	-	307	1101	-	-
HCM Lane V/C Ratio	0.038	-	-	0.083	0.001	-	-
HCM Control Delay (s)	8.2	0	-	17.8	8.3	0	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	0	76	0	0	0	0	330	79	0	284	0
Future Volume (vph)	124	0	76	0	0	0	0	330	79	0	284	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.949						0.971				
Flt Protected		0.970										
Satd. Flow (prot)	0	1715	0	0	0	0	0	3397	0	0	1863	0
Flt Permitted		0.970										
Satd. Flow (perm)	0	1715	0	0	0	0	0	3397	0	0	1863	0
Link Speed (mph)		30			25			45			45	
Link Distance (ft)		792			638			835			143	
Travel Time (s)		18.0			17.4			12.7			2.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	4%	2%	2%	2%
Adj. Flow (vph)	138	0	84	0	0	0	0	367	88	0	316	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	0	0	0	455	0	0	316	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	124	0	76	0	0	0	0	330	79	0	284	0
Future Vol, veh/h	124	0	76	0	0	0	0	330	79	0	284	0
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	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	3	4	2	2	2
Mvmt Flow	138	0	84	0	0	0	0	367	88	0	316	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	500	771	316	-	0	0	-	-	0
Stage 1	316	316	-	-	-	-	-	-	-
Stage 2	184	455	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	-	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	-	-	-
Pot Cap-1 Maneuver	515	330	724	0	-	-	0	-	0
Stage 1	738	654	-	0	-	-	0	-	0
Stage 2	830	568	-	0	-	-	0	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	515	0	724	-	-	-	-	-	-
Mov Cap-2 Maneuver	515	0	-	-	-	-	-	-	-
Stage 1	738	0	-	-	-	-	-	-	-
Stage 2	830	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	7.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	1905	-
HCM Lane V/C Ratio	-	-	0.117	-
HCM Control Delay (s)	-	-	7.1	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0.4	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	115	0	0	293	360	0
Future Volume (vph)	115	0	0	293	360	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1687	0	0	3505	1863	0
Flt Permitted	0.950					
Satd. Flow (perm)	1687	0	0	3505	1863	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	145			338	835	
Travel Time (s)	4.0			5.1	12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	2%	2%	3%	2%	2%
Adj. Flow (vph)	128	0	0	326	400	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	0	0	326	400	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	115	0	0	293	360	0
Future Vol, veh/h	115	0	0	293	360	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	7	2	2	3	2	2
Mvmt Flow	128	0	0	326	400	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	563	-	-	0	-	0
Stage 1	400	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.705	-	-	-	-	-
Critical Hdwy Stg 1	5.505	-	-	-	-	-
Critical Hdwy Stg 2	5.905	-	-	-	-	-
Follow-up Hdwy	3.5665	-	-	-	-	-
Pot Cap-1 Maneuver	461	0	0	-	-	0
Stage 1	663	0	0	-	-	0
Stage 2	837	0	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	461	-	-	-	-	-
Mov Cap-2 Maneuver	461	-	-	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	461	-
HCM Lane V/C Ratio	-	0.277	-
HCM Control Delay (s)	-	15.8	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	1.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	3	298	61	103	377
Future Volume (vph)	10	3	298	61	103	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		100	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt	0.971		0.974			
Flt Protected	0.962					0.989
Satd. Flow (prot)	1740	0	3402	0	0	3500
Flt Permitted	0.962					0.989
Satd. Flow (perm)	1740	0	3402	0	0	3500
Link Speed (mph)	25		45			45
Link Distance (ft)	1058		1007			534
Travel Time (s)	28.9		15.3			8.1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	5%	2%	2%
Adj. Flow (vph)	11	3	331	68	114	419
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	399	0	0	533
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	3	298	61	103	377
Future Vol, veh/h	10	3	298	61	103	377
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Free	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	5	2	2
Mvmt Flow	11	3	331	68	114	419

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	769	166	0	-	331	0
Stage 1	331	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	338	849	-	0	1225	-
Stage 1	700	-	-	0	-	-
Stage 2	618	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	297	849	-	-	1225	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	SBL	SBT
Capacity (veh/h)	-	349	1225	-
HCM Lane V/C Ratio	-	0.041	0.093	-
HCM Control Delay (s)	-	15.8	8.2	0.3
HCM Lane LOS	-	C	A	A
HCM 95th %tile Q(veh)	-	0.1	0.3	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	848	572	0	0	103
Future Volume (vph)	65	848	572	0	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	100				100	
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)	1583	1810	1759	0	0	1467
Flt Permitted	0.950					
Satd. Flow (perm)	1583	1810	1759	0	0	1467
Link Speed (mph)		55	55		25	
Link Distance (ft)		434	1066		459	
Travel Time (s)		5.4	13.2		12.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	5%	8%	2%	2%	12%
Adj. Flow (vph)	72	942	636	0	0	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	942	636	0	0	114
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	848	572	0	0	103
Future Vol, veh/h	65	848	572	0	0	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	5	8	2	2	12
Mvmt Flow	72	942	636	0	0	114

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	636	0	-	0	-	636
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.24	-	-	-	-	6.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.326	-	-	-	-	3.408
Pot Cap-1 Maneuver	892	-	-	0	0	460
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	892	-	-	-	-	460
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	892	-	-	460
HCM Lane V/C Ratio	0.081	-	-	0.249
HCM Control Delay (s)	9.4	-	-	15.4
HCM Lane LOS	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	61	3	0	16	0	0	0	0	1	1433	88
Future Volume (vph)	0	61	3	0	16	0	0	0	0	1	1433	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.994									0.991	
Flt Protected												
Satd. Flow (prot)	0	1720	0	0	1863	0	0	0	0	0	3442	0
Flt Permitted												
Satd. Flow (perm)	0	1720	0	0	1863	0	0	0	0	0	3442	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	68	3	0	18	0	0	0	0	1	1592	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	18	0	0	0	0	0	1691	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	61	3	0	16	0	0	0	0	1	1433	88
Future Vol, veh/h	0	61	3	0	16	0	0	0	0	1	1433	88
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	68	3	0	18	0	0	0	0	1	1592	98

Major/Minor	Minor2			Minor1					Major2			
Conflicting Flow All	-	1643	845	832	1692	-			0	0	0	
Stage 1	-	1643	-	0	0	-			-	-	-	
Stage 2	-	0	-	832	1692	-			-	-	-	
Critical Hdwy	-	6.66	7.9	7.54	6.54	-			4.14	-	-	
Critical Hdwy Stg 1	-	5.66	-	-	-	-			-	-	-	
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-	
Follow-up Hdwy	-	4.08	3.8	3.52	4.02	-			2.22	-	-	
Pot Cap-1 Maneuver	0	93	224	262	92	0			-	-	-	
Stage 1	0	147	-	-	-	0			-	-	-	
Stage 2	0	-	-	330	147	0			-	-	-	
Platoon blocked, %										-	-	
Mov Cap-1 Maneuver	-	93	224	140	92	-			-	-	-	
Mov Cap-2 Maneuver	-	118	-	164	115	-			-	-	-	
Stage 1	-	147	-	-	-	-			-	-	-	
Stage 2	-	-	-	175	147	-			-	-	-	

Approach	EB	WB	SB
HCM Control Delay, s	70.3	41.9	
HCM LOS	F	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	121	115	-	-	-
HCM Lane V/C Ratio	0.588	0.155	-	-	-
HCM Control Delay (s)	70.3	41.9	-	-	-
HCM Lane LOS	F	E	-	-	-
HCM 95th %tile Q(veh)	2.9	0.5	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	40	67	161	299	90
Future Volume (vph)	53	40	67	161	299	90
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	0.942				0.969	
Flt Protected	0.972			0.986		
Satd. Flow (prot)	1706	0	0	1763	1739	0
Flt Permitted	0.972			0.986		
Satd. Flow (perm)	1706	0	0	1763	1739	0
Link Speed (mph)	25			45	45	
Link Distance (ft)	1002			951	412	
Travel Time (s)	27.3			14.4	6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	7%	2%
Adj. Flow (vph)	59	44	74	179	332	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	0	253	432	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	40	67	161	299	90
Future Vol, veh/h	53	40	67	161	299	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	7	2
Mvmt Flow	59	44	74	179	332	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	709	382	432	0	-	0
Stage 1	382	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	401	665	1128	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	372	665	1128	-	-	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	2.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1128	-	459	-	-
HCM Lane V/C Ratio	0.066	-	0.225	-	-
HCM Control Delay (s)	8.4	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.9	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	115	124	0	0	0	0
Future Volume (vph)	115	124	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.977				
Satd. Flow (prot)	0	3378	0	0	0	0
Flt Permitted		0.977				
Satd. Flow (perm)	0	3378	0	0	0	0
Link Speed (mph)		45	25		25	
Link Distance (ft)		950	389		145	
Travel Time (s)		14.4	10.6		4.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Adj. Flow (vph)	128	138	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	266	0	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 10.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	124	0	293	360	0
Future Volume (vph)	0	124	0	293	360	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.88	1.00	1.00
Frt				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	0	2760	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	0	2760	1770	0
Link Speed (mph)		45	45		45	
Link Distance (ft)		389	534		338	
Travel Time (s)		5.9	8.1		5.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	3%	2%	2%
Adj. Flow (vph)	0	138	0	326	400	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	138	0	326	400	0
Sign Control		Free	Free		Yield	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2	0	0	10	1	6	916	8	0	0	0
Future Volume (vph)	60	2	0	0	10	1	6	916	8	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.989			0.999				
Flt Protected		0.954										
Satd. Flow (prot)	0	1681	0	0	1842	0	0	3502	0	0	0	0
Flt Permitted		0.954										
Satd. Flow (perm)	0	1681	0	0	1842	0	0	3502	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			842	
Travel Time (s)		3.0			16.0			11.5			10.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	67	2	0	0	11	1	7	1018	9	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	12	0	0	1034	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		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	60	2	0	0	10	1	6	916	8	0	0	0
Future Vol, veh/h	60	2	0	0	10	1	6	916	8	0	0	0
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	8	2	2	2	2	2	2	3	2	2	2	2
Mvmt Flow	67	2	0	0	11	1	7	1018	9	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	529	1041	-	-	1037	514	0	0	0
Stage 1	0	0	-	-	1037	-	-	-	-
Stage 2	529	1041	-	-	0	-	-	-	-
Critical Hdwy	7.66	6.54	-	-	6.54	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	6.66	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.58	4.02	-	-	4.02	3.32	2.22	-	-
Pot Cap-1 Maneuver	420	229	0	0	230	505	-	-	-
Stage 1	-	-	0	0	307	-	-	-	-
Stage 2	486	305	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	404	229	-	-	230	505	-	-	-
Mov Cap-2 Maneuver	404	229	-	-	230	-	-	-	-
Stage 1	-	-	-	-	307	-	-	-	-
Stage 2	467	305	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	16.1	20.7	
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	394	242
HCM Lane V/C Ratio	-	-	-	0.175	0.051
HCM Control Delay (s)	-	-	-	16.1	20.7
HCM Lane LOS	-	-	-	C	C
HCM 95th %tile Q(veh)	-	-	-	0.6	0.2

2035 Build-out Conditions
Improved

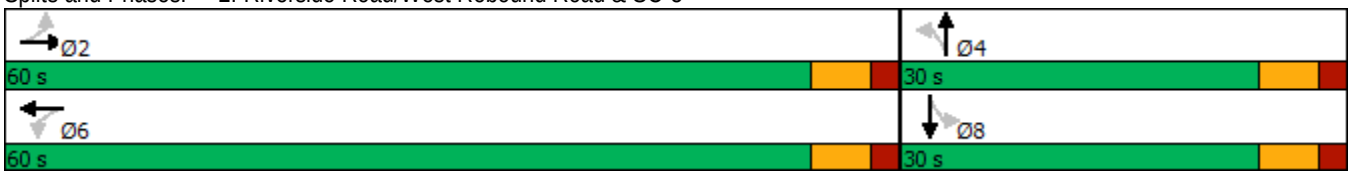
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Future Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		0	500		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.998			0.978			0.926	
Flt Protected	0.950			0.950				0.972			0.998	
Satd. Flow (prot)	1736	1679	0	1203	1755	0	0	1741	0	0	1685	0
Flt Permitted	0.074			0.315				0.780			0.986	
Satd. Flow (perm)	135	1679	0	399	1755	0	0	1397	0	0	1664	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			1			11			61	
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	11%	8%	50%	8%	11%	5%	2%	2%	2%	6%	3%
Adj. Flow (vph)	37	542	96	26	1067	13	228	99	63	4	47	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	638	0	26	1080	0	0	390	0	0	112	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		15.0	15.0		15.0	15.0	
Total Split (s)	60.0	60.0		60.0	60.0		30.0	30.0		30.0	30.0	
Total Split (%)	66.7%	66.7%		66.7%	66.7%		33.3%	33.3%		33.3%	33.3%	
Maximum Green (s)	54.0	54.0		54.0	54.0		24.0	24.0		24.0	24.0	
Yellow Time (s)	4.0	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	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												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	54.0	54.0		54.0	54.0			24.0			24.0	
Actuated g/C Ratio	0.60	0.60		0.60	0.60			0.27			0.27	
v/c Ratio	0.46	0.63		0.11	1.03			1.03			0.23	
Control Delay	32.5	14.7		9.1	54.4			87.0			14.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	32.5	14.7		9.1	54.4			87.0			14.5	
LOS	C	B		A	D			F			B	
Approach Delay		15.7			53.4			87.0			14.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			D			F			B	
Queue Length 50th (ft)	11	208		6	~662			~234			22	
Queue Length 95th (ft)	#59	319		18	#906			#412			63	
Internal Link Dist (ft)		925			926			934			932	
Turn Bay Length (ft)	500			500								
Base Capacity (vph)	81	1014		239	1053			380			488	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.46	0.63		0.11	1.03			1.03			0.23	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 46.0 Intersection LOS: D
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Riverside Road/West Rebound Road & SC-5





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	81	1	4	12	0	0	0	0	0	732	36
Future Volume (vph)	0	81	1	4	12	0	0	0	0	0	732	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		500
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.999										0.850
Flt Protected					0.988							
Satd. Flow (prot)	0	1611	0	0	1600	0	0	0	0	0	3505	1302
Flt Permitted					0.988							
Satd. Flow (perm)	0	1611	0	0	1600	0	0	0	0	0	3505	1302
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	18%	2%	67%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	90	1	4	13	0	0	0	0	0	813	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	17	0	0	0	0	0	813	40
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	81	1	4	12	0	0	0	0	0	732	36
Future Vol, veh/h	0	81	1	4	12	0	0	0	0	0	732	36
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	-	-	-	-	-	-	-	-	-	-	-	500
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	18	2	67	2	2	2	2	2	2	3	24
Mvmt Flow	0	90	1	4	13	0	0	0	0	0	813	40

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	813	407	452	853	-			0	0	0
Stage 1	-	813	-	0	0	-			-	-	-
Stage 2	-	0	-	452	853	-			-	-	-
Critical Hdwy	-	6.86	6.94	8.84	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.86	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	7.84	5.54	-			-	-	-
Follow-up Hdwy	-	4.18	3.32	4.17	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	283	593	365	295	0			-	-	-
Stage 1	0	354	-	-	-	0			-	-	-
Stage 2	0	-	-	414	374	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	283	593	288	295	-			-	-	-
Mov Cap-2 Maneuver	-	331	-	292	348	-			-	-	-
Stage 1	-	354	-	-	-	-			-	-	-
Stage 2	-	-	-	308	374	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	19.8	16.5	0
HCM LOS	C	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	333	332	-	-	-
HCM Lane V/C Ratio	0.274	0.054	-	-	-
HCM Control Delay (s)	19.8	16.5	0	-	-
HCM Lane LOS	C	C	A	-	-
HCM 95th %tile Q(veh)	1.1	0.2	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	74	56	20	282	119	26
Future Volume (vph)	74	56	20	282	119	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150			150
Storage Lanes	1	0	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942					0.850
Flt Protected	0.972		0.950			
Satd. Flow (prot)	1706	0	1770	1810	1712	1583
Flt Permitted	0.972		0.950			
Satd. Flow (perm)	1706	0	1770	1810	1712	1583
Link Speed (mph)	25			45	45	
Link Distance (ft)	1002			860	504	
Travel Time (s)	27.3			13.0	7.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	11%	2%
Adj. Flow (vph)	82	62	22	313	132	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	144	0	22	313	132	29
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	74	56	20	282	119	26
Future Vol, veh/h	74	56	20	282	119	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	150
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	11	2
Mvmt Flow	82	62	22	313	132	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	489	132	161	0	-	0
Stage 1	132	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	538	917	1418	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	529	917	1418	-	-	-
Mov Cap-2 Maneuver	529	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	647	-	-
HCM Lane V/C Ratio	0.016	-	0.223	-	-
HCM Control Delay (s)	7.6	-	12.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

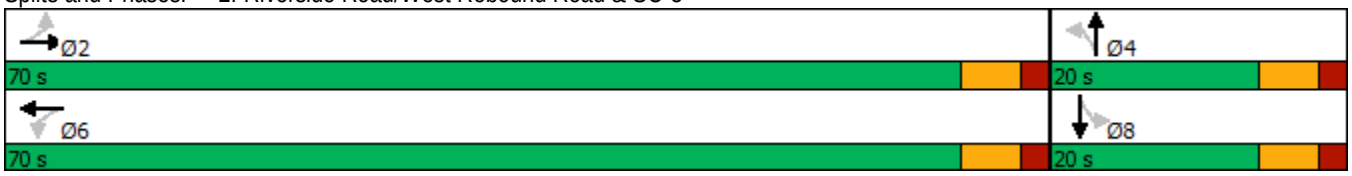
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Future Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		0	500		0	500		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.996			0.972			0.952	
Flt Protected	0.950			0.950				0.975			0.997	
Satd. Flow (prot)	1770	1782	0	1203	1765	0	0	1709	0	0	1667	0
Flt Permitted	0.318			0.062				0.609			0.973	
Satd. Flow (perm)	592	1782	0	79	1765	0	0	1067	0	0	1627	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			4			12			26	
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	5%	50%	7%	14%	3%	12%	2%	33%	5%	10%
Adj. Flow (vph)	48	1197	220	78	706	21	124	70	51	9	107	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	1417	0	78	727	0	0	245	0	0	179	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	22.0	22.0		22.0	22.0		15.0	15.0		15.0	15.0	
Total Split (s)	70.0	70.0		70.0	70.0		20.0	20.0		20.0	20.0	
Total Split (%)	77.8%	77.8%		77.8%	77.8%		22.2%	22.2%		22.2%	22.2%	
Maximum Green (s)	64.0	64.0		64.0	64.0		14.0	14.0		14.0	14.0	
Yellow Time (s)	4.0	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	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												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)	64.0	64.0		64.0	64.0			14.0			14.0	
Actuated g/C Ratio	0.71	0.71		0.71	0.71			0.16			0.16	
v/c Ratio	0.11	1.11		1.39	0.58			1.39			0.65	
Control Delay	4.9	78.2		279.0	8.6			238.3			42.7	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	4.9	78.2		279.0	8.6			238.3			42.7	
LOS	A	E		F	A			F			D	
Approach Delay		75.8			34.8			238.3			42.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		E			C			F			D	
Queue Length 50th (ft)	7	~931		~60	171			~183			82	
Queue Length 95th (ft)	18	#1189		#119	258			#332			#164	
Internal Link Dist (ft)		925			926			934			932	
Turn Bay Length (ft)	500			500								
Base Capacity (vph)	420	1274		56	1256			176			275	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.11	1.11		1.39	0.58			1.39			0.65	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.39
Intersection Signal Delay: 76.1 Intersection LOS: E
Intersection Capacity Utilization 105.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Riverside Road/West Rebound Road & SC-5





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	61	3	0	16	0	0	0	0	1	1433	88
Future Volume (vph)	0	61	3	0	16	0	0	0	0	1	1433	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		500
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.994										0.850
Flt Protected												
Satd. Flow (prot)	0	1720	0	0	1863	0	0	0	0	0	3505	1357
Flt Permitted												
Satd. Flow (perm)	0	1720	0	0	1863	0	0	0	0	0	3505	1357
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			954	
Travel Time (s)		12.5			1.7			9.9			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	68	3	0	18	0	0	0	0	1	1592	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	18	0	0	0	0	0	1593	98
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	61	3	0	16	0	0	0	0	1	1433	88
Future Vol, veh/h	0	61	3	0	16	0	0	0	0	1	1433	88
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	-	-	-	-	-	-	-	-	-	-	-	500
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	68	3	0	18	0	0	0	0	1	1592	98

Major/Minor	Minor2			Minor1					Major2			
Conflicting Flow All	-	1594	796	832	1692	-			0	0	0	
Stage 1	-	1594	-	0	0	-			-	-	-	
Stage 2	-	0	-	832	1692	-			-	-	-	
Critical Hdwy	-	6.66	7.9	7.54	6.54	-			4.14	-	-	
Critical Hdwy Stg 1	-	5.66	-	-	-	-			-	-	-	
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-	
Follow-up Hdwy	-	4.08	3.8	3.52	4.02	-			2.22	-	-	
Pot Cap-1 Maneuver	0	100	244	262	92	0			-	-	-	
Stage 1	0	156	-	-	-	0			-	-	-	
Stage 2	0	-	-	330	147	0			-	-	-	
Platoon blocked, %										-	-	
Mov Cap-1 Maneuver	-	100	244	149	92	-			-	-	-	
Mov Cap-2 Maneuver	-	127	-	172	115	-			-	-	-	
Stage 1	-	156	-	-	-	-			-	-	-	
Stage 2	-	-	-	184	147	-			-	-	-	

Approach	EB	WB	SB
HCM Control Delay, s	61.9	41.9	
HCM LOS	F	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	130	115	-	-	-
HCM Lane V/C Ratio	0.547	0.155	-	-	-
HCM Control Delay (s)	61.9	41.9	-	-	-
HCM Lane LOS	F	E	-	-	-
HCM 95th %tile Q(veh)	2.7	0.5	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	53	40	67	161	299	90
Future Volume (vph)	53	40	67	161	299	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	500			500
Storage Lanes	1	0	1			1
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942					0.850
Flt Protected	0.972		0.950			
Satd. Flow (prot)	1706	0	1770	1759	1776	1583
Flt Permitted	0.972		0.950			
Satd. Flow (perm)	1706	0	1770	1759	1776	1583
Link Speed (mph)	25			45	45	
Link Distance (ft)	1002			951	412	
Travel Time (s)	27.3			14.4	6.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	8%	7%	2%
Adj. Flow (vph)	59	44	74	179	332	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	0	74	179	332	100
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	40	67	161	299	90
Future Vol, veh/h	53	40	67	161	299	90
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	-	500	-	-	500
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	8	7	2
Mvmt Flow	59	44	74	179	332	100

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	659	332	432	0	-	0
Stage 1	332	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	429	710	1128	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	401	710	1128	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	2.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1128	-	493	-	-
HCM Lane V/C Ratio	0.066	-	0.21	-	-
HCM Control Delay (s)	8.4	-	14.2	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-	-

2035 Build-out Conditions
Target

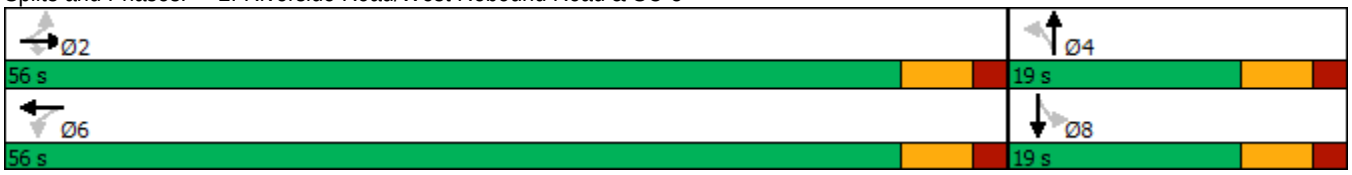
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Future Volume (vph)	33	488	86	23	960	12	205	89	57	4	42	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		0	500		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998			0.942			0.926	
Flt Protected	0.950			0.950			0.950				0.998	
Satd. Flow (prot)	1736	1712	1495	1203	1755	0	1719	1755	0	0	1685	0
Flt Permitted	0.088			0.414			0.767				0.986	
Satd. Flow (perm)	161	1712	1495	524	1755	0	1388	1755	0	0	1664	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		2			37			61	
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	11%	8%	50%	8%	11%	5%	2%	2%	2%	6%	3%
Adj. Flow (vph)	37	542	96	26	1067	13	228	99	63	4	47	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	542	96	26	1080	0	228	162	0	0	112	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6			4			8		
Detector Phase	2	2	2	6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		15.0	15.0		15.0	15.0	
Total Split (s)	56.0	56.0	56.0	56.0	56.0		19.0	19.0		19.0	19.0	
Total Split (%)	74.7%	74.7%	74.7%	74.7%	74.7%		25.3%	25.3%		25.3%	25.3%	
Maximum Green (s)	50.0	50.0	50.0	50.0	50.0		13.0	13.0		13.0	13.0	
Yellow Time (s)	4.0	4.0	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		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	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	6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Act Effct Green (s)	46.3	46.3	46.3	46.3	46.3		13.1	13.1			13.1	
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.65		0.18	0.18			0.18	
v/c Ratio	0.36	0.49	0.10	0.08	0.95		0.90	0.46			0.32	
Control Delay	16.9	8.1	1.3	5.1	30.2		69.4	26.2			17.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	16.9	8.1	1.3	5.1	30.2		69.4	26.2			17.2	
LOS	B	A	A	A	C		E	C			B	
Approach Delay		7.6			29.6			51.5			17.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			C			D			B	
Queue Length 50th (ft)	6	105	0	4	371		106	52			20	
Queue Length 95th (ft)	31	167	13	12	#719		#237	109			64	
Internal Link Dist (ft)		925			926			934			932	
Turn Bay Length (ft)	500		500	500			500					
Base Capacity (vph)	113	1206	1081	369	1236		254	351			354	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.33	0.45	0.09	0.07	0.87		0.90	0.46			0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 71.5			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 79.3%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Riverside Road/West Rebound Road & SC-5





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	82	4	12	0	0	0	0	0	732	36
Future Volume (vph)	0	0	82	4	12	0	0	0	0	0	732	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		500
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt			0.865								0.993	
Flt Protected					0.988							
Satd. Flow (prot)	0	0	1611	0	1600	0	0	0	0	0	3447	0
Flt Permitted					0.988							
Satd. Flow (perm)	0	0	1611	0	1600	0	0	0	0	0	3447	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			266			954	
Travel Time (s)		12.5			1.7			3.3			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	18%	2%	67%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	0	91	4	13	0	0	0	0	0	813	40
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	91	0	17	0	0	0	0	0	853	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	82	4	12	0	0	0	0	0	732	36
Future Vol, veh/h	0	0	82	4	12	0	0	0	0	0	732	36
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	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	18	2	67	2	2	2	2	2	2	3	24
Mvmt Flow	0	0	91	4	13	0	0	0	0	0	813	40

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	-	427	407	853	-			0	0	0
Stage 1	-	-	-	0	0	-			-	-	-
Stage 2	-	-	-	407	853	-			-	-	-
Critical Hdwy	-	-	6.94	8.84	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	7.84	5.54	-			-	-	-
Follow-up Hdwy	-	-	3.32	4.17	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	0	576	399	295	0			-	-	-
Stage 1	0	0	-	-	-	0			-	-	-
Stage 2	0	0	-	446	374	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	-	576	336	295	-			-	-	-
Mov Cap-2 Maneuver	-	-	-	355	348	-			-	-	-
Stage 1	-	-	-	-	-	-			-	-	-
Stage 2	-	-	-	375	374	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	12.4	15.8	0
HCM LOS	B	C	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	576	350	-	-	-
HCM Lane V/C Ratio	0.158	0.051	-	-	-
HCM Control Delay (s)	12.4	15.8	0	-	-
HCM Lane LOS	B	C	A	-	-
HCM 95th %tile Q(veh)	0.6	0.2	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Future Volume (vph)	43	1077	198	70	635	19	112	63	46	8	96	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500		500	500		0	500		0	0		0
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996			0.937			0.952	
Flt Protected	0.950			0.950			0.950				0.997	
Satd. Flow (prot)	1770	1827	1538	1203	1765	0	1752	1652	0	0	1667	0
Flt Permitted	0.319			0.073			0.476				0.980	
Satd. Flow (perm)	594	1827	1538	92	1765	0	878	1652	0	0	1639	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			220		4			35			26	
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1005			1006			1014			1012	
Travel Time (s)		12.5			12.5			15.4			15.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	5%	50%	7%	14%	3%	12%	2%	33%	5%	10%
Adj. Flow (vph)	48	1197	220	78	706	21	124	70	51	9	107	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	1197	220	78	727	0	124	121	0	0	179	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6			4			8		
Detector Phase	2	2	2	6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	15.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0		15.0	15.0		15.0	15.0	
Total Split (s)	70.0	70.0	70.0	70.0	70.0		20.0	20.0		20.0	20.0	
Total Split (%)	77.8%	77.8%	77.8%	77.8%	77.8%		22.2%	22.2%		22.2%	22.2%	
Maximum Green (s)	64.0	64.0	64.0	64.0	64.0		14.0	14.0		14.0	14.0	
Yellow Time (s)	4.0	4.0	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		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	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	6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min	Min	Min	Min		None	None		None	None	
Act Effct Green (s)	64.0	64.0	64.0	64.0	64.0		13.9	13.9			13.9	
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71		0.15	0.15			0.15	
v/c Ratio	0.11	0.92	0.19	1.20	0.58		0.92	0.43			0.65	
Control Delay	4.9	24.5	1.0	199.5	8.6		99.1	29.6			42.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	4.9	24.5	1.0	199.5	8.6		99.1	29.6			42.8	
LOS	A	C	A	F	A		F	C			D	
Approach Delay		20.3			27.1			64.7			42.8	

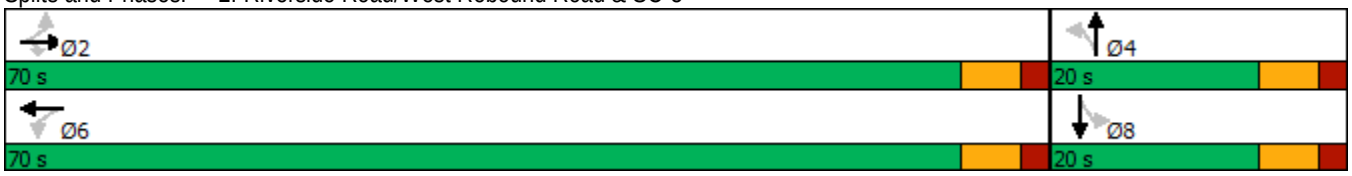
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		C			C			E			D	
Queue Length 50th (ft)	7	483	0	~54	171		70	44			82	
Queue Length 95th (ft)	18	#898	18	#108	258		#177	97			#163	
Internal Link Dist (ft)		925			926			934			932	
Turn Bay Length (ft)	500		500	500			500					
Base Capacity (vph)	423	1301	1158	65	1258		136	286			276	
Starvation Cap Reductn	0	0	0	0	0		0	0			0	
Spillback Cap Reductn	0	0	0	0	0		0	0			0	
Storage Cap Reductn	0	0	0	0	0		0	0			0	
Reduced v/c Ratio	0.11	0.92	0.19	1.20	0.58		0.91	0.42			0.65	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 89.9			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 27.9		Intersection LOS: C	
Intersection Capacity Utilization 88.8%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Riverside Road/West Rebound Road & SC-5





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	64	0	16	0	0	0	0	0	1434	88
Future Volume (vph)	0	0	64	0	16	0	0	0	0	0	1434	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		500
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95
Frt			0.865								0.991	
Flt Protected												
Satd. Flow (prot)	0	0	1096	0	1863	0	0	0	0	0	3442	0
Flt Permitted												
Satd. Flow (perm)	0	0	1096	0	1863	0	0	0	0	0	3442	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			241			954	
Travel Time (s)		12.5			1.7			3.0			11.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	0	71	0	18	0	0	0	0	0	1593	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	71	0	18	0	0	0	0	0	1691	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	64	0	16	0	0	0	0	0	1434	88
Future Vol, veh/h	0	0	64	0	16	0	0	0	0	0	1434	88
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	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	0	71	0	18	0	0	0	0	0	1593	98

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	-	846	797	1691	-			-	-	0
Stage 1	-	-	-	0	0	-			-	-	-
Stage 2	-	-	-	797	1691	-			-	-	-
Critical Hdwy	-	-	7.9	7.54	6.54	-			-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-
Follow-up Hdwy	-	-	3.8	3.52	4.02	-			-	-	-
Pot Cap-1 Maneuver	0	0	224	277	92	0			0	-	-
Stage 1	0	0	-	-	-	0			0	-	-
Stage 2	0	0	-	346	148	0			0	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	-	224	189	92	-			-	-	-
Mov Cap-2 Maneuver	-	-	-	221	115	-			-	-	-
Stage 1	-	-	-	-	-	-			-	-	-
Stage 2	-	-	-	236	148	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	28.4	41.9	0
HCM LOS	D	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	224	115	-	-
HCM Lane V/C Ratio	0.317	0.155	-	-
HCM Control Delay (s)	28.4	41.9	-	-
HCM Lane LOS	D	E	-	-
HCM 95th %tile Q(veh)	1.3	0.5	-	-

Queuing and Blocking Reports

2035 Build-out Conditions
Improved

Intersection: 1: Riverside Road & Cobblestone Way

Movement	EB	EB	NB	SB	SB
Directions Served	L	R	L	T	R
Maximum Queue (ft)	106	83	79	2	14
Average Queue (ft)	54	33	16	0	1
95th Queue (ft)	93	60	53	2	7
Link Distance (ft)		948		945	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	75		175		200
Storage Blk Time (%)	4	0			
Queuing Penalty (veh)	5	0			

Intersection: 2: Riverside Road/West Rebound Road & SC-5

Movement	EB	EB	WB	WB	B46	NB	B34	B15	SB
Directions Served	L	TR	L	TR	T	LTR	T	T	LTR
Maximum Queue (ft)	87	327	549	936	70	1053	1485	445	110
Average Queue (ft)	27	154	81	478	4	699	417	48	44
95th Queue (ft)	67	276	354	879	45	1287	1375	319	92
Link Distance (ft)		968		935	2750	944	1481	1949	963
Upstream Blk Time (%)				1		46	11		
Queuing Penalty (veh)				11		167	37		
Storage Bay Dist (ft)	500		500						
Storage Blk Time (%)			0	15					
Queuing Penalty (veh)			2	4					

Intersection: 3: Riverside Road & Antique Lane/University Drive

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	16	82	122
Average Queue (ft)	1	25	17
95th Queue (ft)	9	58	72
Link Distance (ft)	939	1015	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Riverside Road & SC-9 WB On-Ramp/South Lake Drive

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	57	65	9
Average Queue (ft)	17	7	0
95th Queue (ft)	45	37	6
Link Distance (ft)	1017	92	977
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Riverside Road & SC-9 WB Off-Ramp/SC-9 WB On-Ramp

Movement	EB	NB	NB	SB
Directions Served	LTR	T	TR	T
Maximum Queue (ft)	72	0	2	5
Average Queue (ft)	31	0	0	0
95th Queue (ft)	62	0	2	5
Link Distance (ft)	762	729	729	92
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Riverside Road/W Meeting Street & SC 9 EB Off Ramp

Movement	EB	NB
Directions Served	L	T
Maximum Queue (ft)	75	2
Average Queue (ft)	32	0
95th Queue (ft)	60	2
Link Distance (ft)	91	286
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: W Meeting Street & SC-9 EB On-Ramp

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	26	77
Average Queue (ft)	3	22
95th Queue (ft)	15	59
Link Distance (ft)	986	453
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: SC-5 & US-521 Off-Ramp

Movement	EB	EB	B54	B12	WB	SB
Directions Served	L	T	T	T	T	R
Maximum Queue (ft)	119	109	59	3	11	6
Average Queue (ft)	50	16	9	0	0	0
95th Queue (ft)	112	146	118	3	6	6
Link Distance (ft)		399	514	8238	1030	359
Upstream Blk Time (%)		1	0			
Queuing Penalty (veh)		7	2			
Storage Bay Dist (ft)	100					
Storage Blk Time (%)	4	0				
Queuing Penalty (veh)	19	0				

Intersection: 9: SC-5/Old Church Road & US 521 SB

Movement	EB	WB	SB
Directions Served	TR	LT	LT
Maximum Queue (ft)	241	64	8
Average Queue (ft)	95	16	0
95th Queue (ft)	252	49	6
Link Distance (ft)	359	76	925
Upstream Blk Time (%)	2	0	
Queuing Penalty (veh)	2	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Riverside Road & Access 1

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	90	29	2
Average Queue (ft)	37	3	0
95th Queue (ft)	71	19	2
Link Distance (ft)	951		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		150	150
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 61: SC 9 EB Off Ramp

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

Intersection: 62: W Meeting Street

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	3	104
Average Queue (ft)	0	39
95th Queue (ft)	3	90
Link Distance (ft)	326	286
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 91: US 521 NB & Old Church Road

Movement	EB	WB	NB	NB
Directions Served	LT	TR	LT	TR
Maximum Queue (ft)	93	73	2	4
Average Queue (ft)	63	18	0	0
95th Queue (ft)	100	53	2	2
Link Distance (ft)	76	1018	903	903
Upstream Blk Time (%)	28			
Queuing Penalty (veh)	23			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 279

Intersection: 1: Riverside Road & Cobblestone Way

Movement	EB	EB	NB	SB
Directions Served	L	R	L	R
Maximum Queue (ft)	118	158	230	34
Average Queue (ft)	60	39	75	4
95th Queue (ft)	111	112	163	19
Link Distance (ft)		948		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	75		175	200
Storage Blk Time (%)	12	0	1	
Queuing Penalty (veh)	10	0	1	

Intersection: 2: Riverside Road/West Rebound Road & SC-5

Movement	EB	EB	WB	WB	B46	B13	B47	NB	B34	B15	SB
Directions Served	L	TR	L	TR	T	T	T	LTR	T	T	LTR
Maximum Queue (ft)	600	1026	599	1038	2856	728	4272	1038	1490	893	217
Average Queue (ft)	183	920	489	713	1386	242	818	787	549	114	95
95th Queue (ft)	618	1204	745	1365	3521	781	3353	1310	1578	649	179
Link Distance (ft)		968		935	2750	621	8238	944	1481	1949	963
Upstream Blk Time (%)		35		53	35	30		56	18	0	
Queuing Penalty (veh)		0		368	242	203		124	38	1	
Storage Bay Dist (ft)	500		500								
Storage Blk Time (%)		35	67	21							
Queuing Penalty (veh)		15	443	14							

Intersection: 3: Riverside Road & Antique Lane/University Drive

Movement	EB	WB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	80	169
Average Queue (ft)	1	27	30
95th Queue (ft)	10	57	108
Link Distance (ft)	939	1015	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 4: Riverside Road & SC-9 WB On-Ramp/South Lake Drive

Movement	WB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	50	93	26
Average Queue (ft)	18	26	1
95th Queue (ft)	45	79	10
Link Distance (ft)	1017	92	977
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		4	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Riverside Road & SC-9 WB Off-Ramp/SC-9 WB On-Ramp

Movement	EB	NB	NB	SB
Directions Served	LTR	T	TR	T
Maximum Queue (ft)	119	13	35	7
Average Queue (ft)	55	1	2	0
95th Queue (ft)	97	9	20	4
Link Distance (ft)	762	729	729	92
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Riverside Road/W Meeting Street & SC 9 EB Off Ramp

Movement	EB
Directions Served	L
Maximum Queue (ft)	91
Average Queue (ft)	47
95th Queue (ft)	83
Link Distance (ft)	91
Upstream Blk Time (%)	1
Queuing Penalty (veh)	1
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: W Meeting Street & SC-9 EB On-Ramp

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	30	58
Average Queue (ft)	11	24
95th Queue (ft)	32	53
Link Distance (ft)	995	458
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: SC-5 & US-521 Off-Ramp

Movement	EB	EB	WB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	84	30	2	22
Average Queue (ft)	28	1	0	1
95th Queue (ft)	64	22	2	12
Link Distance (ft)		399	1030	359
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100			
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	1	0		

Intersection: 9: SC-5/Old Church Road & US 521 SB

Movement	EB	WB	SB	SB
Directions Served	TR	LT	LT	T
Maximum Queue (ft)	144	58	2	2
Average Queue (ft)	58	15	0	0
95th Queue (ft)	125	45	2	2
Link Distance (ft)	359	76	925	925
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Riverside Road & Access 1

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	68	67	13
Average Queue (ft)	28	21	0
95th Queue (ft)	53	53	7
Link Distance (ft)	951		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		500	500
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 61: SC 9 EB Off Ramp

Movement	EB
Directions Served	LT
Maximum Queue (ft)	44
Average Queue (ft)	3
95th Queue (ft)	22
Link Distance (ft)	934
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 62: W Meeting Street

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	6	112
Average Queue (ft)	0	43
95th Queue (ft)	4	93
Link Distance (ft)	326	286
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 91: US 521 NB & Old Church Road

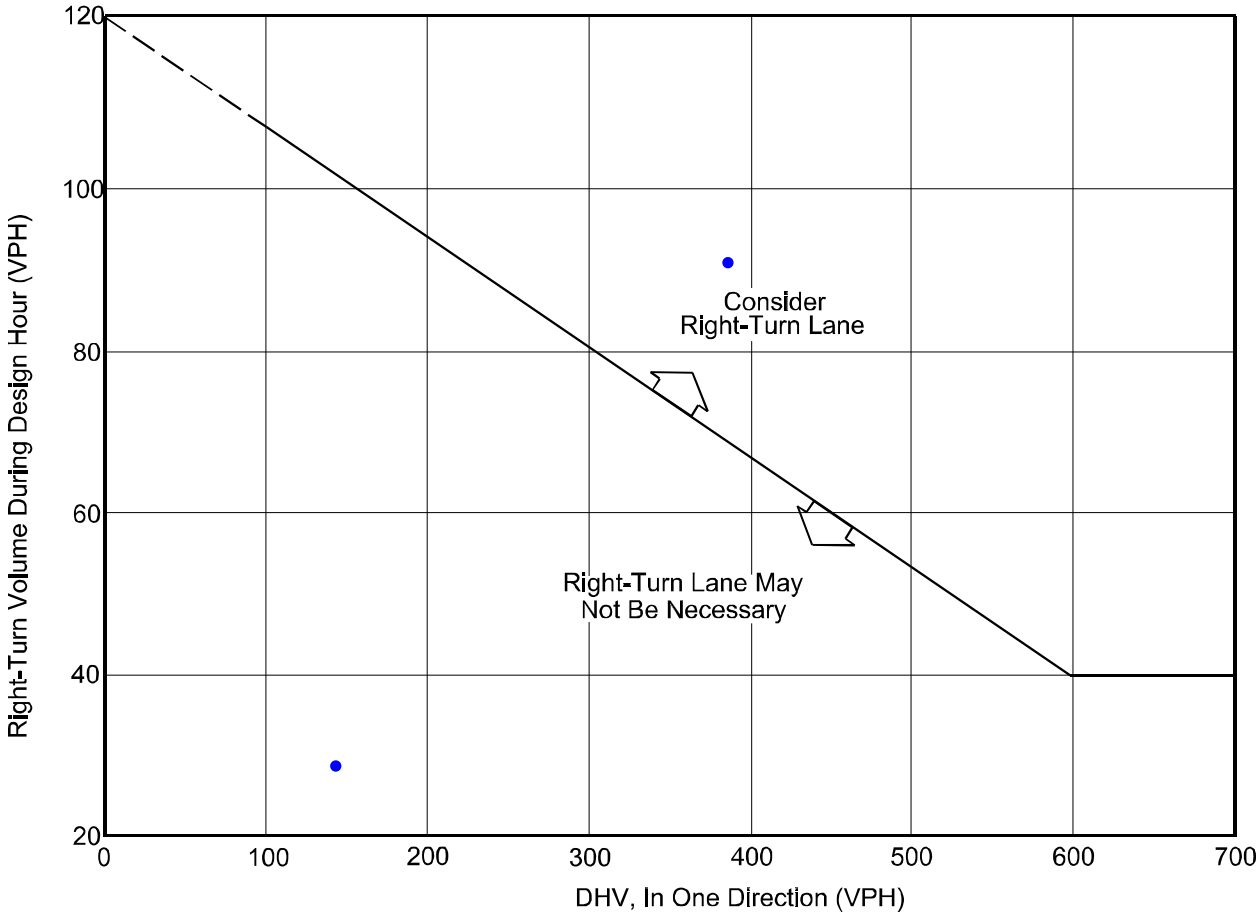
Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	76	38
Average Queue (ft)	35	10
95th Queue (ft)	70	33
Link Distance (ft)	76	1018
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 1465

Auxiliary Turn-Lane Warrants

Riverside Road at Access 1



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

2035 Build

AM	AM
V_{SBR} = 26	V_{SBR} = 90
DHV = 145	DHV = 389
Don't Consider	Consider

Example

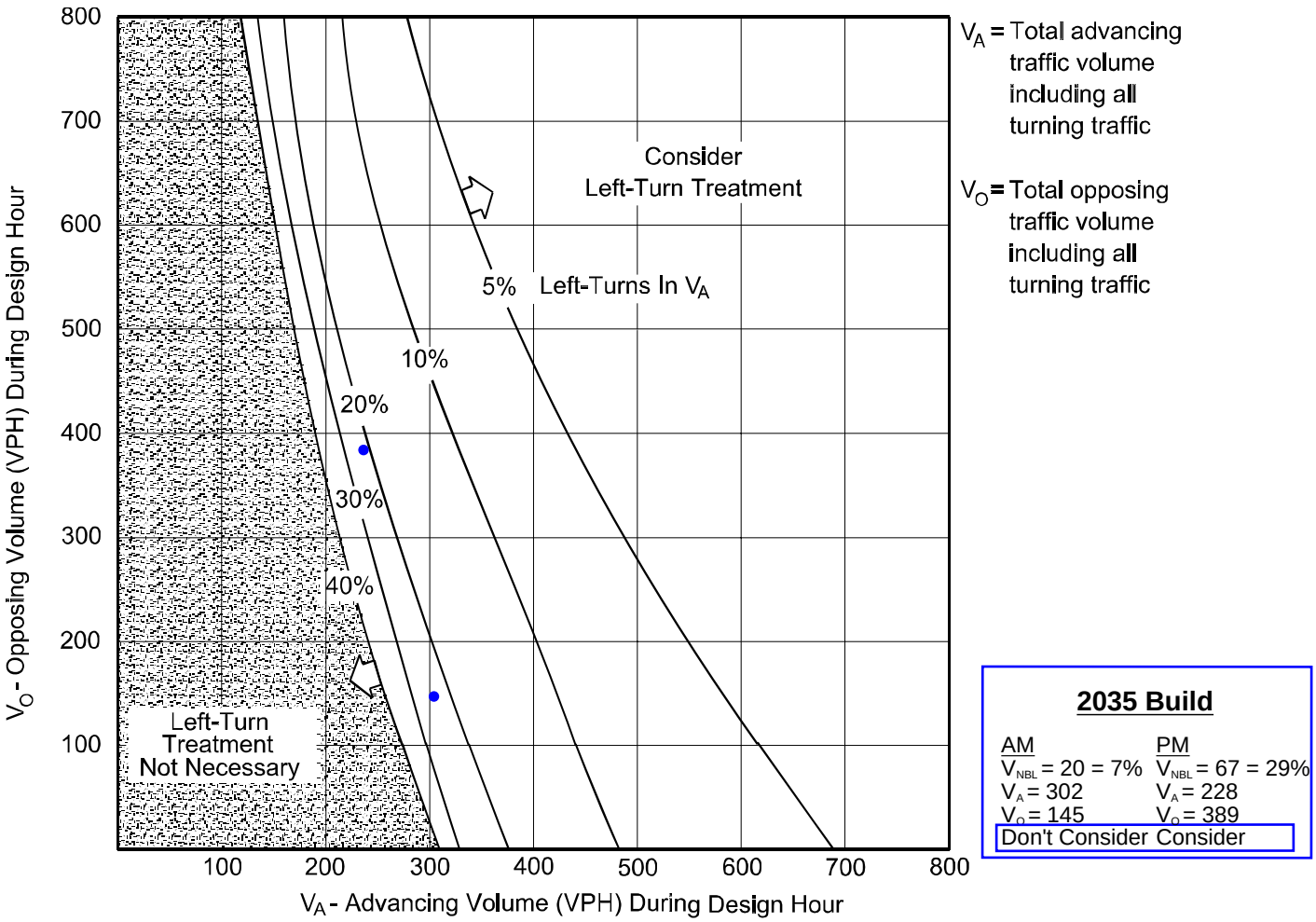
Given: Design Speed = 35 miles per hour
DHV = 250 vehicles per hour
Right Turns = 100 vehicles per hour

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 – 20 = 80 vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
Figure 9.5-A

Riverside Road at Access 1



Instructions:

1. *The family of curves represents the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.*

2. *Read V_A and V_O into the chart and locate the intersection of the two volumes.*

3. *Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.*

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (50 mph)
Figure 9.5-E

Preliminary Signal Warrants

Riverchase Estates TIA

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Based on 2009 MUTCD

INTERSECTION NAME: Riverside Road/West Rebound Road and SC-5

DATE: 09/07/22

INTERSECTION CONDITION: 2035 Buildout Total

MAJOR STREET: Riverside Road/West Rebound Road

OF APPROACH LANES: 1

MINOR STREET: SC-5

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

USE 56% REDUCTION (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
									CONDITION A			CONDITION B				
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →			350	105		525	53		400	120		600	60			
12:00 AM TO 01:00 AM																
01:00 AM TO 02:00 AM																
02:00 AM TO 03:00 AM																
03:00 AM TO 04:00 AM																
04:00 AM TO 05:00 AM																
05:00 AM TO 06:00 AM																
06:00 AM TO 07:00 AM																
07:00 AM TO 08:00 AM	452	989	Y	Y	**Y**		Y		Y	Y	**Y**		Y		**Y**	**Y**
08:00 AM TO 09:00 AM																
09:00 AM TO 10:00 AM																
10:00 AM TO 11:00 AM																
11:00 AM TO 12:00 PM																
12:00 PM TO 01:00 PM																
01:00 PM TO 02:00 PM																
02:00 PM TO 03:00 PM																
03:00 PM TO 04:00 PM																
04:00 PM TO 05:00 PM																
05:00 PM TO 06:00 PM	382	1219	Y	Y	**Y**		Y			Y			Y		**Y**	**Y**
06:00 PM TO 07:00 PM																
07:00 PM TO 08:00 PM																
08:00 PM TO 09:00 PM																
09:00 PM TO 10:00 PM																
10:00 PM TO 11:00 PM																
11:00 PM TO 12:00 AM																
	834	2,208			**2**			**0**			**1**			**0**	**2**	**2**
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS OF BOTH COND. A AND COND. B NEEDED						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant

Condition A : Minimum Vehicular Volume

Condition B : Interruption of Continuous Traffic

Combination : Combination of Condition A and Condition B

WARRANT 2 -- Four-Hour Vehicular Volume Warrant

WARRANT 3 -- Peak Hour Warrant

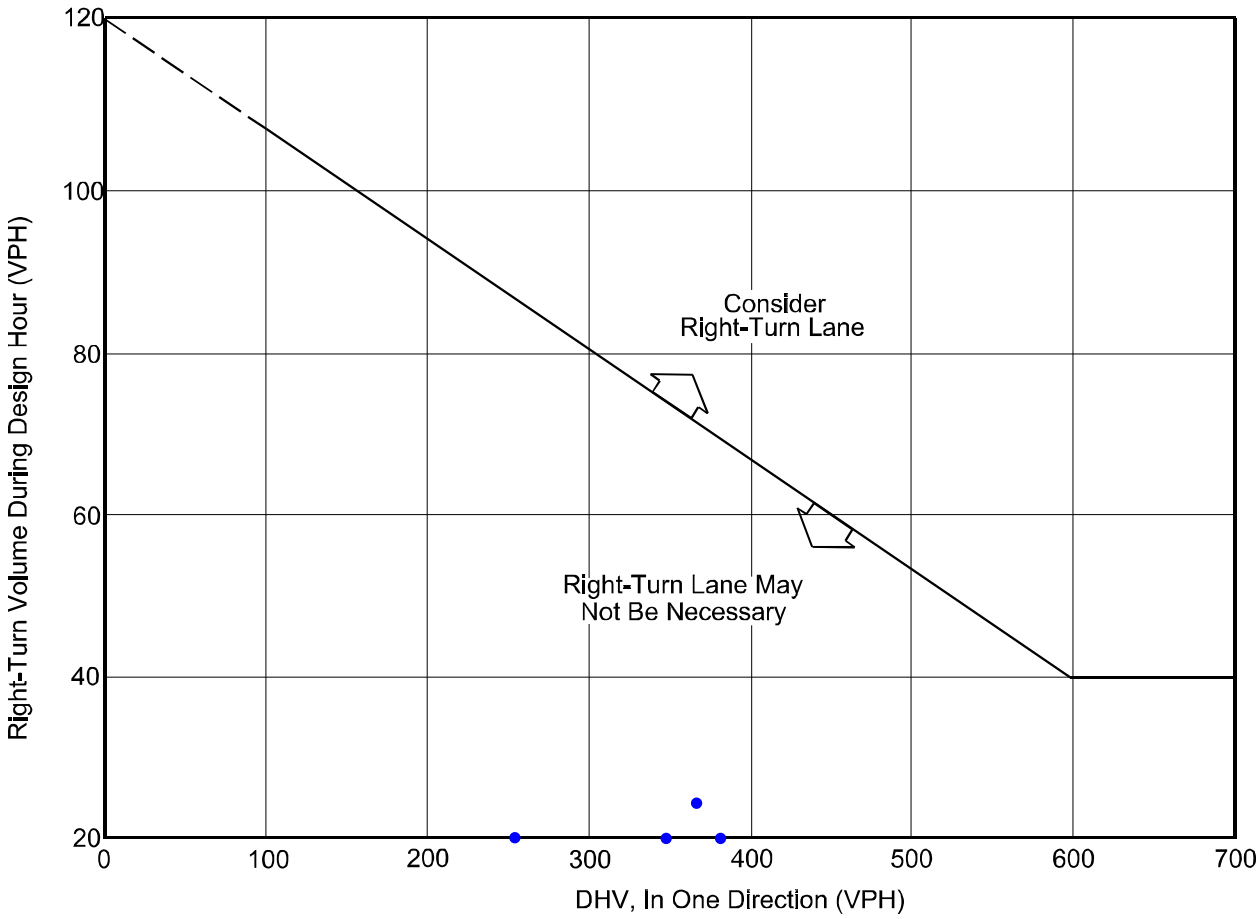
TIA Addendum Updated Analysis

Table 6.2 - SC 5 at Riverside Road/West Rebound Road											
Condition	Measure	EB			WB		NB		SB	Intersection	
		EBL	EBT	EBR	WBL	WBTR	NBL	NBTR	SBLTR	LOS (Delay)	V/C
AM Peak Hour											
2022 Existing	LOS (Delay)	A (0.6)			A (0.1)		F (232.6)		C (22.2)	-	-
	Synchro 95th Q	-	3'	-	-	0'	-	253'	33'		
2035 Background	LOS (Delay)	A (0.6)			A (0.0)		F (1644.4)		F (73.4)	-	-
	Synchro 95th Q	-	5'	-	-	0'	-	470'	90'		
2035 Build-out	LOS (Delay)	A (0.6)			A (0.2)		F (7504.6)		F (+)	-	-
	Synchro 95th Q	-	5'	-	-	3'	-	1223'	+		
2035 Build-out IMP	LOS (Delay)	B (15.7)			D (53.4)		F (87.0)		C (14.5)	D (46.0)	-
	Synchro 95th Q	#59'	319'	-	18'	#906'	-	#412'	1575'		
2035 Build-out Target	LOS (Delay)	A (7.6)			C (29.6)		D (51.5)		B (17.2)	C (26.2)	-
	Synchro 95th Q	31'	167'	13'	12'	#719'	#237'	109'	64'		
2035 Build-out IMP Single Roundabout	LOS (Delay)	B (10.4)			F (153.8)		B (14.6)		B (13.8)	F (80.8)	1.28
	SIDRA 95th Q	117'	117'	117'	2874'	2874'	108'	108'	27'		
2035 Build-out IMP Multi Roundabout	LOS (Delay)	A (5.5)			B (12.9)		B (11.4)		B (13.7)	B (10.7)	0.61
	SIDRA 95th Q	30'	30'	29'	150'	151'	78'	78'	25'		
PM Peak Hour											
2022 Existing	LOS (Delay)	A (0.5)			A (0.1)		F (100.5)		E (37.3)	-	-
	Synchro 95th Q	-	3'	-	-	0'	-	100'	53'		
2035 Background	LOS (Delay)	A (0.3)			A (0.1)		F (3335.2)		F (464.2)	-	-
	Synchro 95th Q	-	5'	-	-	0'	-	295'	235'		
2035 Build-out	LOS (Delay)	A (0.3)			A (1.7)		F (+)		F (+)	-	-
	Synchro 95th Q	-	5'	-	-	20'	-	+	+		
2035 Build-out IMP	LOS (Delay)	E (75.8)			C (34.8)		F (238.3)		D (42.7)	E (76.1)	-
	Synchro 95th Q	18'	#1189'	-	#119'	258'	-	#332'	#164'		
2035 Build-out Target	LOS (Delay)	C (20.3)			C (27.1)		E (64.7)		D (42.8)	C (27.9)	-
	Synchro 95th Q	18'	#898'	18'	#108'	258'	#177'	97'	#163'		
2035 Build-out IMP Single Roundabout	LOS (Delay)	F (204.9)			C (23.0)		C (16.0)		B (14.7)	F (120.7)	1.41
	SIDRA 95th Q	4689'	4689'	4689'	578'	578'	67'	67'	46'		
2035 Build-out IMP Multi Roundabout	LOS (Delay)	B (13.6)			A (8.1)		C (20.4)		B (11.0)	B (12.4)	0.68
	SIDRA 95th Q	10'	10'	10'	2'	2'	70'	70'	32'		

95th percentile volume exceeds capacity, queue may be longer

+ Computation not defined

Riverside Road and Firetower Road/University Drive



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

2035 Build

AM	PM
V_{NBR} = 14	V_{NBR} = 26
V_{NB} = 252	V_{NB} = 362
Not Necessary	Not Necessary
V_{SBR} = 0	V_{SBR} = 0
V_{SB} = 341	V_{SB} = 373
Not Necessary	Not Necessary

Example

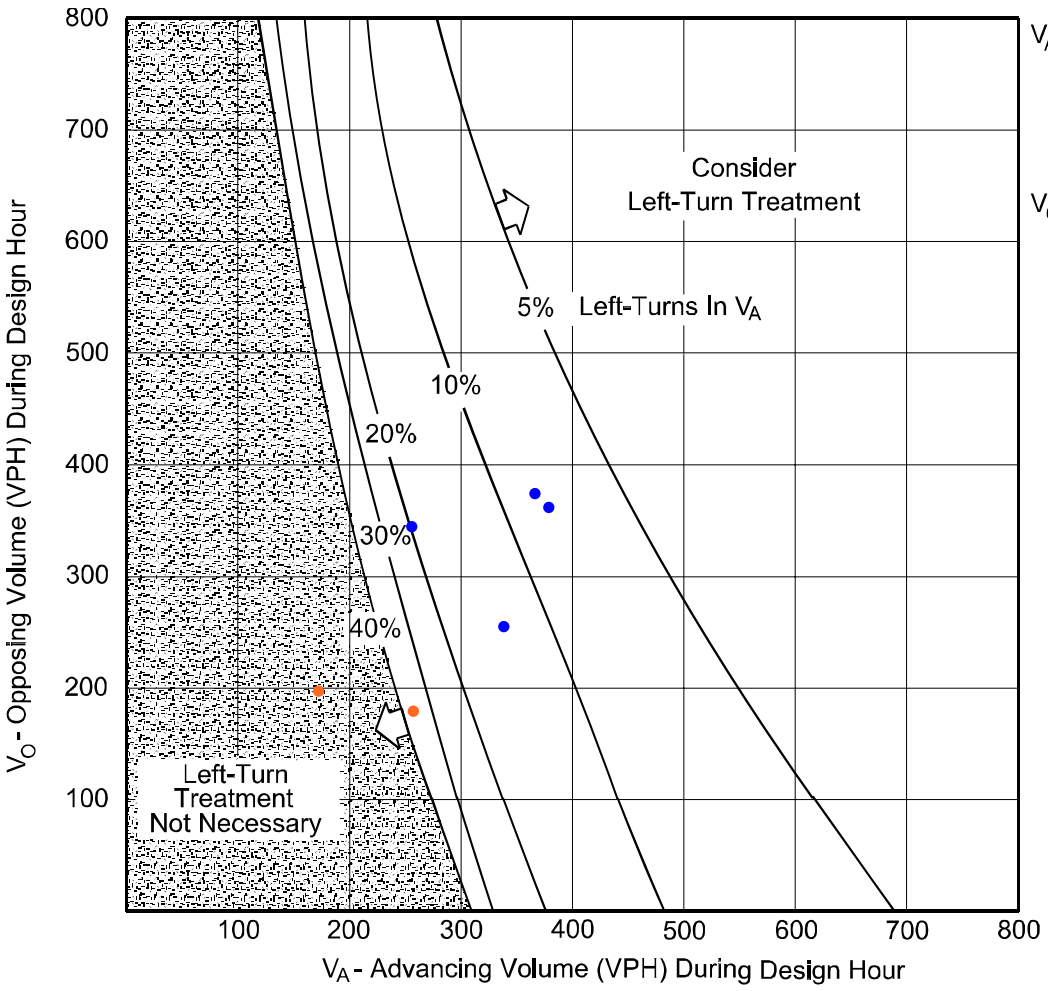
Given: Design Speed = 35 miles per hour
DHV = 250 vehicles per hour
Right Turns = 100 vehicles per hour

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use 100 – 20 = 80 vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
Figure 9.5-A

Riverside Road and Firetower Road/University Drive



V_A = Total advancing traffic volume including all turning traffic

V_O = Total opposing traffic volume including all turning traffic

2035 Background

AM	PM
V_{SBL} = 22 = 13%	V_{SBL} = 29 = 11%
V_A = 174	V_A = 254
V_o = 200	V_o = 182
Not Necessary	Not Necessary

2035 Build

AM	PM
V_{SBL} = 41 = 12%	V_{SBL} = 42 = 11%
V_A = 341	V_A = 373
V_o = 252	V_o = 362
Not Necessary	Consider
V_{NBL} = 0 = 0%	V_{NBL} = 0 = 0%
V_A = 252	V_A = 362
V_o = 341	V_o = 373
Not Necessary	Not Necessary

Instructions:

1. *The family of curves represents the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.*

2. *Read V_A and V_O into the chart and locate the intersection of the two volumes.*

3. *Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is warranted. If the point is to the left of the line, then a left-turn lane is not warranted based on traffic volumes.*

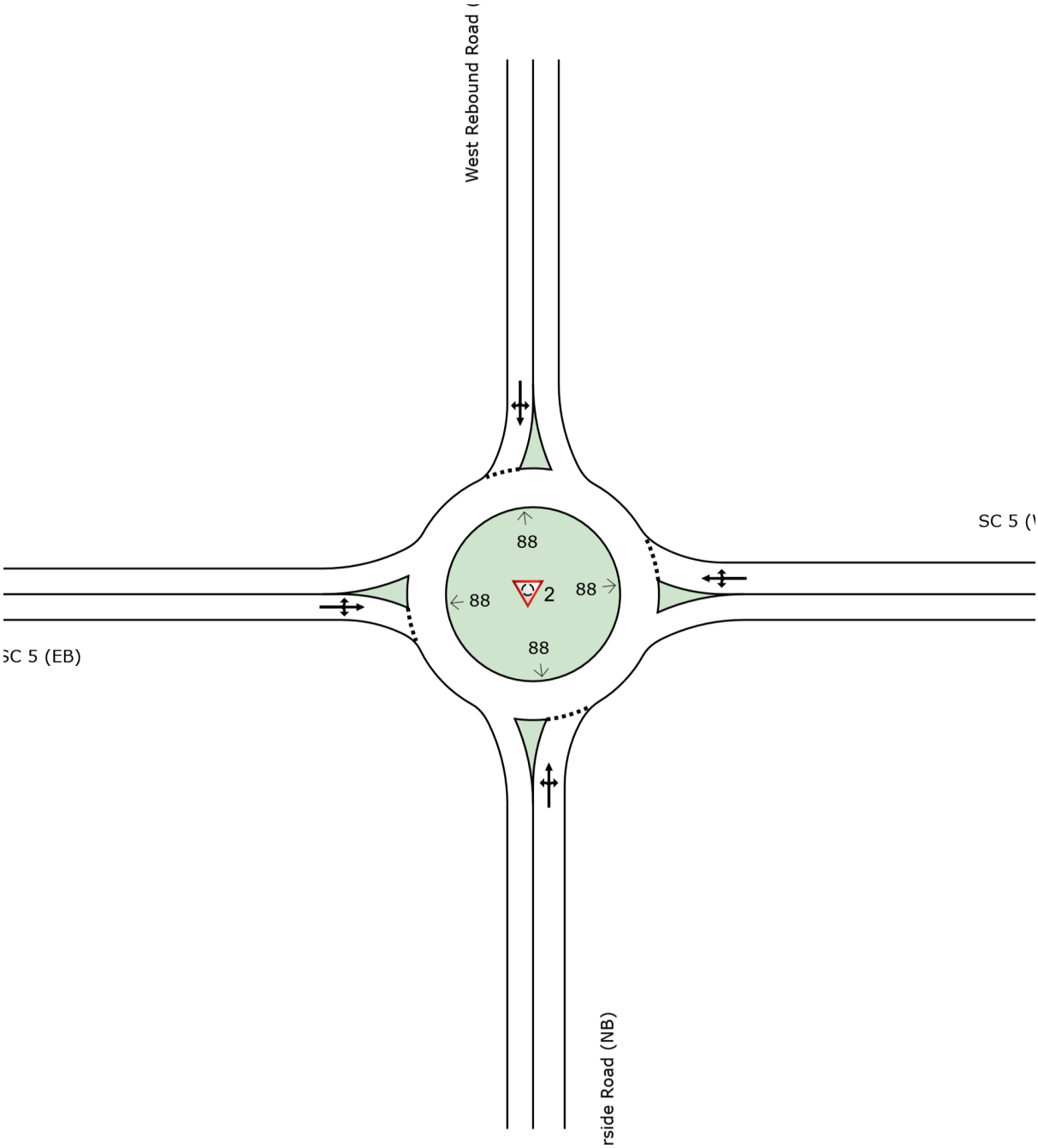
VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (50 mph)
Figure 9.5-E

SITE LAYOUT

Site: 2 [#2 2035 Build IMP AM (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 2 [#2 2035 Build IMP AM (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Riverside Road (NB)														
205	L2	205	5.0	228	5.0	0.566	14.7	LOS B	4.2	107.6	0.77	0.92	1.24	31.7
89	T1	89	2.0	99	2.0	0.566	14.5	LOS B	4.2	107.6	0.77	0.92	1.24	30.9
57	R2	57	2.0	63	2.0	0.566	14.5	LOS B	4.2	107.6	0.77	0.92	1.24	31.5
Approach		351	3.8	390	3.8	0.566	14.6	LOS B	4.2	107.6	0.77	0.92	1.24	31.5
East: SC 5 (WB)														
23	L2	23	50.0	26	50.0	1.284	155.4	LOS F	107.2	2873.3	1.00	3.43	8.34	10.3
960	T1	960	8.0	1067	8.0	1.284	153.8	LOS F	107.2	2873.3	1.00	3.43	8.34	11.1
12	R2	12	11.0	13	11.0	1.284	153.9	LOS F	107.2	2873.3	1.00	3.43	8.34	10.8
Approach		995	9.0	1106	9.0	1.284	153.8	LOS F	107.2	2873.3	1.00	3.43	8.34	11.0
North: West Rebound Road (SB)														
4	L2	4	2.0	4	2.0	0.280	13.6	LOS B	1.1	27.2	0.76	0.78	0.83	33.8
42	T1	42	6.0	47	6.0	0.280	14.0	LOS B	1.1	27.2	0.76	0.78	0.83	32.0
55	R2	55	3.0	61	3.0	0.280	13.7	LOS B	1.1	27.2	0.76	0.78	0.83	33.0
Approach		101	4.2	112	4.2	0.280	13.8	LOS B	1.1	27.2	0.76	0.78	0.83	32.6
West: SC 5 (EB)														
33	L2	33	4.0	37	4.0	0.587	10.2	LOS B	4.3	116.7	0.39	0.20	0.39	35.4
488	T1	488	11.0	542	11.0	0.587	10.4	LOS B	4.3	116.7	0.39	0.20	0.39	36.4
86	R2	86	8.0	96	8.0	0.587	10.3	LOS B	4.3	116.7	0.39	0.20	0.39	34.1
Approach		607	10.2	674	10.2	0.587	10.4	LOS B	4.3	116.7	0.39	0.20	0.39	36.0
All Vehicles		2054	8.2	2282	8.2	1.284	80.8	LOS F	107.2	2873.3	0.77	1.92	4.41	16.9

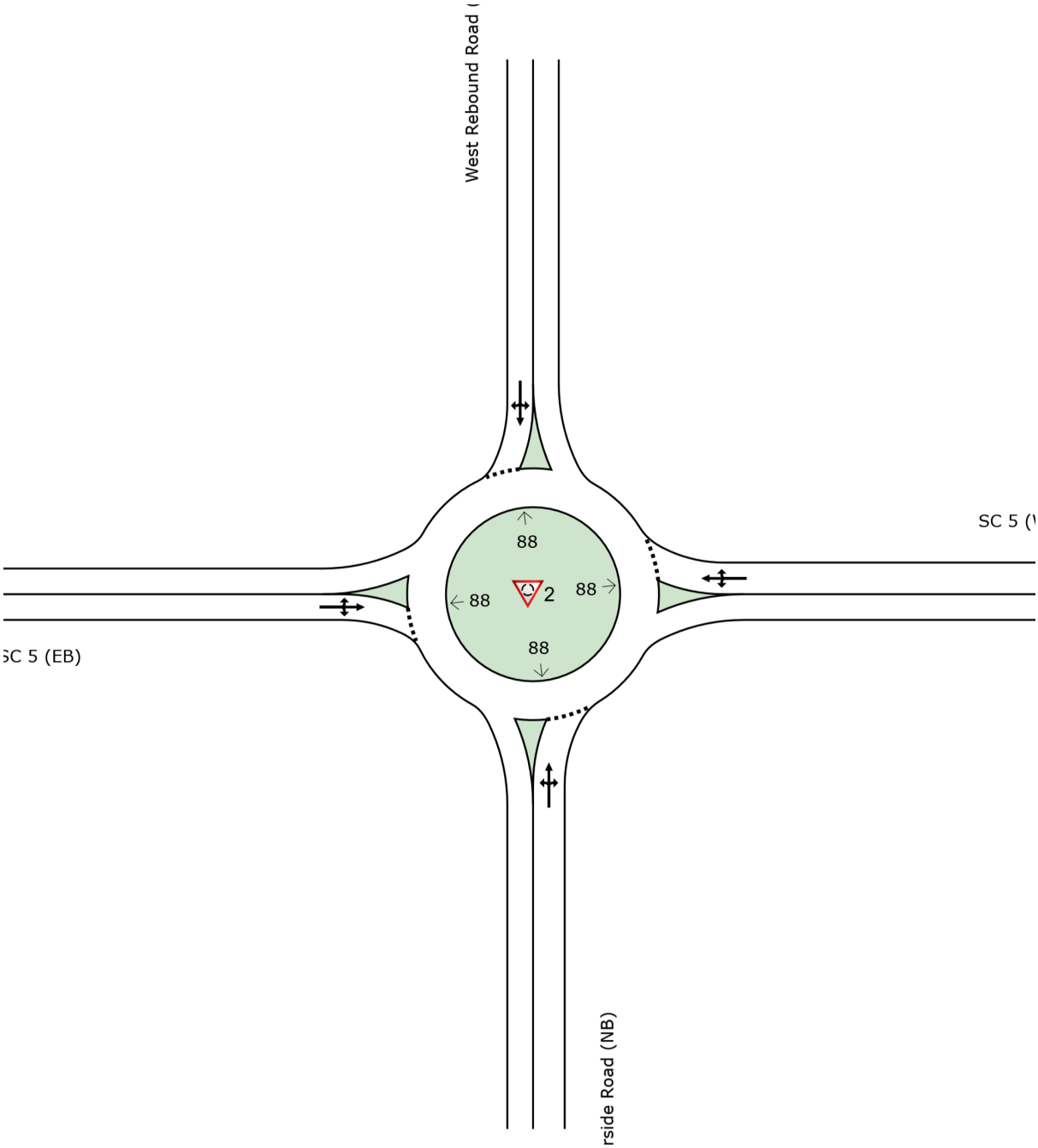
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 2 [#2 2035 Build IMP PM (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 2 [#2 2035 Build IMP PM (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Riverside Road (NB)														
112	L2	112	3.0	124	3.0	0.485	15.9	LOS C	2.6	66.7	0.76	0.87	1.16	31.5
63	T1	63	12.0	70	12.0	0.485	16.5	LOS C	2.6	66.7	0.76	0.87	1.16	29.5
46	R2	46	2.0	51	2.0	0.485	15.8	LOS C	2.6	66.7	0.76	0.87	1.16	31.0
Approach		221	5.4	246	5.4	0.485	16.0	LOS C	2.6	66.7	0.76	0.87	1.16	30.8
East: SC 5 (WB)														
70	L2	70	50.0	78	50.0	0.830	24.3	LOS C	21.2	577.5	0.85	1.08	1.84	25.2
635	T1	635	7.0	706	7.0	0.830	22.9	LOS C	21.2	577.5	0.85	1.08	1.84	30.6
19	R2	19	14.0	21	14.0	0.830	23.1	LOS C	21.2	577.5	0.85	1.08	1.84	28.3
Approach		724	11.3	804	11.3	0.830	23.0	LOS C	21.2	577.5	0.85	1.08	1.84	30.0
North: West Rebound Road (SB)														
8	L2	8	33.0	9	33.0	0.389	16.5	LOS C	1.7	45.2	0.74	0.81	0.99	29.8
96	T1	96	5.0	107	5.0	0.389	14.4	LOS B	1.7	45.2	0.74	0.81	0.99	31.8
57	R2	57	10.0	63	10.0	0.389	14.8	LOS B	1.7	45.2	0.74	0.81	0.99	31.9
Approach		161	8.2	179	8.2	0.389	14.7	LOS B	1.7	45.2	0.74	0.81	0.99	31.7
West: SC 5 (EB)														
43	L2	43	2.0	48	2.0	1.412	204.8	LOS F	181.6	4688.9	1.00	3.58	8.05	8.8
1077	T1	1077	4.0	1197	4.0	1.412	204.9	LOS F	181.6	4688.9	1.00	3.58	8.05	8.9
198	R2	198	5.0	220	5.0	1.412	204.9	LOS F	181.6	4688.9	1.00	3.58	8.05	8.7
Approach		1318	4.1	1464	4.1	1.412	204.9	LOS F	181.6	4688.9	1.00	3.58	8.05	8.8
All Vehicles		2424	6.6	2693	6.6	1.412	120.7	LOS F	181.6	4688.9	0.92	2.40	5.09	13.1

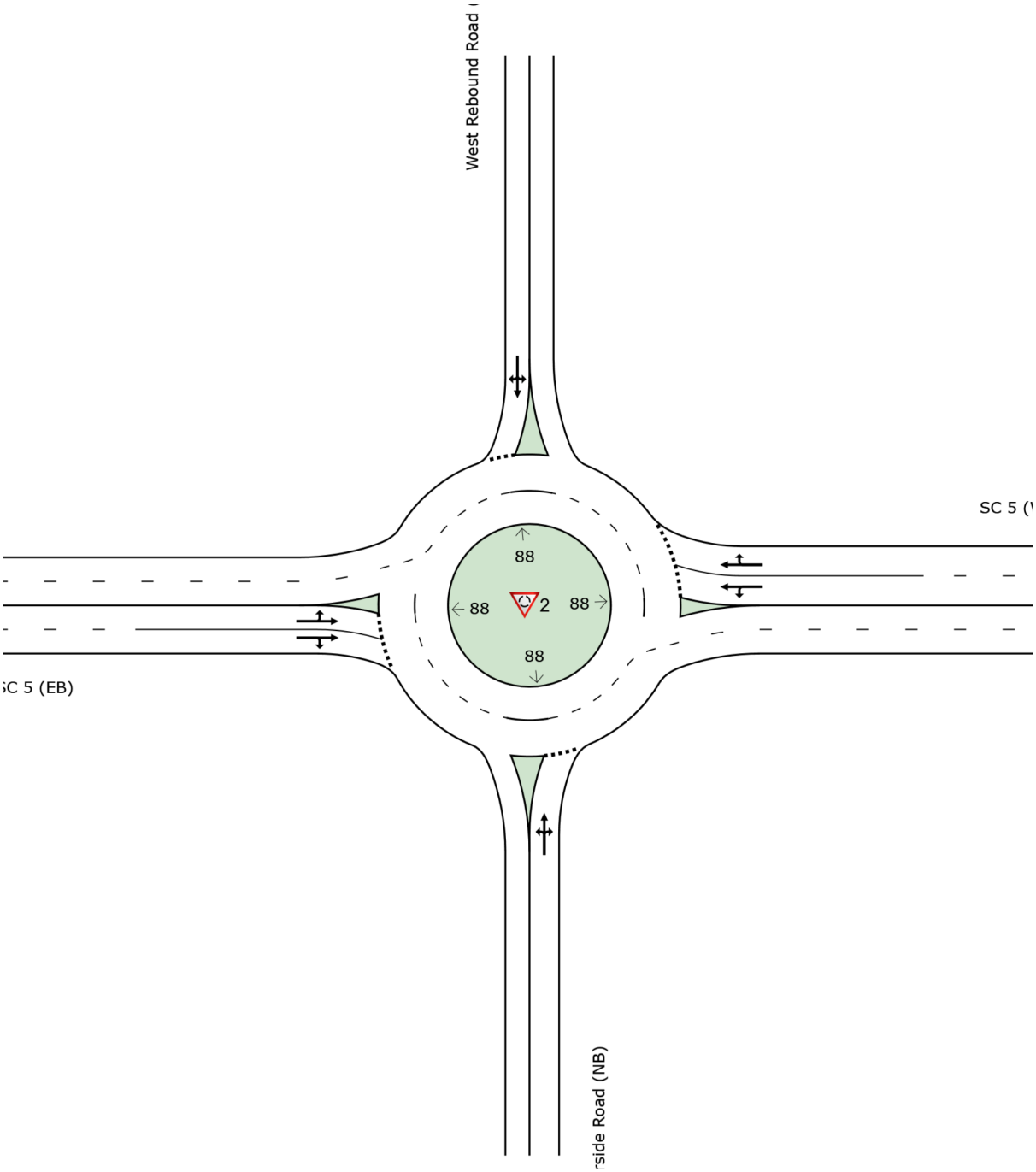
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 2 [#2 2035 Build IMP AM - Multiple Lanes (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 2 [#2 2035 Build IMP AM - Multiple Lanes (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Riverside Road (NB)														
205	L2	205	5.0	228	5.0	0.493	11.4	LOS B	3.0	77.3	0.68	0.78	0.99	33.2
89	T1	89	2.0	99	2.0	0.493	11.3	LOS B	3.0	77.3	0.68	0.78	0.99	32.4
57	R2	57	2.0	63	2.0	0.493	11.3	LOS B	3.0	77.3	0.68	0.78	0.99	33.0
Approach		351	3.8	390	3.8	0.493	11.4	LOS B	3.0	77.3	0.68	0.78	0.99	33.0
East: SC 5 (WB)														
23	L2	23	50.0	26	50.0	0.608	14.9	LOS B	5.5	149.5	0.66	0.75	1.08	28.3
960	T1	960	8.0	1067	8.0	0.608	12.9	LOS B	5.7	150.7	0.65	0.74	1.06	35.5
12	R2	12	11.0	13	11.0	0.608	12.6	LOS B	5.7	150.7	0.65	0.72	1.04	32.6
Approach		995	9.0	1106	9.0	0.608	12.9	LOS B	5.7	150.7	0.65	0.74	1.06	35.2
North: West Rebound Road (SB)														
4	L2	4	2.0	4	2.0	0.278	13.5	LOS B	0.9	24.5	0.76	0.79	0.87	33.8
42	T1	42	6.0	47	6.0	0.278	13.8	LOS B	0.9	24.5	0.76	0.79	0.87	32.1
55	R2	55	3.0	61	3.0	0.278	13.6	LOS B	0.9	24.5	0.76	0.79	0.87	33.1
Approach		101	4.2	112	4.2	0.278	13.7	LOS B	0.9	24.5	0.76	0.79	0.87	32.7
West: SC 5 (EB)														
33	L2	33	4.0	37	4.0	0.257	5.4	LOS A	1.1	29.4	0.24	0.12	0.24	38.0
488	T1	488	11.0	542	11.0	0.257	5.5	LOS A	1.1	29.4	0.23	0.12	0.23	39.5
86	R2	7	100.0	8	100.0	0.257	7.8	LOS A	1.0	28.3	0.23	0.11	0.23	33.1
Approach		528	11.7	587	11.7	0.257	5.5	LOS A	1.1	29.4	0.23	0.12	0.23	39.3
All Vehicles		1975	8.6	2194	8.6	0.608	10.7	LOS B	5.7	150.7	0.55	0.58	0.82	35.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
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Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

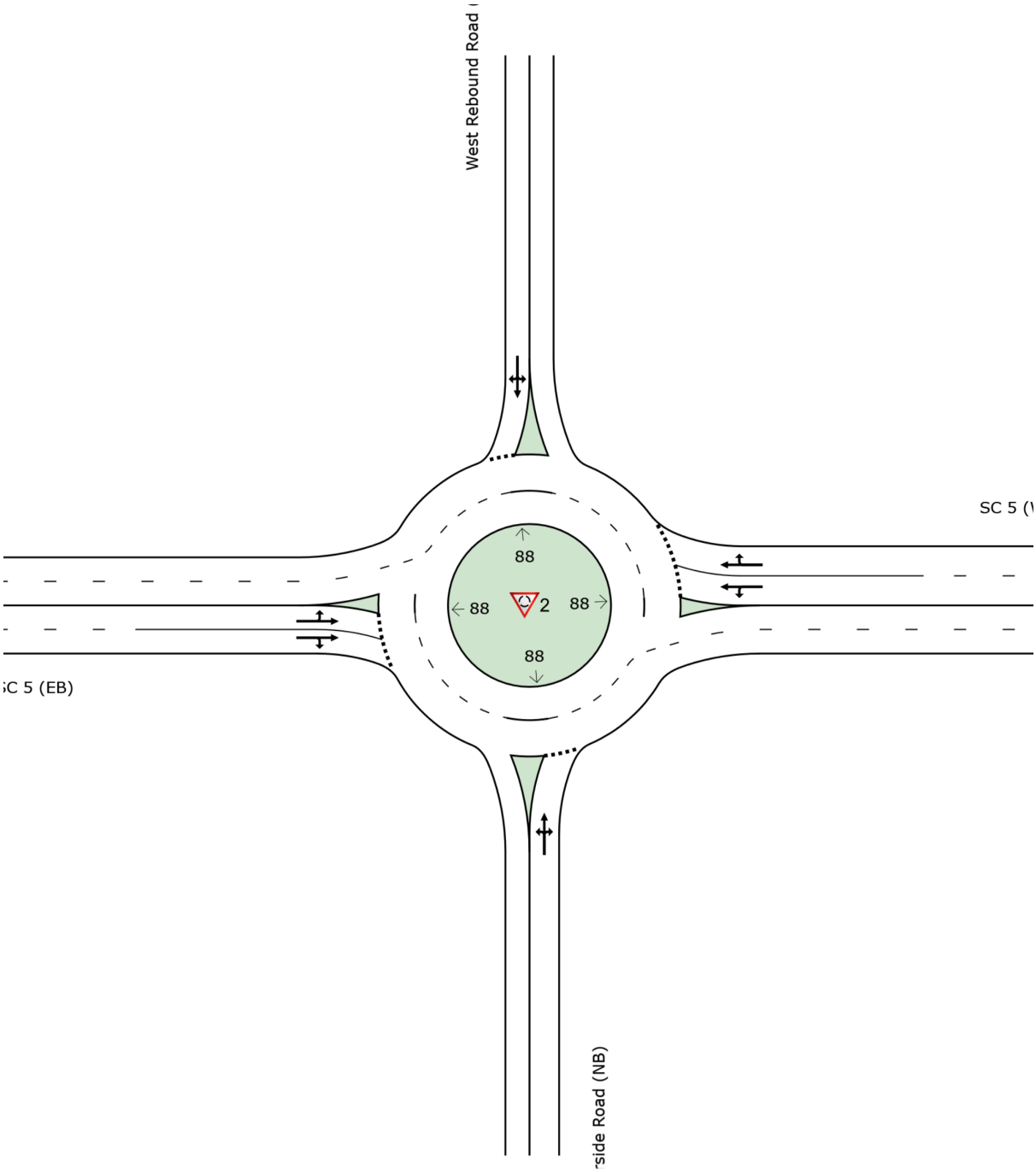
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SITE LAYOUT

Site: 2 [#2 2035 Build IMP PM - Multiple Lanes (Site Folder: Riverchase TIA)]

Riverchase TIA
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 2 [#2 2035 Build IMP PM - Multiple Lanes (Site Folder: Riverchase TIA)]

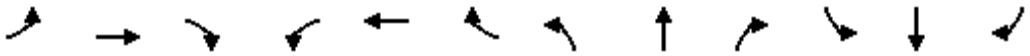
Riverchase TIA
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Riverside Road (NB)														
112	L2	112	3.0	124	3.0	0.552	20.2	LOS C	2.7	69.6	0.81	0.95	1.37	29.7
63	T1	63	12.0	70	12.0	0.552	20.9	LOS C	2.7	69.6	0.81	0.95	1.37	27.9
46	R2	46	2.0	51	2.0	0.552	20.1	LOS C	2.7	69.6	0.81	0.95	1.37	29.3
Approach		221	5.4	246	5.4	0.552	20.4	LOS C	2.7	69.6	0.81	0.95	1.37	29.1
East: SC 5 (WB)														
70	L2	70	50.0	78	50.0	0.405	9.7	LOS A	1.7	49.3	0.46	0.35	0.46	30.0
635	T1	635	7.0	706	7.0	0.405	7.9	LOS A	1.9	50.5	0.45	0.35	0.45	38.4
19	R2	19	14.0	21	14.0	0.405	7.9	LOS A	1.9	50.5	0.45	0.34	0.45	35.0
Approach		724	11.3	804	11.3	0.405	8.1	LOS A	1.9	50.5	0.45	0.35	0.45	37.3
North: West Rebound Road (SB)														
8	L2	8	33.0	9	33.0	0.319	12.5	LOS B	1.2	31.7	0.66	0.70	0.78	31.3
96	T1	96	5.0	107	5.0	0.319	10.8	LOS B	1.2	31.7	0.66	0.70	0.78	33.5
57	R2	57	10.0	63	10.0	0.319	11.1	LOS B	1.2	31.7	0.66	0.70	0.78	33.6
Approach		161	8.2	179	8.2	0.319	11.0	LOS B	1.2	31.7	0.66	0.70	0.78	33.4
West: SC 5 (EB)														
43	L2	43	2.0	48	2.0	0.681	13.8	LOS B	9.3	239.3	0.67	0.68	1.03	33.8
1077	T1	1077	4.0	1197	4.0	0.681	13.6	LOS B	9.3	239.3	0.66	0.66	1.00	35.5
198	R2	198	5.0	220	5.0	0.681	13.3	LOS B	9.1	234.5	0.65	0.64	0.97	33.1
Approach		1318	4.1	1464	4.1	0.681	13.6	LOS B	9.3	239.3	0.66	0.66	1.00	35.1
All Vehicles		2424	6.6	2693	6.6	0.681	12.4	LOS B	9.3	239.3	0.61	0.59	0.86	34.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
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Roundabout Capacity Model: US HCM 6.
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Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	81	1	0	0	0	0	0	0	0	736	48
Future Volume (vph)	0	81	1	0	0	0	0	0	0	0	736	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.999									0.991	
Flt Protected												
Satd. Flow (prot)	0	1611	0	0	1863	0	0	0	0	0	3431	0
Flt Permitted												
Satd. Flow (perm)	0	1611	0	0	1863	0	0	0	0	0	3431	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			1092	
Travel Time (s)		12.5			1.7			9.9			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	18%	2%	2%	2%	2%	2%	2%	2%	2%	3%	24%
Adj. Flow (vph)	0	90	1	0	0	0	0	0	0	0	818	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	0	0	0	0	0	0	871	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

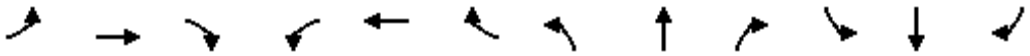
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	81	1	0	0	0	0	0	0	0	736	48
Future Vol, veh/h	0	81	1	0	0	0	0	0	0	0	736	48
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	18	2	2	2	2	2	2	2	2	3	24
Mvmt Flow	0	90	1	0	0	0	0	0	0	0	818	53

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	845	436	454	871	-			0	0	0
Stage 1	-	845	-	0	0	-			-	-	-
Stage 2	-	0	-	454	871	-			-	-	-
Critical Hdwy	-	6.86	6.94	7.54	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.86	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-
Follow-up Hdwy	-	4.18	3.32	3.52	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	270	568	489	288	0			-	-	-
Stage 1	0	342	-	-	-	0			-	-	-
Stage 2	0	-	-	555	367	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	270	568	381	288	-			-	-	-
Mov Cap-2 Maneuver	-	319	-	387	341	-			-	-	-
Stage 1	-	342	-	-	-	-			-	-	-
Stage 2	-	-	-	408	367	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	20.6	0	0
HCM LOS	C	A	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	321	-	-	-	-
HCM Lane V/C Ratio	0.284	-	-	-	-
HCM Control Delay (s)	20.6	0	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1	0	0	0	17	0	1255	6	0	0	0
Future Volume (vph)	80	1	0	0	0	17	0	1255	6	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt						0.865		0.999				
Flt Protected		0.953										
Satd. Flow (prot)	0	1524	0	0	0	1611	0	3403	0	0	0	0
Flt Permitted		0.953										
Satd. Flow (perm)	0	1524	0	0	0	1611	0	3403	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			1090	
Travel Time (s)		3.0			16.0			11.5			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	19%	2%	2%	2%	2%	2%	2%	6%	2%	2%	2%	2%
Adj. Flow (vph)	89	1	0	0	0	19	0	1394	7	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	0	19	0	1401	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	1	0	0	0	17	0	1255	6	0	0	0
Future Vol, veh/h	80	1	0	0	0	17	0	1255	6	0	0	0
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	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	19	2	2	2	2	2	2	6	2	2	2	2
Mvmt Flow	89	1	0	0	0	19	0	1394	7	0	0	0

Major/Minor	Minor2			Minor1			Major1			
Conflicting Flow All	697	1401	-	-	-	701	0	0	0	
Stage 1	0	0	-	-	-	-	-	-	-	
Stage 2	697	1401	-	-	-	-	-	-	-	
Critical Hdwy	7.88	6.54	-	-	-	6.94	4.14	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.88	5.54	-	-	-	-	-	-	-	
Follow-up Hdwy	3.69	4.02	-	-	-	3.32	2.22	-	-	
Pot Cap-1 Maneuver	297	139	0	0	0	381	-	-	-	
Stage 1	-	-	0	0	0	-	-	-	-	
Stage 2	360	205	0	0	0	-	-	-	-	
Platoon blocked, %								-	-	
Mov Cap-1 Maneuver	282	139	-	-	-	381	-	-	-	
Mov Cap-2 Maneuver	282	139	-	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	-	-	-	
Stage 2	342	205	-	-	-	-	-	-	-	

Approach	EB	WB	NB
HCM Control Delay, s	24	14.9	0
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	278	381
HCM Lane V/C Ratio	-	-	-	0.324	0.05
HCM Control Delay (s)	0	-	-	24	14.9
HCM Lane LOS	A	-	-	C	B
HCM 95th %tile Q(veh)	-	-	-	1.4	0.2



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	16	0	0	0	0	768
Future Volume (vph)	16	0	0	0	0	768
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	0	0	3539
Link Speed (mph)	35		55			55
Link Distance (ft)	170		559			307
Travel Time (s)	3.3		6.9			3.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	0	0	0	0	853
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	0	0	0	853
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.8%		ICU Level of Service C	
Analysis Period (min) 15			

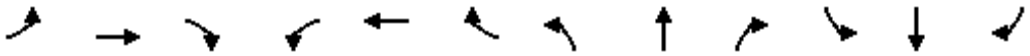
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	0	0	0	0	768
Future Vol, veh/h	16	0	0	0	0	768
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	0	0	0	853

Major/Minor	Minor1		Major2	
Conflicting Flow All	427	-	-	-
Stage 1	0	-	-	-
Stage 2	427	-	-	-
Critical Hdwy	6.84	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	-	-
Pot Cap-1 Maneuver	556	0	0	-
Stage 1	-	0	0	-
Stage 2	626	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	556	-	-	-
Mov Cap-2 Maneuver	556	-	-	-
Stage 1	-	-	-	-
Stage 2	626	-	-	-

Approach	WB	SB
HCM Control Delay, s	11.7	0
HCM LOS	B	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	556	-
HCM Lane V/C Ratio	0.032	-
HCM Control Delay (s)	11.7	-
HCM Lane LOS	B	-
HCM 95th %tile Q(veh)	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	61	3	0	6	0	0	0	0	1	1433	98
Future Volume (vph)	0	61	3	0	6	0	0	0	0	1	1433	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.994									0.990	
Flt Protected												
Satd. Flow (prot)	0	1720	0	0	1863	0	0	0	0	0	3436	0
Flt Permitted												
Satd. Flow (perm)	0	1720	0	0	1863	0	0	0	0	0	3436	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		459			110			797			1092	
Travel Time (s)		12.5			1.7			9.9			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	50%	2%	2%	2%	2%	2%	2%	2%	3%	19%
Adj. Flow (vph)	0	68	3	0	7	0	0	0	0	1	1592	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	7	0	0	0	0	0	1702	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.8%		ICU Level of Service A	
Analysis Period (min) 15			

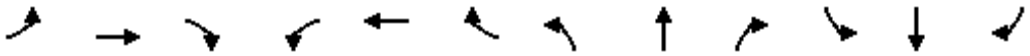
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	61	3	0	6	0	0	0	0	1	1433	98
Future Vol, veh/h	0	61	3	0	6	0	0	0	0	1	1433	98
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	8	50	2	2	2	2	2	2	2	3	19
Mvmt Flow	0	68	3	0	7	0	0	0	0	1	1592	109

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	1649	851	832	1703	-			0	0	0
Stage 1	-	1649	-	0	0	-			-	-	-
Stage 2	-	0	-	832	1703	-			-	-	-
Critical Hdwy	-	6.66	7.9	7.54	6.54	-			4.14	-	-
Critical Hdwy Stg 1	-	5.66	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.54	5.54	-			-	-	-
Follow-up Hdwy	-	4.08	3.8	3.52	4.02	-			2.22	-	-
Pot Cap-1 Maneuver	0	92	222	262	91	0			-	-	-
Stage 1	0	146	-	-	-	0			-	-	-
Stage 2	0	-	-	330	146	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	92	222	138	91	-			-	-	-
Mov Cap-2 Maneuver	-	116	-	162	114	-			-	-	-
Stage 1	-	146	-	-	-	-			-	-	-
Stage 2	-	-	-	174	146	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	72.5	38.5	
HCM LOS	F	E	

Minor Lane/Major Mvmt	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	119	114	-	-	-
HCM Lane V/C Ratio	0.598	0.058	-	-	-
HCM Control Delay (s)	72.5	38.5	-	-	-
HCM Lane LOS	F	E	-	-	-
HCM 95th %tile Q(veh)	3	0.2	-	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	2	0	0	0	11	6	916	8	0	0	0
Future Volume (vph)	60	2	0	0	0	11	6	916	8	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt						0.865		0.999				
Flt Protected		0.954										
Satd. Flow (prot)	0	1681	0	0	0	1611	0	3502	0	0	0	0
Flt Permitted		0.954										
Satd. Flow (perm)	0	1681	0	0	0	1611	0	3502	0	0	0	0
Link Speed (mph)		25			45			55			55	
Link Distance (ft)		110			1059			931			1090	
Travel Time (s)		3.0			16.0			11.5			13.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	67	2	0	0	0	12	7	1018	9	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	69	0	0	0	12	0	1034	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		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	60	2	0	0	0	11	6	916	8	0	0	0
Future Vol, veh/h	60	2	0	0	0	11	6	916	8	0	0	0
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	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	8	2	2	2	2	2	2	3	2	2	2	2
Mvmt Flow	67	2	0	0	0	12	7	1018	9	0	0	0

Major/Minor	Minor2		Minor1			Major1			
Conflicting Flow All	523	1041	-	-	-	514	0	0	0
Stage 1	0	0	-	-	-	-	-	-	-
Stage 2	523	1041	-	-	-	-	-	-	-
Critical Hdwy	7.66	6.54	-	-	-	6.94	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.66	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.58	4.02	-	-	-	3.32	2.22	-	-
Pot Cap-1 Maneuver	424	229	0	0	0	505	-	-	-
Stage 1	-	-	0	0	0	-	-	-	-
Stage 2	490	305	0	0	0	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	414	229	-	-	-	505	-	-	-
Mov Cap-2 Maneuver	414	229	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	478	305	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	15.8	12.3	
HCM LOS	C	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1
Capacity (veh/h)	-	-	-	403	505
HCM Lane V/C Ratio	-	-	-	0.171	0.024
HCM Control Delay (s)	-	-	-	15.8	12.3
HCM Lane LOS	-	-	-	C	B
HCM 95th %tile Q(veh)	-	-	-	0.6	0.1



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	0	0	0	0	1522
Future Volume (vph)	10	0	0	0	0	1522
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	0	0	0	3505
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	0	0	0	3505
Link Speed (mph)	35		55			55
Link Distance (ft)	170		559			307
Travel Time (s)	3.3		6.9			3.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%
Adj. Flow (vph)	11	0	0	0	0	1691
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	0	0	1691
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.7%		ICU Level of Service D	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	0	0	0	1522
Future Vol, veh/h	10	0	0	0	0	1522
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	11	0	0	0	0	1691

Major/Minor	Minor1		Major2	
Conflicting Flow All	846	-	-	-
Stage 1	0	-	-	-
Stage 2	846	-	-	-
Critical Hdwy	6.84	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	-	-
Pot Cap-1 Maneuver	301	0	0	-
Stage 1	-	0	0	-
Stage 2	381	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	301	-	-	-
Mov Cap-2 Maneuver	301	-	-	-
Stage 1	-	-	-	-
Stage 2	381	-	-	-

Approach	WB	SB
HCM Control Delay, s	17.4	0
HCM LOS	C	

Minor Lane/Major Mvmt	WBLn1	SBT
Capacity (veh/h)	301	-
HCM Lane V/C Ratio	0.037	-
HCM Control Delay (s)	17.4	-
HCM Lane LOS	C	-
HCM 95th %tile Q(veh)	0.1	-

Agenda Item Summary

Ordinance # / Resolution #: RZ-2023-0531 Crossridge 4
Contact Person / Sponsor: A. Davis
Department: Planning
Date Requested to be on Agenda: 5/4/2023

Points to Consider:

ATTACHMENTS:

Description	Upload Date	Type
Application	4/28/2023	Exhibit
Proposed Plat	4/28/2023	Exhibit
Sketch Plan	4/28/2023	Exhibit

Lancaster County
South Carolina

Planning Department
P.O. Box 1809, 101 N. Main Street, Lancaster, SC 29721
Phone: 803.285.6005, planning@lancastercountysc.net
www.mylancastersc.org

ZONING MAP AMENDMENT APPLICATION

SUBMITTAL REQUIREMENTS

- Completed Application
- Signatures of Applicant and Property Owner
- Deed and survey plat or boundary survey
- Fees associated with review

GENERAL INFORMATION

Property Address 8574 Charlotte Hwy

City Indian Land State SC Zip 29707 Tax Parcel ID 0010-00-057.00
0010-00-056.00
0010-00-061.01
0010-00-059.00

Current Zoning RB and PDD 26 Current Use Vacant

Proposed Zoning RB and PDD 26 Total Acres

Project Description Zoning line adjustment on parcels

Surrounding Property Description Commercial Uses or vacant

CONTACT INFORMATION

Applicant Name Ben Cerullo, Chief Operating Officer

Address 3000 World Reach Dr

City Indian Land State SC Zip 29707 Phone (803) 587-1000

Fax Email bcerullo@bencerullo.com

Property Owner Name Ben Cerullo, Chief Operating Officer

Address 3000 World Reach Dr

City Indian Land State SC Zip 29707 Phone (803) 587-1000

Fax Email bcerullo@bencerullo.com

I hereby certify that I have read this application and the information supplied herein is true and correct to the best of my knowledge. I agree to comply with all applicable County ordinances and state laws related to the use and development of the land. I further certify that I am the property owner, or his/her authorized agent, or the subject property. I understand that falsifying any information herein may result in rejection or denial of this request.

Ben Cerullo — 4/20/23

Applicant — Date

[signature] — 4/20/23

Property Owner(s) — Date

Attach owner's notarized written authorization with property information if the applicant is not the owner.

LANCASTER COUNTY OFFICE USE ONLY

Application Number _____ Date Received _____ Receipt Number _____

Amount Paid _____ Check Number _____ Cash Amount _____

Received By _____ Planning Commission Meeting Date _____

SCHEDULE/PROCESS 1. **Submit Application**

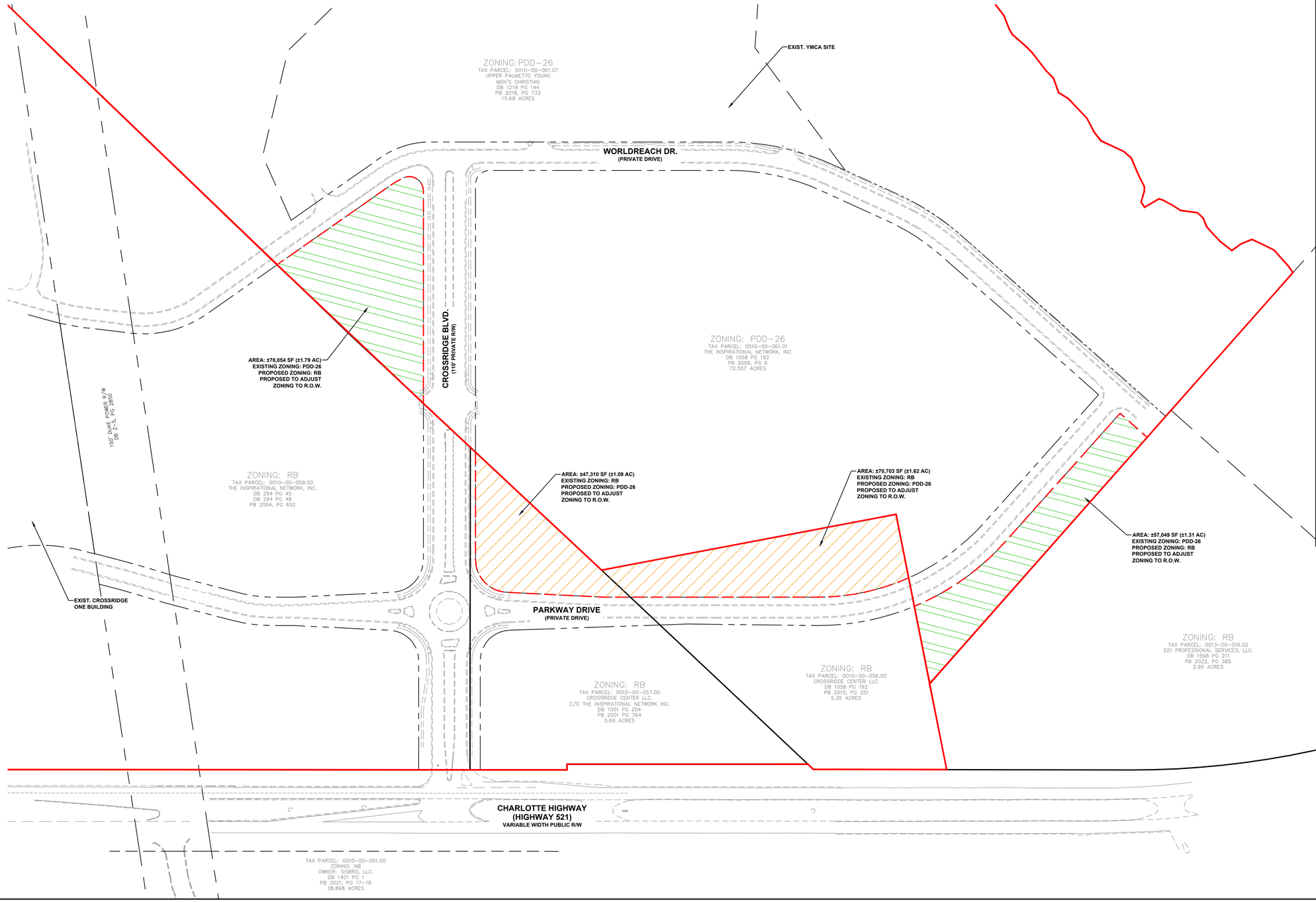
- The deadline for this application is at least 45 days prior to the Planning Commission meeting, held every third Tuesday of the month.
- Once an application is submitted, it is placed on the Planning Commission agenda for the following month.
- An application withdrawal should be made in writing and received prior to public notice in order to receive a refund.
- Rezoning Application Fee – single parcel $435.00
- Rezoning Application Fee – multi parcel $610.00

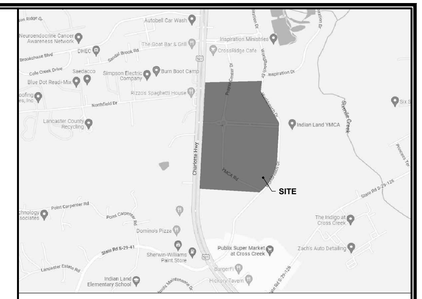
2. **Planning Commission**

- Conducts a public hearing on the application to receive input from Lancaster County citizens, applicant, and other interested parties.
- Reviews the application to ensure it is consistent with the Lancaster County Unified Development Ordinance, Comprehensive Plan, and all adopted County plans.
- Makes a recommendation to the County Council.

3. **County Council**

- Approves, denies, or submits application to the Planning Commission for further study.
- Action requires three readings for approval.
- Subsequent to final County Council action on rezoning, notice of action will be provided to the applicant, owner, and adjacent property owners.
- If applicant would like to request a special presentation, please notify the County Clerk @ (803) 416-9307 before 5:00pm on the first Monday of the month to make arrangements.





VICINITY MAP

NTS

NORTH

GENERAL NOTES:

1. ALL SITE PLAN, ZONING AND WETLAND INFORMATION UTILIZED IN THE PREPARATION OF THIS PLAN IS CONSIDERED TO BE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE AND FINAL VERIFICATION.
2. DRAFT: DO NOT RELY ON THIS DOCUMENT.

BASE INFORMATION:
BOUNDARY AND BASE INFORMATION TAKEN FROM "TOPOGRAPHIC SURVEY CROSSRIDGE CENTER LLC TAX PARCEL 0010-00-059.00" BY ESP ASSOCIATES, INC. DATED 02/14/23.

PUBLIC INFORMATION:
ESP ASSOCIATES IS NOT RESPONSIBLE FOR PLAN DEFICIENCIES CREATED BY INCORRECT, INCOMPLETE AND MISSING OR OUTDATED INFORMATION DERIVED FROM PUBLIC SOURCES SUCH AS GIS PLANNING AND ZONING DEPARTMENTS.

LEGEND:

- PROJECT BOUNDARY
- CONTOURS
- STREAMS
- FLOODWAYS
- WETLANDS / PONDS

PROPOSED ZONING LINE ADJUSTMENTS

EXISTING ZONING	PROPOSED ZONING	ACREAGE	LEGEND
PDD-26	RB	± 3.10 AC	
RB	PDD-26	± 2.71 AC	

ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
3475 Lakemont Blvd.
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-2440 (SC)
www.espassociates.com

NORTH ORIENTED TO SC GRID (NAD83/2011)

CROSSRIDGE COMMERCIAL - PHASE 4

ZONING EXHIBIT

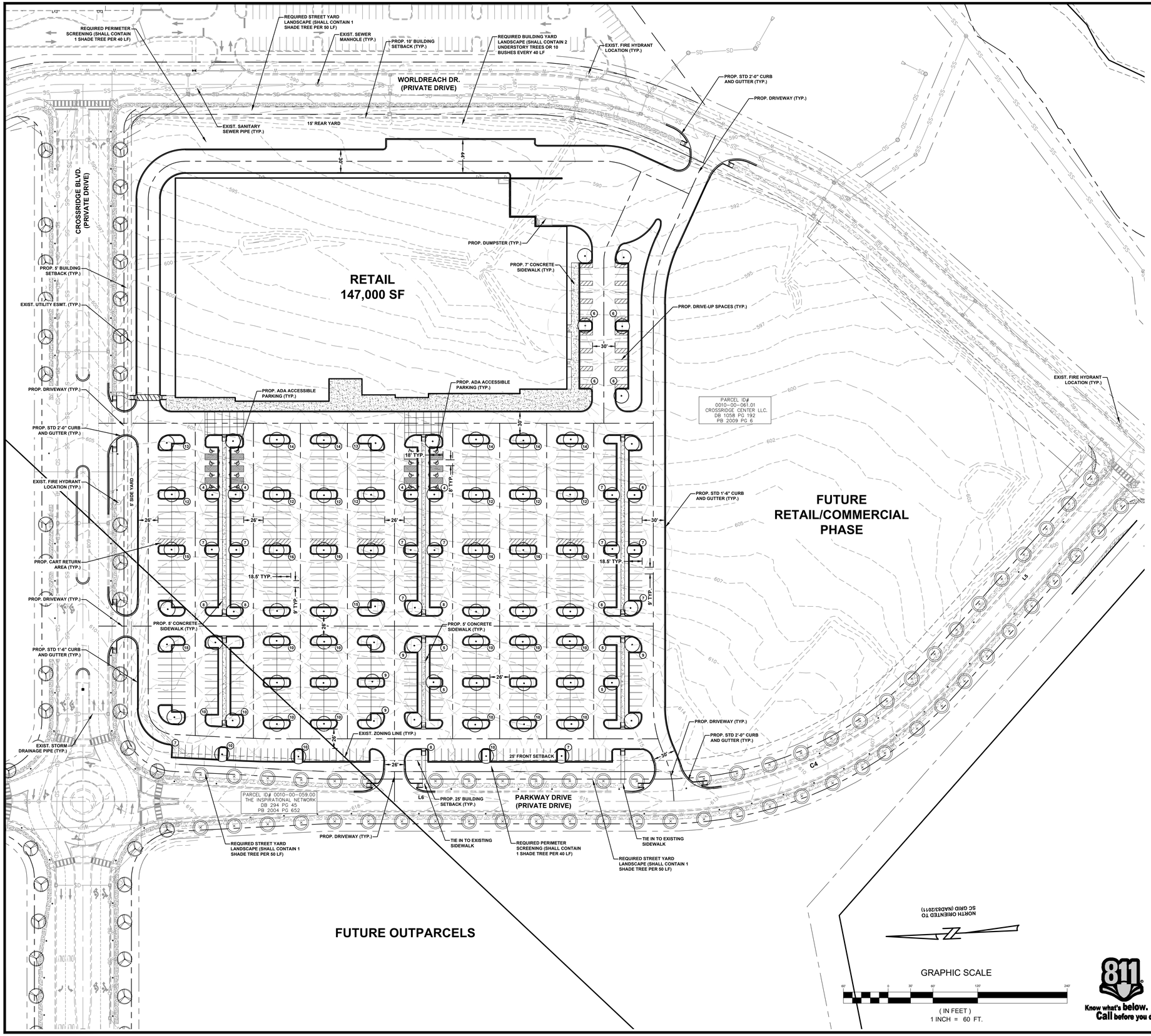
ESP JOB: WD20.105 4/20/2023

GRAPHIC SCALE

100' 0 50' 100' 200' 400'

(IN FEET)
1 INCH = 100 FT.

Crossridge Development, LLC
3000 World Outreach Dr.
Indian Land, SC 29707





VICINITY MAP SCALE: 1" = 3,000'

Development Data:

Tax Parcel:	0010-00-059.00, 0010-00-061.01
Site Area:	±21.99 Acres
Location:	Lancaster County, SC
Land Use:	
Existing:	Open Space
Proposed:	Proposed Commercial Development
Existing Zoning:	PDD-26
Parking:	
Required:	588 Spaces
Retail:	1 Space Per 250 SF Building Area (588 Spaces)
Provided:	653 Spaces (637 Spaces, 8 ADA Van Space, & 8 ADA Space)

PDD-26 Development Standards:

Setbacks:	
Front Setback:	25'
Side Yard:	5'
Rear Yard:	15'
Building Height:	50' Max

Landscaping Standards:

Street Yard:	Street yards shall be a minimum of 5 feet wide. Street yards shall contain one shade tree per 50 linear except in the case of a conflict with utility lines. These trees shall be generally equally distributed along the street frontage, but they are not required to be at absolute equal intervals. This will allow for some flexibility in design while discouraging long intervals without trees.
Building Yard:	Building yards shall be a minimum of 6 feet wide and shall be provided along any side of a building facing a public right-of-way. Up to 25 percent of the building width along the street may be used for entrance walkways. The building yard must contain a minimum of two (2) understory trees or ten (10) shrubs every 40 linear feet of building yard.
Perimeter Screening:	Ten-foot landscaped strip along a street frontage. This area shall include a semi-opaque screen to an average height of three (3) feet and one (1) canopy tree per every fifty (40) feet of street frontage. No parking space shall be more than 50' from the base of a tree.
Interior Landscaping:	No less than a minimum of one (1) landscaped island shall be provided for every ten (10) parking spaces or fraction thereof. Landscaped island shall be a minimum of one hundred eighty (180) square feet with a minimum width of ten (10) feet. This area shall contain one (1) canopy tree or two (2) understory trees (two understory trees can replace one canopy tree for no more than $\frac{1}{3}$ of the required canopy trees. Additionally, a landscaped island shall be provided at both ends of all parking aisles.

Notes:

1. Preliminary Site Plan is conceptual in nature and subject to change.
2. Storm water quality for the Proposed Retail Building Area depicted on this Site Plan have been accounted for as part of the overall INSP development property.
3. Base information utilized in preparation of this Site Plan obtained from survey titled "Topographic Survey of a Portion of Tax Parcel ID 0010-00-061.01" by ESP Associates, INC. dated 03/02/2023.
4. Site Layout utilized in preparation of this Site Plan provided from ESP Associates, INC., in autocad file titled "WD20.440 - Base.dwg" on March 7, 2023.
5. Draft- Do Not Rely on this Document.

Access Points/Driveways/Streets

Proposed project entrance locations are considered preliminary in nature and need to be verified for adequate sight distance and will need to be verified for sufficiency to satisfy or exceed minimum requirements established in the applicable standards identified in the Lancaster County Land Development Standards Manual. Location of street connections are conceptual and may be subject to change based on agency input and review.

Public Information

ESP is not responsible for plan deficiencies created by incorrect, incomplete, missing or outdated information derived from public sources such as GIS, Planning and Zoning departments.

ESP Associates, Inc.
P.O. Box 7030
Charlotte, NC 28241
3475 Lakemont Blvd.
Fort Mill, SC 29708
704-583-4949 (NC)
803-802-4940 (SC)
www.espassociates.com

PRELIMINARY NOT FOR CONSTRUCTION

NO.	DATE	REVISION	BY

TRC SITE PLAN - PHASE 4

CROSSRIDGE
LANCASTER COUNTY, SOUTH CAROLINA
CROSSRIDGE DEVELOPMENT, LLC

PROJECT INFORMATION	
PROJECT MANAGER:	CL
DESIGNED BY:	LS
DRAWN BY:	LS
PROJECT NUMBER:	WD20.103
ORIGINAL DATE:	03/08/23

SHEET: SP-1

U:\2008 Projects (W)\WD20.101 - CrossRidge Development (Crossridge Development, LLC)_WD20.105_CrossRidge Phase 4\Exhibits\WD20.105 - CrossRidge Commercial Phase 4 - TRC Site Plan.dwg, SP-3, bhakespeare