INFRASTRUCTURE
CONSULTING & ENGINEERING

Prepared for Carlyle Development, LLC

Traffic Impact Analysis

Camden Tract Residential Development

Battleship Road & Carter Street

Camden, South Carolina

SOUTH CAROLINA
Infrastructure Consulting & Engineering, PLLC
No. 4470
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 18737
CRAIG DAVID NELSON

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6/23/2023

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6/23/2023

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Executive Summary

A Traffic Impact Analysis (TIA) was performed for a proposed residential development on Battleship Road (S-194), Chestnut Street (S-76), and Carter Street (S-393) in Camden, South Carolina. Land use includes a total of 778 Single-Family Attached Dwelling Units.

Traffic to and from the site will use a proposed extension of Chesnut Street (S-76); a proposed access (Access 1) on Battleship Road (S-194) approximately 2900 feet south of Carter Street (S-393) aligned with Five Bridge Road (S-198); a proposed access (Access 2) on Carter Street (S-393) about 2650 feet north of Chesnut Street (S-76); and a proposed access (Access 3) on Carter Street (S-393) approximately 2650 feet north of Chesnut Street (S-76) aligned with Access 2.

Study intersections included West DeKalb Street (US 1) at Battleship Road (S-194, existing signal); Battleship Road (S-194) at Five Bridge Road (S-198)/Access 1; Carter Street (S-393) at Battleship Road (S-194); Chesnut Street (S-76) at Carter Street (S-479); Broad Street (US-521) at Chesnut Street (S-76, existing signal); and Carter Street (S-393) at Access 2/Access 3.

Growth projections were made using the SCDOT Traffic Analysis and Data Application website, and a 1.0% No Build traffic growth rate was assumed.

It was found that in the 2026 Build scenario, the signalized intersection of West DeKalb Street (US 1) at Battleship Road (S-194) is expected to operate at LOS D in the AM and PM peak hours. Based on the analysis, a left turn phase for eastbound traffic on West DeKalb Street (US 1) at Battleship Road (S-194) may be beneficial. The westbound left turn movement from Access 1 at Battleship Road (S-194) would experience LOS C in the AM and PM peak hours. All other study intersections would experience LOS B or better.

SCDOT Turn Lane guidelines indicate that a right turn lane on Battleship Road (S-194) at Access 1 should be considered in the 2026 Build scenario.

The study concludes that the public roadway system serving the site can accommodate the anticipated traffic volumes generated by the proposed Camden Tract Residential Development.

Introduction

This report summarizes the results of a traffic study conducted by Infrastructure Consulting & Engineering, PLLC (ICE) in connection with the development of a proposed residential development on Battleship Road (S-194), Chestnut Street (S-76), and Carter Street (S-393) in Camden, South Carolina. Land use includes a total of 778 Single-Family Attached Dwelling Units.

The proposed development is anticipated to be complete in 2025, with a horizon year for the Build analysis of 2026 (completion year plus one).

The Site Location and Study Area is illustrated in Figure 1, and the Site Plan is presented in Figure 2.

The purpose of this study is to determine the traffic impacts of the proposed development on the adjacent roadway system and the study intersections in the vicinity of the project site.

Existing Conditions

The land use in the study area consists of residential, recreational, commercial, and church uses near the site. The property being developed consists of an equestrian training center (Camden Training Center).

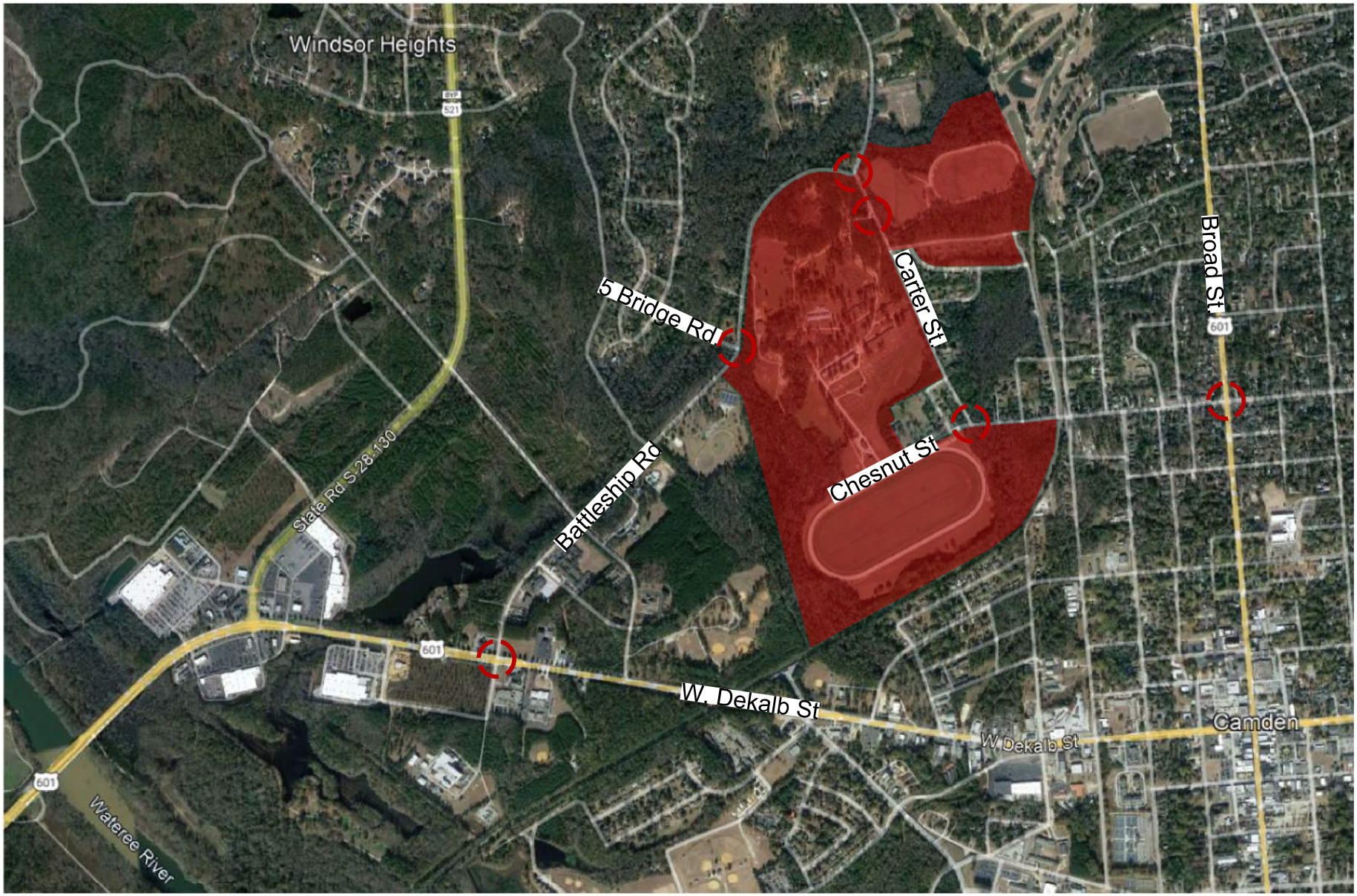
Regional access to the project site is provided by I-20, West DeKalb Street (US 1), and Broad Street (US 521). Direct access to the project site is proposed to be provided on Carter Street (S-393), Battleship Road (S-194), and Chesnut Street (S-76). Carter Street (S-393) is a north-south street running through the project site that connects Chesnut Street (S-76) to Knights Hill Road north of the project site. Battleship Road (S-194) is a north-south road connecting West DeKalb Street (US 1) on its south end to Carter Street (S-393) on its north end. Chesnut Street (S-76) is an east-west street in the City of Camden beginning at the project site and ending to the east at Lakeview Avenue. Five Bridge Road (S-198) is a short east-west local street connecting the Kirkover Hills neighborhood west of the project site to Battleship Road (S-194). Broad Street (US 521) is a north-south highway running from Georgetown, South Carolina to Charlotte, North Carolina. West DeKalb Street (US 1) is a north-south highway on the east coast of the United States connecting Key West, Florida to Fort Kent, Maine at the Canadian border.

Study area intersections include West DeKalb Street (US 1) at Battleship Road (S-194, existing signal); Battleship Road (S-194) at Five Bridge Road (S-198)/Access 1; Carter Street (S-393) at Battleship Road (S-194); Chesnut Street (S-76) at Carter Street (S-479); Broad Street (US-521) at Chesnut Street (S-76, existing signal); and Carter Street (S-393) at Access 2/Access 3.

Carter Street (S-393) is a two-lane road with a posted speed limit of 45 mph (See Table 1). Battleship Road (S-194) is a two-lane road in the study area with a speed limit of 45 mph. Chesnut Street (S-76) is a two-lane road with a posted speed limit of 45 mph. Five Bridge Road (S-198) is a two-lane road with no posted speed limit. Broad Street (US 521) is a two-lane street with a posted speed limit of 25 mph. West DeKalb Street (US 1) is a two-lane street with a posted speed limit of 15 mph. The proposed project site spans approximately 715 feet along Carter Street (S-393), 1875 feet along Battleship Road (S-194), and 950 feet along

The roadway classification is summarized in Table 1 below:

Table 1 Roadway Classifications Camden Tract Residential Development TIA		
Roadway	**Classification**	**Speed Limit**
Carter Street (S-393, S-479)	Urban-Major Collector	30 mph
Battleship Road (S-194)	Urban- Major Collector	35 mph
Chesnut Street (S-76)	Urban-Major Collector	None Posted
Five Bridge Road (S-198)	Urban-Local	None Posted
Broad Street (US 521)	Urban-Principal Arterial	35 mph
West DeKalb Street (US 1)	Urban- Principal Arterial	40 mph



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LEGEND

Project Location:

Study Intersections:

Figure 1

Site Location/Study Area

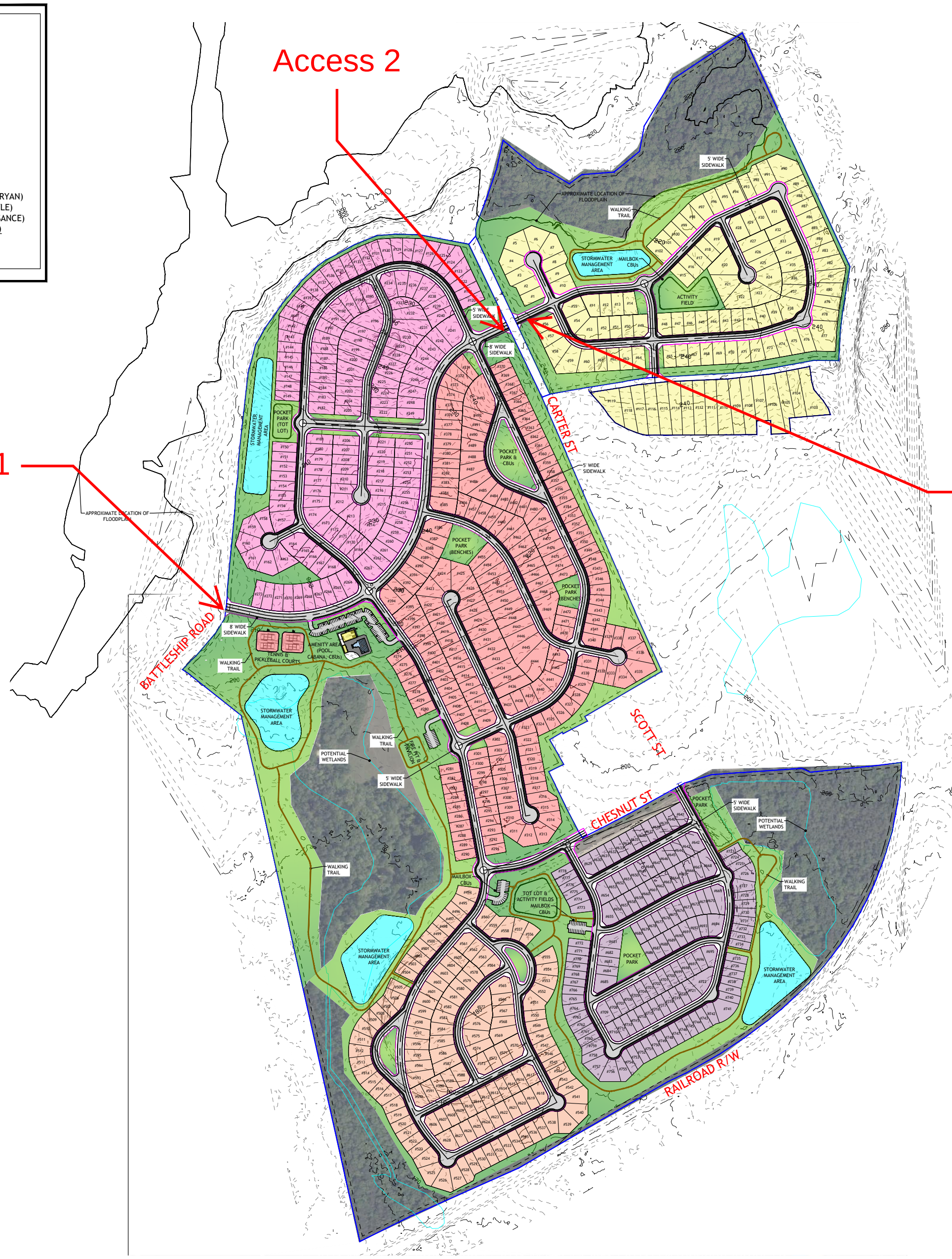
Camden Tract Residential

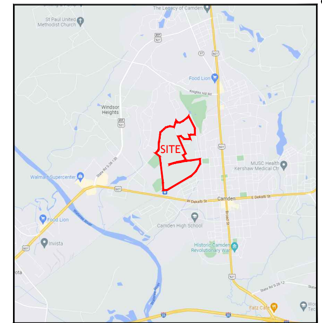
Traffic Impact Analysis

SITE DATA

TAX MAP NO.:	C270-00-00-014 & C270-00-00-013
SITE AREA:	±315 AC
ZONING:	*R-6
SETBACKS: EXTERIOR:	20'
PROPOSED ROADWAY:	29,309 LF (50' PUBLIC R.O.W.) 3,279 LF (50' PUBLIC R.O.W.) 32,588 LF TOTAL
PROPOSED LOTS:	150 SFR LOTS (43' X 120' TYP.) 135 SFR LOTS (53' X 120' TYP.) (SIMPLY RYAN) 220 SFR LOTS (53' X 115' TYP.) (LIFESTYLE) 154 SFR LOTS (53' X 125' TYP.) (RENAISSANCE) 119 SFR LOTS (65' X 135' TYP.) (ESTATE) 778 TOTAL LOTS

*LAYOUT IS SUBJECT TO P.C. APPROVAL





VICINITY MAP - N.T.S.

SITE LEGEND

43' WIDE LOTS	(150 LOTS)
53' SIMPLY RYAN LOTS	(135 LOTS)
53' LIFESTYLE LOTS	(220 LOTS)
53' RENAISSANCE LOTS	(154 LOTS)
65' WIDE ESTATE LOTS	(119 LOTS)
PROPERTY LINE/R.O.W.	
PROPOSED BUILDING SETBACK LINE	
FLOODPLAIN	
PROPOSED R/W	
PROPOSED C/L ROAD	

GRAPHIC SCALE

(IN FEET)
1 inch = 300 ft.

Project Number: 2023-021
DWG Name: Camden Tract SP-5.dwg
Drawing Scale: AS NOTED
Date of Project: 04/2023
Engineer of Record:
Paul J. Harrison, P.E.
South Carolina PE# 24224
North Carolina PE# 038371

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SC C04212 - GA PEF005865
NC P0868 - AL CA4065E

CAMDEN TRACT
(SFR Subdivision - Preliminary)
Battleship St. & Carter St.
Kershaw County, SC

Preliminary Site Plan

SP-5

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Figure 2
Proposed Site Plan

Camden Tract Residential
Traffic Impact Analysis

Transportation System Analysis

Street System Improvements: As per the SCDOT Project Viewer, no upcoming improvement projects are listed in the study area.

Pedestrian Access: It was observed that there are existing sidewalks on West DeKalb Street (US 1) at Battleship Road (S-194) with pedestrian signals at the intersection. There are also existing sidewalks on Broad Street (US 521) at Chesnut Street (S-76) with pedestrian signals. There are no existing sidewalks on the roads immediately adjacent to the project site.

Bicycle Access: Currently, bicycle lanes are not present on the study area streets. There are no known plans for bicycle lanes in the vicinity of the project site.

Transit Service: Bus routes are not present in the study area.

On-Street Parking: On-street parking is not present in the vicinity of the project site.

Data Collection

The AM and PM peak period turning movement counts for the study area intersections were conducted by Short Counts, LLC on May 16, 2023.

AM and PM peak hour turning movement counts are summarized in Figure 3. Additionally, AADT counts are available on the SCDOT Traffic Analysis and Data Application website for Station Id 28-0147 (US 521: US 1 (WEST DEKALB ST) TO S-132 (DICEY FORD RD)); Station Id 28-0115 (US 1: S-130 (SPRINGDALE DR) TO S-45 (CHESTNUT FERRY RD)); Station Id 28-0425 (S-194: US 1 (WEST DEKALB ST), L- 525 TO S-393 (CARTER ST)); Station Id 28-0371 (S-393: S-479 (CARTER ST) TO L-1318 (PINE TOP RD)); Station Id 28-0441 (S-479: S-393 (GORDON ST) TO S- 76 (CHESNUT ST)); Station Id 28-0401 (S-76: L-76 (CHESNUT ST) TO S-479 (CARTER ST)); and Station Id 28-0457 (L-76: L-79 (MILL ST) TO US 521 (BROAD ST), S- 76).

The reports of the traffic counts conducted for this project are presented in Appendix B.

No Build Conditions

Base future growth analysis was derived from SCDOT's Traffic Analysis and Data Application website using the available SCDOT count stations near the site. Using AADT years 2013 through 2022, a 0.71% weighted average growth rate was calculated. The 0.71% growth rate was rounded up to 1% and applied to existing counts to obtain a horizon year of 2026 (completion year of 2025 plus one year) and to establish the 2026 No Build traffic model.

Resulting 2026 No Build AM and PM peak hour turning movement volumes are summarized in Figure 4. Resulting 2026 No Build AM and PM peak hour turning movement volumes are summarized in Figure 5. Intersection reports in Appendix C show the turning movement volumes for the Existing, No Build, and Build conditions.

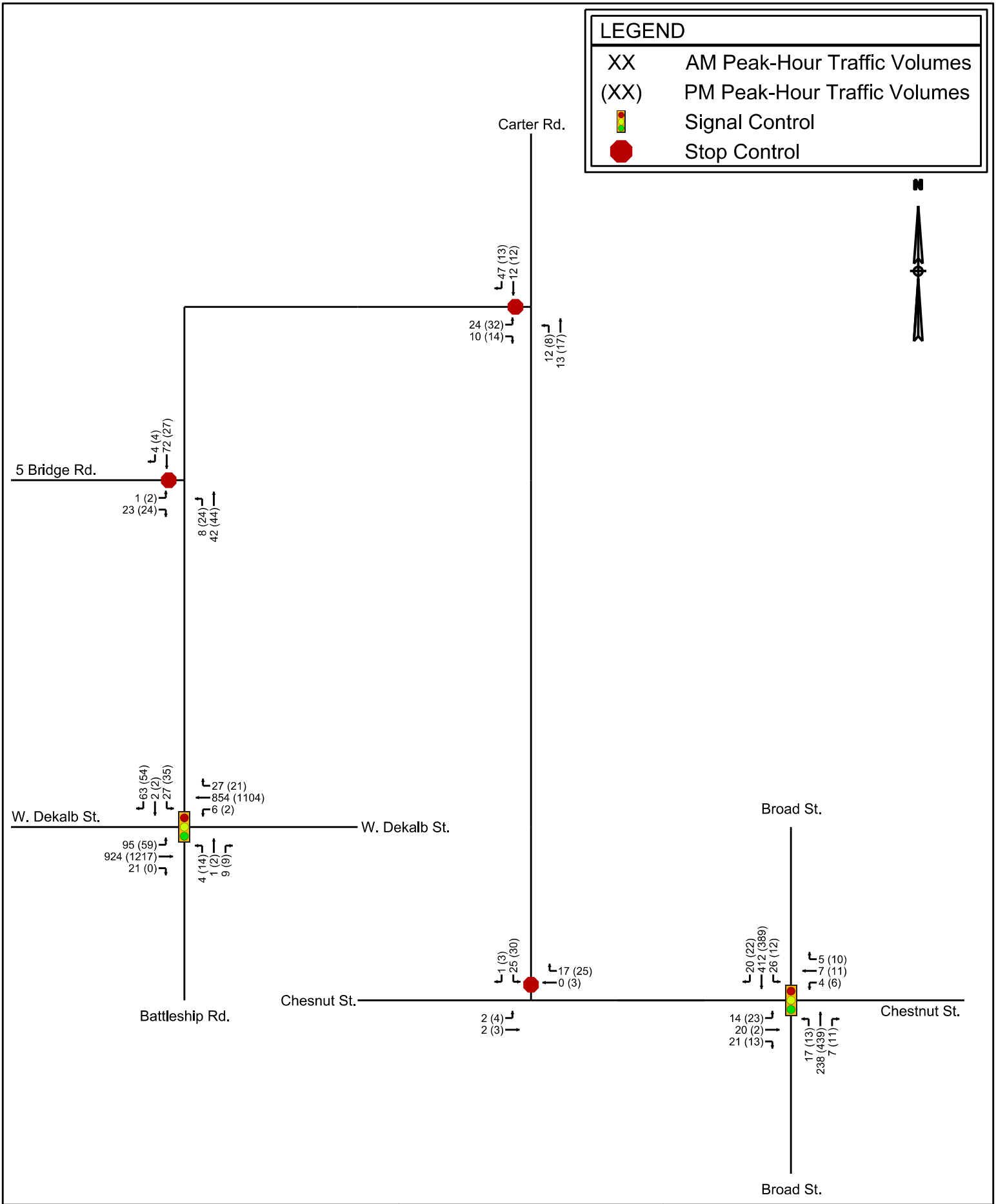

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Figure 3
2023 Existing
Peak Hour Traffic Volumes

Camden Tract Residential
Traffic Impact Analysis

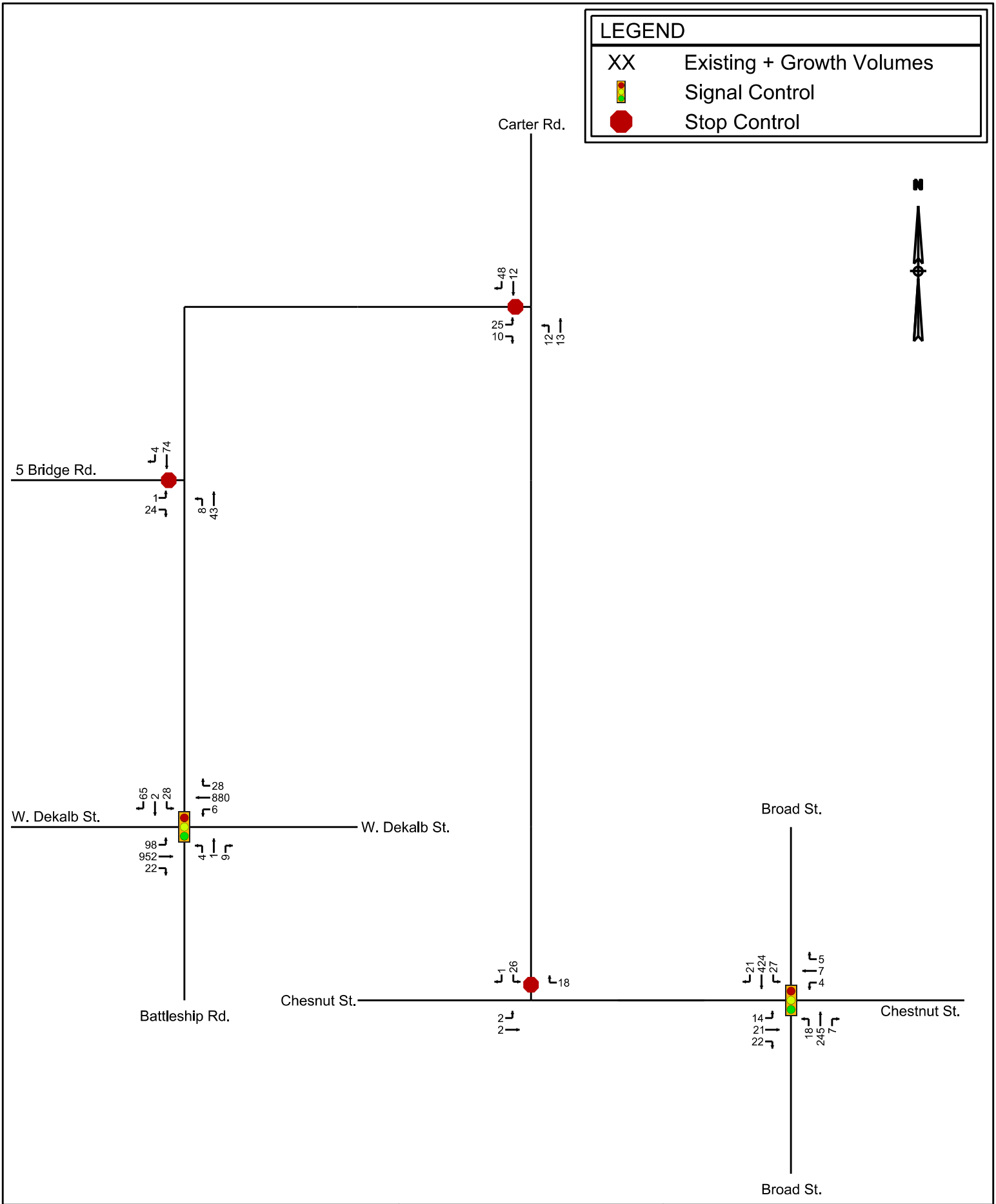

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Figure 4
2025 Background - AM
Peak Hour Traffic Volumes

Camden Tract Residential
Traffic Impact Analysis

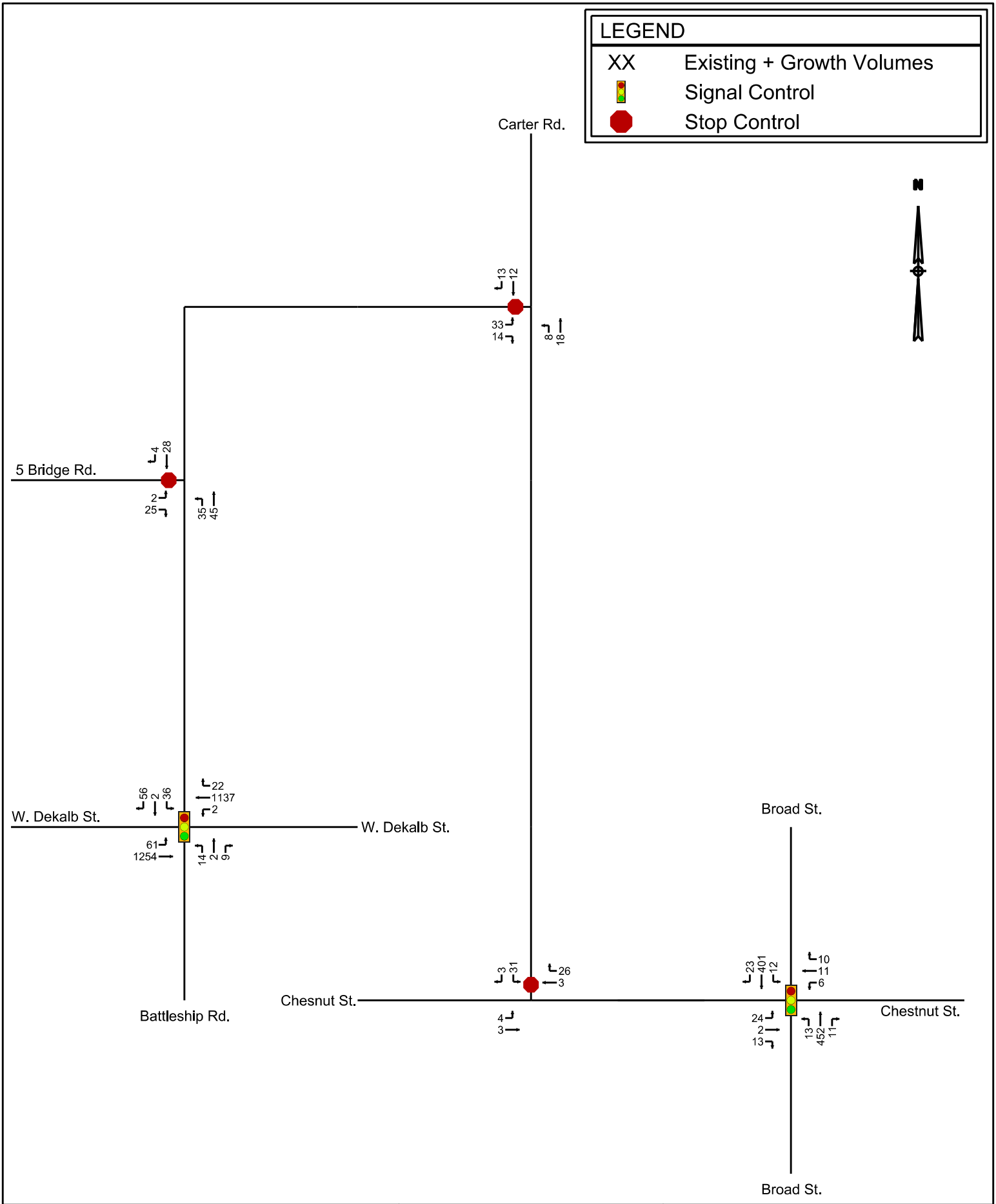

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Figure 5
2025 Background - PM
Peak Hour Traffic Volumes

Camden Tract Residential
Traffic Impact Analysis

Traffic Analysis

Intersection Level of Service (LOS) analyses were performed in accordance with the procedures set forth and recommended by the Highway Capacity Manual (HCM) Level of Service methodologies for evaluation of signalized and unsignalized intersections. Traffic analysis software PTV Vistro was used to evaluate the operation of the study intersections**.** The Level of Service criteria for signalized and unsignalized intersections are listed below in Table 2. LOS 'A' is considered as the best free-flow conditions, and LOS 'F' is considered failing conditions. LOS 'D' is considered acceptable during the peak hours by most agencies.

Table 2
Level of Service (LOS) Criteria for Intersections
Camden Tract Residential Development TIA

LOS	Signalized Intersection	Unsignalized Intersections
	Delay (sec/veh)	Delay (sec/veh)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Existing Conditions

Using the traffic volumes collected in the field, the existing AM and PM peak hour levels of service for the study intersections were determined. The existing AM and peak hour levels of service of the analysis intersections are summarized in Tables 3 and 4 respectively, while detailed levels of service reports are included Appendix C.

As presented in Table 3, West DeKalb Street (US 1) at Battleship Road (S-194) is currently operating at LOS A during the AM peak hour. The Five Bridge Road (S-198) eastbound approach to the intersection of Battleship Road (S-194) currently operates at LOS A during the AM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) currently operates at LOS A during the AM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) operates at LOS A during the AM peak hour. Broad Street (US 521) at Chesnut Street (S-76) is currently operating at LOS A during the AM peak hour.

Table 3
Intersection Level of Service –2023 AM Existing Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.374	6.8	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.001	9.5	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.042	9.3	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.038	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	WB Left	0.201	6.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

As presented in Table 4, West DeKalb Street (US 1) at Battleship Road (S-194) is currently operating at LOS A during the PM peak hour. The Five Bridge Road (S-198) eastbound approach to the intersection of Battleship Road (S-194) currently operates at LOS A during the PM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) currently operates at LOS A during the PM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) operates at LOS A during the PM peak hour. Broad Street (US 521) at Chesnut Street (S-76) is currently operating at LOS A during the PM peak hour.

Table 4
Intersection Level of Service –2023 PM Existing Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.476	7.7	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.003	9.6	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.045	9.1	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.034	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.181	5.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

2026 No Build Conditions

Using the 2026 No Build traffic volumes, the AM and PM weekday traffic peak hour levels of service for the study intersections were determined. The 2026 No Build AM and PM peak hour levels of service of the analysis intersections are summarized in Tables 5 and 6 respectively, while detailed levels of service reports are included in Appendix C.

As presented in Table 5, West DeKalb Street (US 1) at Battleship Road (S-194) would operate at LOS A during the AM peak hour. The Five Bridge Road (S-198) eastbound approach to the intersection of Battleship Road (S-194) would operate at LOS A during the AM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) would operate at LOS A during the AM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) would operate at LOS A during the AM peak hour. Broad Street (US 521) at Chesnut Street (S-76) would operate at LOS A during the AM peak hour.

Table 5
Intersection Level of Service – 2026 AM No Build Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.385	6.8	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.001	9.5	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.043	9.3	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.040	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	WB Left	0.208	6.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

As presented in Table 6, West DeKalb Street (US 1) at Battleship Road (S-194) would operate at LOS A during the PM peak hour. The Five Bridge Road (S-198) eastbound approach to the intersection of Battleship Road (S-194) would operate at LOS A during the PM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) would operate at LOS A during the PM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) would operate at LOS A during the PM peak hour. Broad Street (US 521) at Chesnut Street (S-76) would operate at LOS A during the PM peak hour.

Table 6
Intersection Level of Service – 2026 PM No Build Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.490	7.9	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.003	9.7	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.046	9.1	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.035	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.187	5.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Proposed Development

As presented in the Site Plan (Figure 2), the site will be developed on Battleship Road (S-194), Chestnut Street (S-76), and Carter Street (S-393) on the site of the Camden Training Center. Land use includes a total of 778 Single-Family Attached Dwelling Units.

Traffic to and from the site will use a proposed extension of Chesnut Street (S-76); a proposed access (Access 1) on Battleship Road (S-194) approximately 2900 feet south of Carter Street (S-393) aligned with Five Bridge Road (S-198); a proposed access (Access 2) on Carter Street (S-393) about 2650 feet north of Chesnut Street (S-76); and a proposed access (Access 3) on Carter Street (S-393) approximately 2650 feet north of Chesnut Street (S-76) aligned with Access 2.

Sight distance at the proposed access points will be verified by the site engineer.

Trip Generation

Trips to and from the proposed development were estimated using the Institute of Transportation Engineers' Trip Generation Manual, 11th Edition. Tables summarizing the Trip Generation in the AM and PM peak hours for this project are provided in Tables 7 and 8.

Table 7: AM Trip Generation

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: 43' Wide Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	150.000	50.00	50.00	30	84	114	19.29
2: 53' Simply Ryan Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	135.000	50.00	50.00	27	76	103	17.43
3: 53' Lifestyle Lots	Single-Family Detached Housing	210	Dwelling Units	0.750	220.000	26.00	74.00	43	122	165	27.92
4: 53' Renaissance Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	154.000	50.00	50.00	30	87	117	19.80
5: 65' Wide Estate Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	119.000	50.00	50.00	24	68	92	15.57
					Added Trips Total			**154**	**437**	**591**	**100.00**

Table 8: PM Trip Generation

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: 43' Wide Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	150.000	50.00	50.00	97	54	151	19.28
2: 53' Simply Ryan Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	135.000	50.00	50.00	88	49	137	17.50
3: 53' Lifestyle Lots	Single-Family Detached Housing	210	Dwelling Units	0.990	220.000	64.00	36.00	140	78	218	27.84
4: 53' Renaissance Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	154.000	50.00	50.00	99	56	155	19.80
5: 65' Wide Estate Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	119.000	50.00	50.00	78	44	122	15.58
					Added Trips Total			**502**	**281**	**783**	**100.00**

Trip Distribution and Assignment

The estimate of an approach/departure routing distribution for site traffic, and the assignment of site traffic to the adjacent roadways are essential in determining the traffic impacts of a proposed development. Based on the observed traffic patterns in the vicinity of the site, trip distribution was developed for the proposed project trips during the AM and PM peak hours.

The trip distribution with trip assignment percentages and actual trips for the AM and PM peak hours are shown in Figures 6 and 7 respectively. By utilizing the directional distribution, the site generated traffic was assigned to analyze intersections for the AM and PM peak hours.

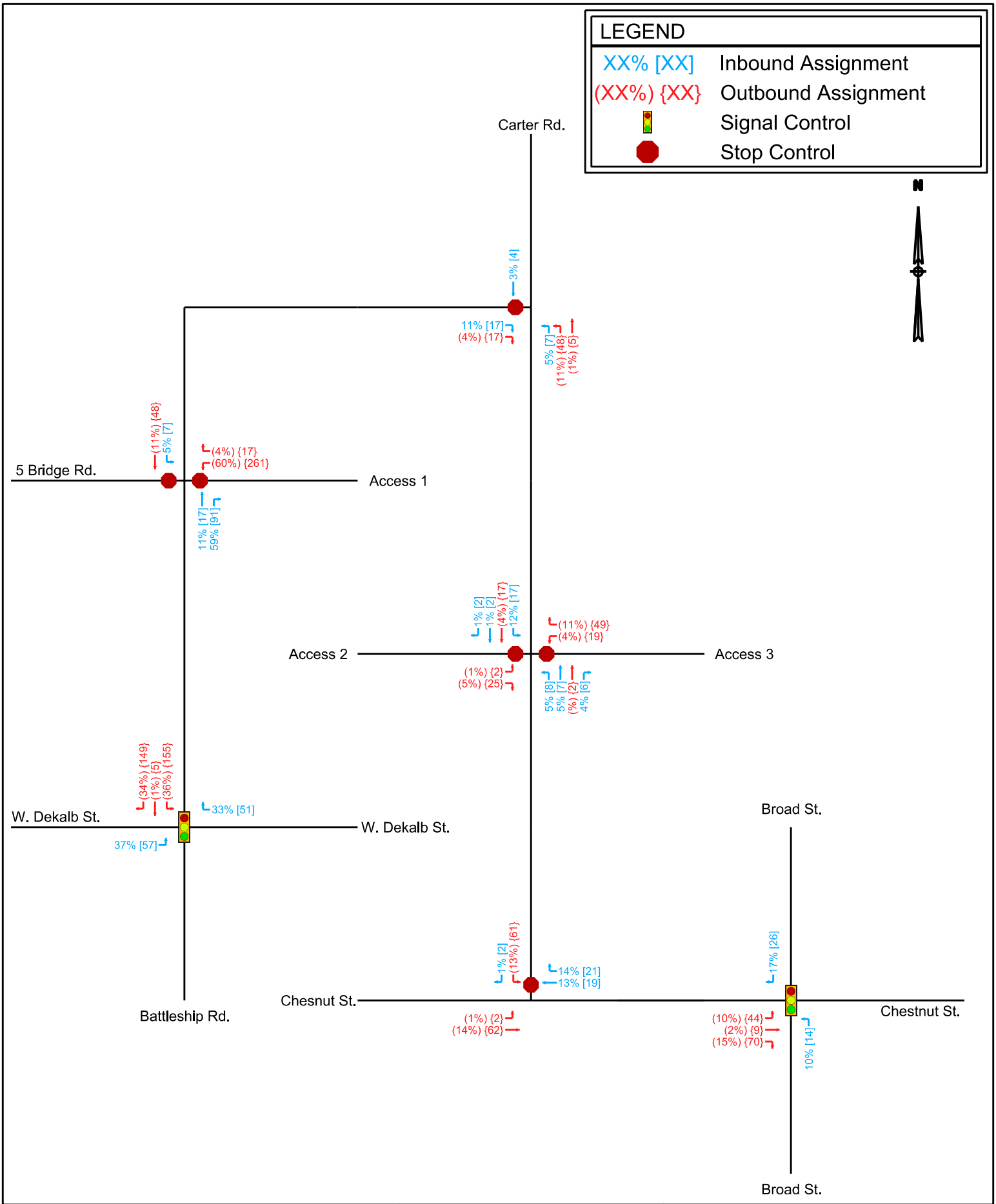

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Figure 6
AM Site Traffic Distribution and Assignment

Camden Tract Residential Traffic Impact Analysis

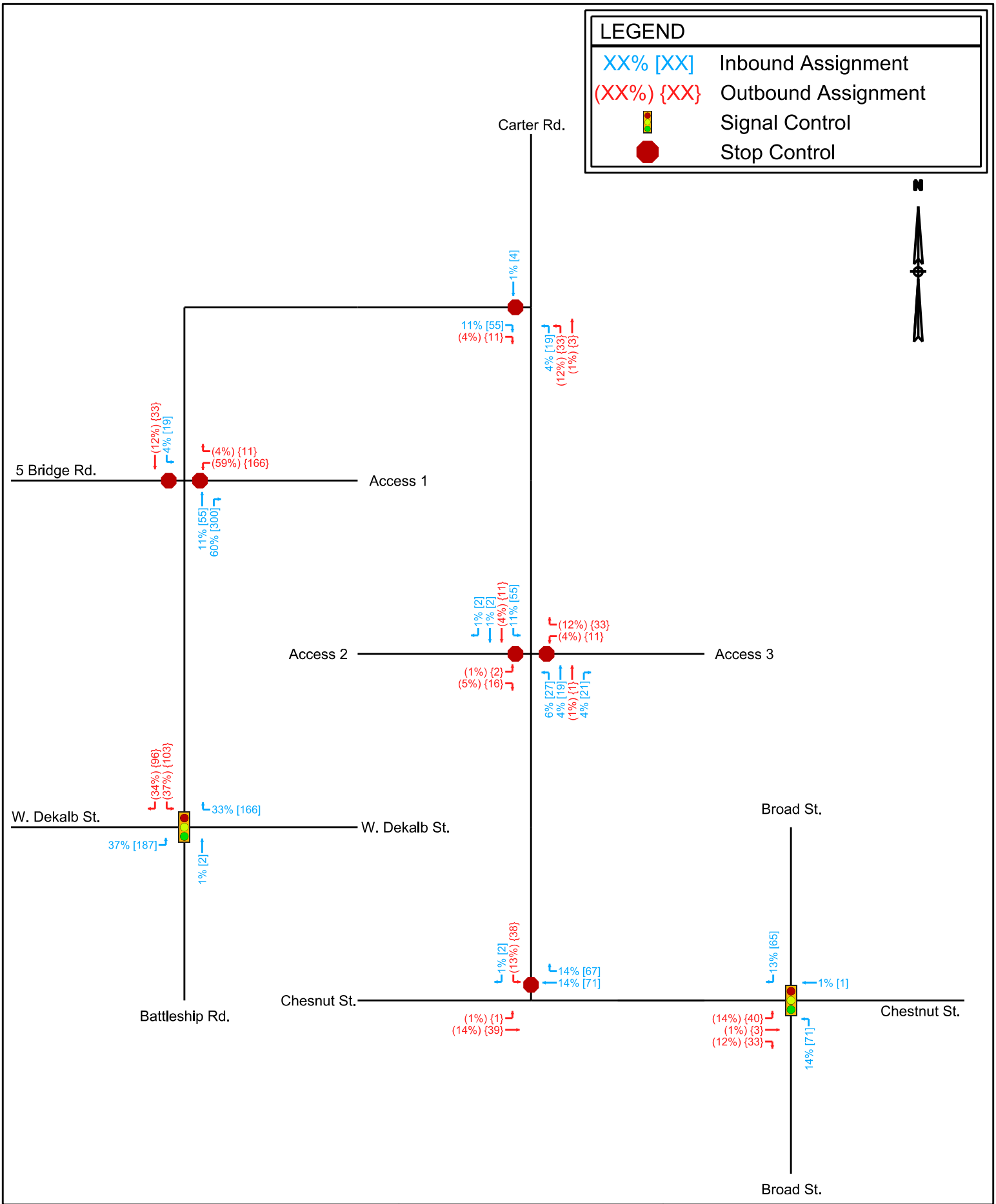

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Figure 7
PM Site Traffic Distribution and Assignment

Camden Tract Residential Traffic Impact Analysis

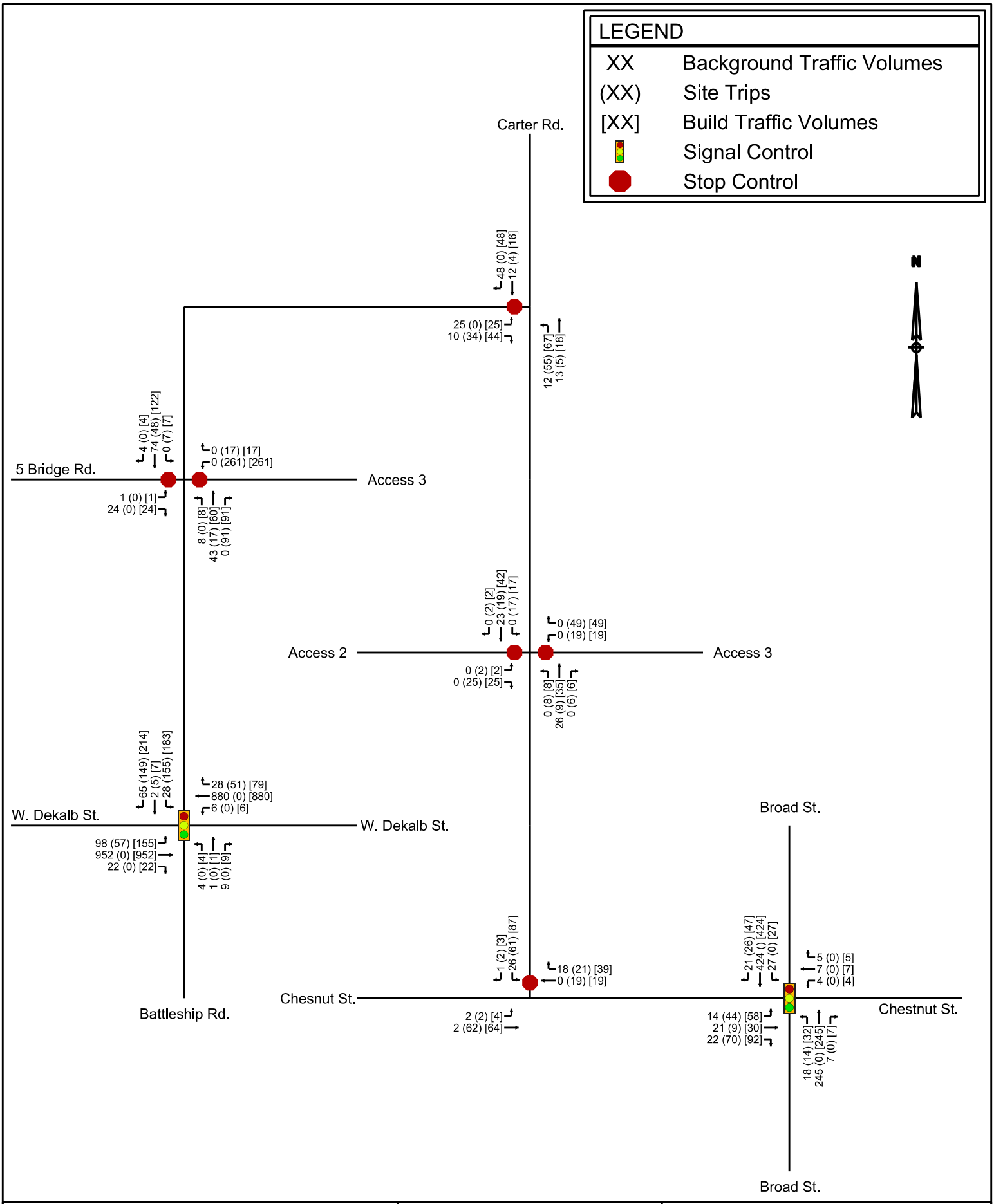

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Figure 8
2025 Build Conditions AM Peak Hour Traffic Volumes

Camden Tract Residential Traffic Impact Analysis

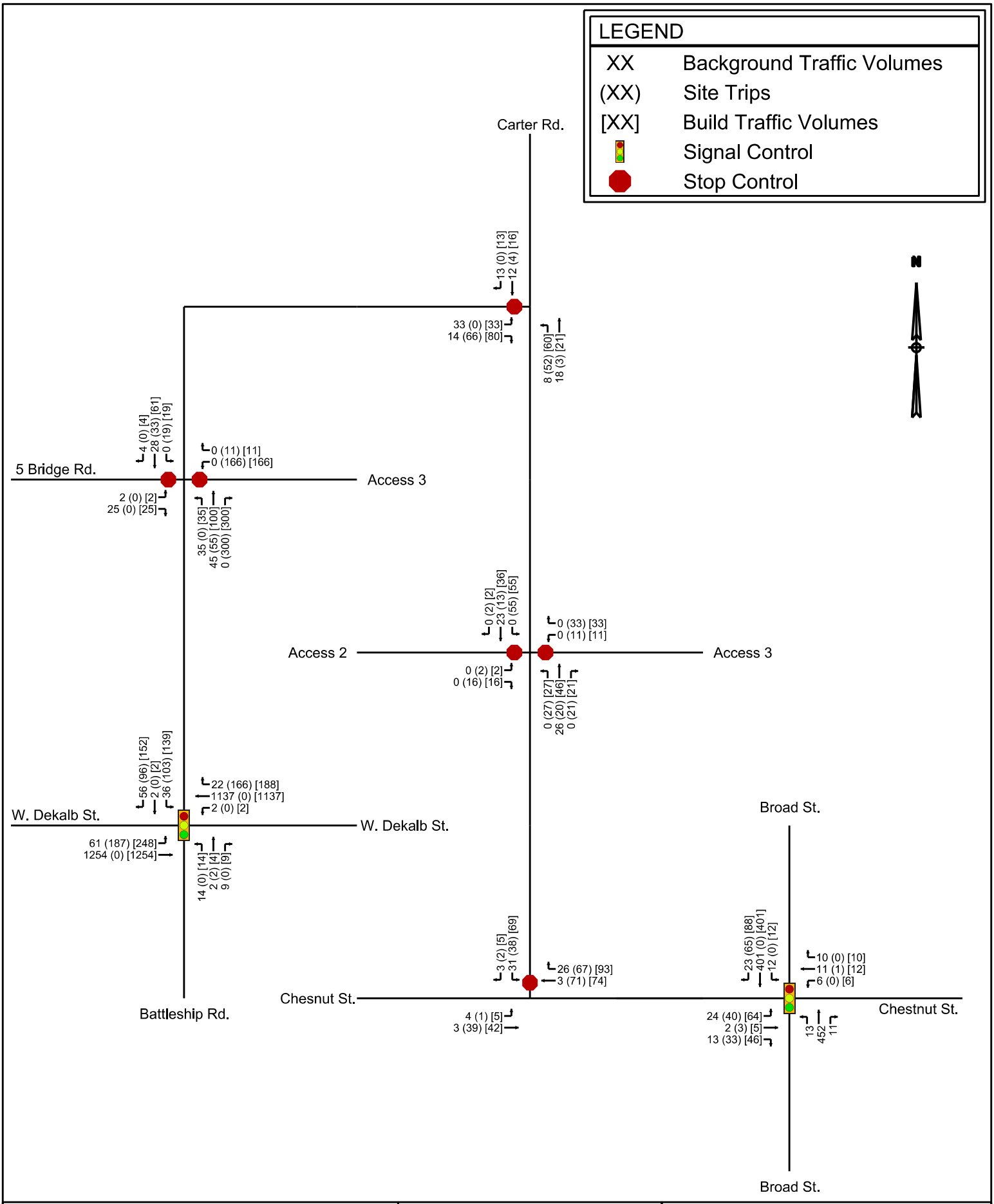

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Figure 9
2025 Build Conditions PM Peak Hour Traffic Volumes

Camden Tract Residential Traffic Impact Analysis

2026 Build Conditions

Using the projected traffic data for the study intersections in combination with the trips generated by the development, the 2026 Build Conditions AM and PM peak hour levels of service for the study intersections were determined, and the results are summarized in Tables 9 and 10 respectively. The detailed levels of service analysis worksheets are included in Appendix C. The 2025 Build Conditions—AM and PM peak traffic volumes are presented in Figures 8 and 9.

As presented in Table 9, West DeKalb Street (US 1) at Battleship Road (S-194) would operate at LOS D during the AM peak hour. The Access 1 westbound approach to the intersection of Battleship Road (S-194) would operate at LOS C during the AM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) would operate at LOS B during the AM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) would operate at LOS B during the AM peak hour. Broad Street (US 521) at Chesnut Street (S-76) would operate at LOS B during the AM peak hour. The Access 2 and Access 3 approaches to Carter Street (S-393) would operate at LOS A during the AM peak hour.

Table 9
Intersection Level of Service – 2026 AM Build Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.682	53.7	D
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	WB Left	0.434	15.7	C
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.059	11.2	B
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.161	10.2	B
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Right	0.286	11.4	B
6	Carter St & Access 2/3	Two-way stop	HCM 6th Edition	EB Left	0.003	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

As presented in Table 10, West DeKalb Street (US 1) at Battleship Road (S-194) would operate at LOS D during the PM peak hour. The Five Bridge Road (S-198) eastbound approach to the intersection of Battleship Road (S-194) would operate at LOS C during the PM peak hour. The Battleship Road (S-194) eastbound approach to Carter Street (S-393) would operate at LOS B during the PM peak hour. The Carter Street (S-479) southbound approach at its intersection with Chesnut Street (S-76) would operate at LOS B during the PM peak hour. Broad Street (US 521) at Chesnut Street (S-76) would operate at LOS A during the PM peak hour. The Access 2 and Access 3 approaches to Carter Street (S-393) would operate at LOS B during the PM peak hour.

Table 10
Intersection Level of Service – 2026 PM Build Conditions
Camden Tract Residential Development TIA

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	EB Left	1.255	43.3	D
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	WB Left	0.389	18.9	C
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.059	10.7	B
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.100	10.2	B
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.286	8.0	A
6	Carter St & Access 2/3	Two-way stop	HCM 6th Edition	EB Left	0.003	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Turn Lane Warrant Analysis—2026 Build Conditions

The intersections were checked to see if left and right turn lanes would be beneficial under the 2026 Build Conditions for the AM and PM peak hours. Graphs and tables showing the criteria for each intersection are in Appendix D.

From the analysis, it was determined that left turn lanes are not needed at the existing two-lane intersections.

The analysis showed that a right turn lane should be considered on Battleship Road (S-194) at Access 1.

Findings and Conclusions

Based on the results of the analysis for 2026 Build Conditions, it was observed that after the addition of the new trips generated to and from the development, all intersections would continue to operate at an acceptable LOS.

At the intersection of West DeKalb Street (US 1) and Battleship Road (S-194), analysis showed that improved operation at the traffic signal could be obtained with optimized signal timing. Since eastbound lefts on West DeKalb Street (US 1) are expected to increase, installation of a left turn phase could be considered after build-out.

Recommendations

After consideration of the traffic analysis of the proposed Camden Tract Residential Development, the following is recommended:

- Obtain an encroachment permit from SCDOT for construction of site access roads.
- Along with construction of Access 1, include installation of a right turn lane on Battleship Road (S-194) at Access 1. Access 1 should have one entering lane and two exit lanes.
- Accesses 2 and 3 should have one entering lane and one exit lane.
- Coordinate as necessary with the City of Camden and SCDOT for the possible future installation of an eastbound left turn phase on West DeKalb Street (US 1) at Battleship Road (S-194).

The study concludes that the public roadway system serving the site can accommodate the anticipated traffic volumes generated by the proposed Camden Tract Residential Development provided the recommended improvements are made.

Appendices

Appendix A Site Photographs
Appendix B Traffic Counts
Appendix C Intersection Reports
Appendix D Turn Lane Analysis

Appendix A Site Photographs

W. DeKalb St at Battleship Rd looking north

W. DeKalb St at Battleship Rd looking east

W. DeKalb St at Battleship Rd looking south

W. DeKalb St at Battleship Rd looking west

Battleship Rd at Five Bridge Rd/Access 1 looking north

Battleship Rd at Five Bridge Rd/Access 1 looking east

Battleship Rd at Five Bridge Rd/Access 1 looking south

Battleship Rd at Five Bridge Rd/Access 1 looking west

Carter St at Battleship Rd looking north

Carter St at Battleship Rd looking east

Carter St at Battleship Rd looking south

Carter St at Battleship Rd looking west

Chesnut St at Carter St looking north

Chesnut St at Carter St looking east

Chesnut St at Carter St looking west

Broad St at Chesnut St looking north

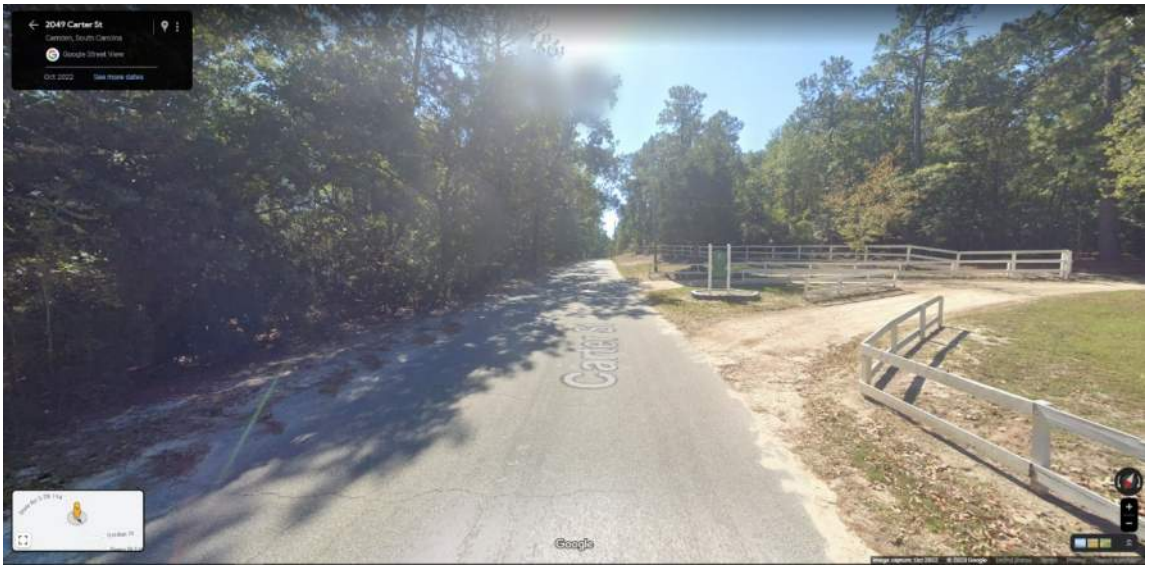
Broad St at Chesnut St looking east

Broad St at Chesnut St looking south

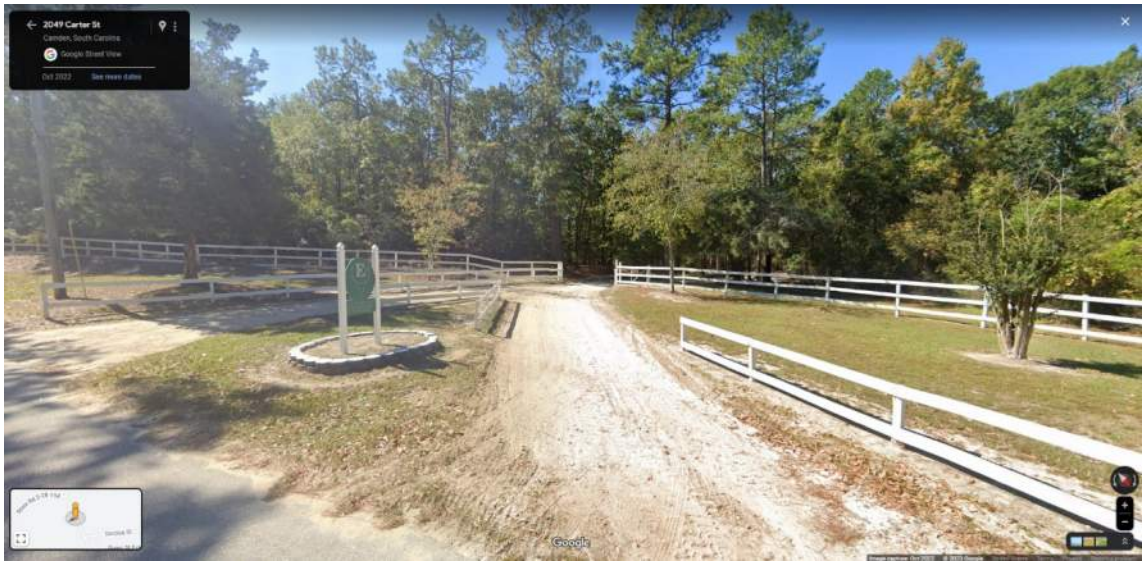
Broad St at Chesnut St looking west

Carter St at Access 2/3 looking north

Carter St at Access 2/3 looking east



Carter St at Access 2/3 looking south



Carter St at Access 2/3 looking west

Appendix B Traffic Counts

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Hwy 601 @ Battleship Rd
Site Code :
Start Date : 05/16/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	Battleship Rd Southbound				Hwy 601 Westbound				Battleship Rd Ext. Northbound				Hwy 601 Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	5	0	11	0	0	161	5	0	5	0	1	0	11	165	3	0	367
07:15	1	0	11	0	1	160	8	0	1	0	1	0	10	208	7	0	408
07:30	5	0	12	0	3	230	3	0	3	0	0	0	16	231	7	0	510
07:45	9	0	9	0	1	213	5	0	0	1	1	0	30	260	5	0	534
Total	20	0	43	0	5	764	21	0	9	1	3	0	67	864	22	0	1819
08:00	7	0	25	0	1	214	11	0	0	0	5	0	28	255	0	0	546
08:15	6	2	17	0	1	197	8	0	1	0	3	0	21	178	9	0	443
08:30	4	0	9	0	3	200	5	0	0	0	0	0	9	181	0	0	411
08:45	7	1	16	0	1	205	5	0	0	0	0	0	8	210	2	0	455
Total	24	3	67	0	6	816	29	0	1	0	8	0	66	824	11	0	1855
16:00	5	0	14	0	1	271	6	0	11	2	5	0	17	340	1	0	673
16:15	9	0	17	0	1	263	6	0	4	1	1	0	12	292	0	0	606
16:30	8	0	6	0	0	272	2	0	5	0	0	0	18	288	0	0	599
16:45	9	0	12	1	2	261	6	0	1	0	1	0	18	267	0	0	578
Total	31	0	49	1	4	1067	20	0	21	3	7	0	65	1187	1	0	2456
17:00	14	1	17	0	0	365	8	0	8	1	6	0	15	288	0	0	723
17:15	4	0	15	0	0	252	2	0	0	1	1	0	15	329	0	0	619
17:30	8	1	10	0	0	226	5	0	5	0	1	0	11	333	0	0	600
17:45	5	0	13	0	0	224	3	0	2	0	1	0	18	299	1	0	566
Total	31	2	55	0	0	1067	18	0	15	2	9	0	59	1249	1	0	2508
Grand Total	106	5	214	1	15	3714	88	0	46	6	27	0	257	4124	35	0	8638
Apprch %	32.5	1.5	65.6	0.3	0.4	97.3	2.3	0	58.2	7.6	34.2	0	5.8	93.4	0.8	0	
Total %	1.2	0.1	2.5	0	0.2	43	1	0	0.5	0.1	0.3	0	3	47.7	0.4	0	
Passenger Vehicles	105	5	213	1	15	3640	88	0	45	6	27	0	257	4047	34	0	8483
% Passenger Vehicles	99.1	100	99.5	100	100	98	100	0	97.8	100	100	0	100	98.1	97.1	0	98.2
Heavy Vehicles	0	0	1	0	0	71	0	0	1	0	0	0	0	75	1	0	149
% Heavy Vehicles	0	0	0.5	0	0	1.9	0	0	2.2	0	0	0	0	1.8	2.9	0	1.7
Buses	1	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	6
% Buses	0.9	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1

SHORT COUNTS, LLC

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Columbia, SC 29201

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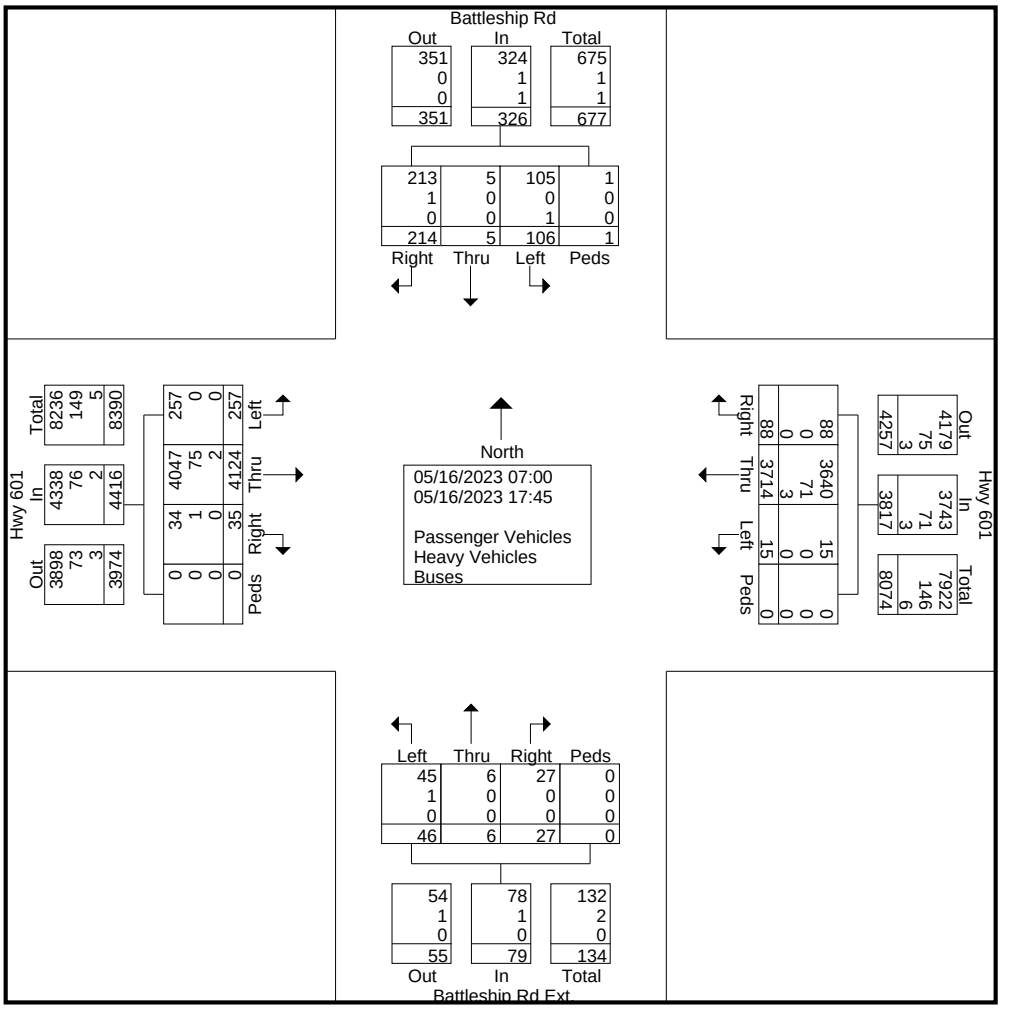
File Name : Hwy 601 @ Battleship Rd
Site Code :
Start Date : 05/16/2023
Page No : 2



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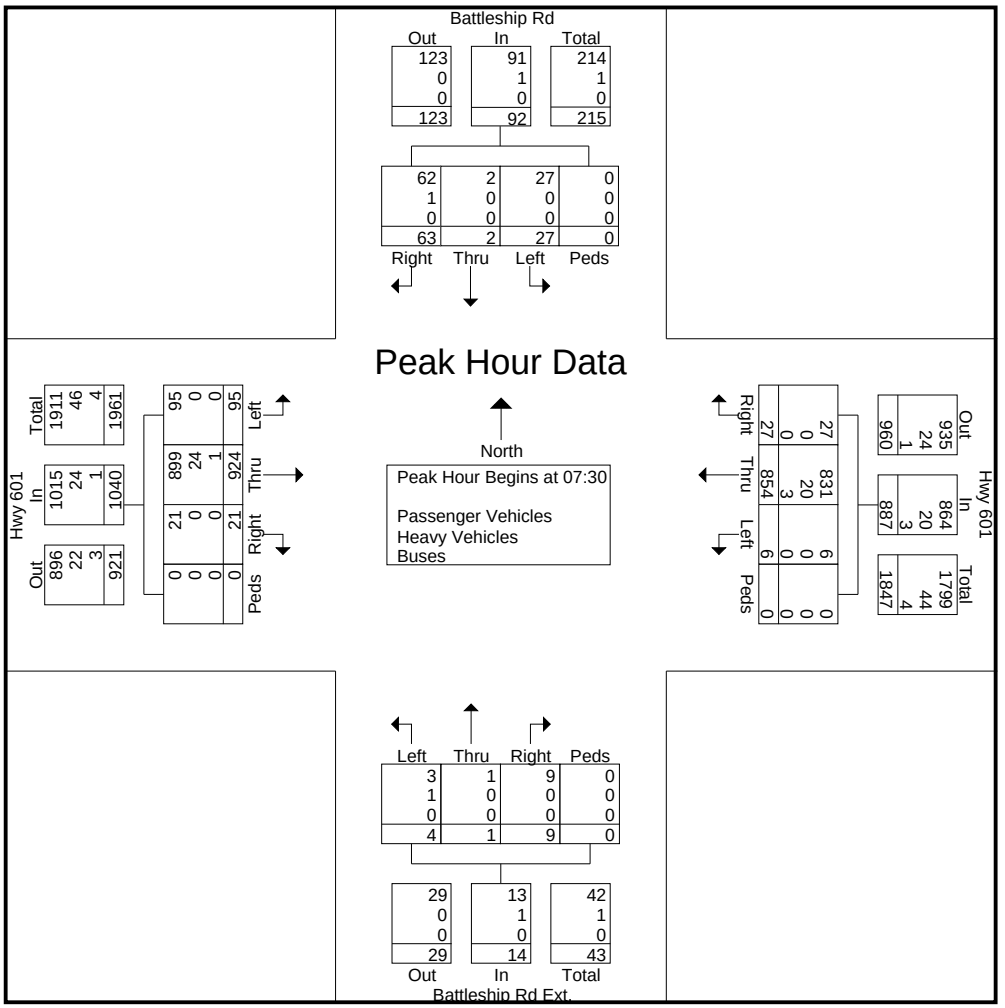
File Name : Hwy 601 @ Battleship Rd
Site Code :
Start Date : 05/16/2023
Page No : 3

	Battleship Rd Southbound					Hwy 601 Westbound					Battleship Rd Ext. Northbound					Hwy 601 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	5	0	12	0	17	**3**	**230**	3	0	**236**	**3**	0	0	0	3	16	231	7	0	254	510
07:45	**9**	0	9	0	18	1	213	5	0	219	0	**1**	1	0	2	**30**	**260**	5	0	**295**	534
08:00	7	0	**25**	0	**32**	1	214	**11**	0	226	0	0	**5**	0	**5**	28	255	0	0	283	**546**
08:15	6	**2**	17	0	25	1	197	8	0	206	1	0	3	0	4	21	178	**9**	0	208	443
Total Volume	27	2	63	0	92	6	854	27	0	887	4	1	9	0	14	95	924	21	0	1040	2033
% App. Total	29.3	2.2	68.5	0		0.7	96.3	3	0		28.6	7.1	64.3	0		9.1	88.8	2	0		
PHF	.750	.250	.630	.000	.719	.500	.928	.614	.000	.940	.333	.250	.450	.000	.700	.792	.888	.583	.000	.881	.931
Passenger Vehicles	27	2	62	0	91	6	831	27	0	864	3	1	9	0	13	95	899	21	0	1015	1983
% Passenger Vehicles																					
Heavy Vehicles	0	0	1	0	1	0	20	0	0	20	1	0	0	0	1	0	24	0	0	24	46
% Heavy Vehicles	0	0	1.6	0	1.1	0	2.3	0	0	2.3	25.0	0	0	0	7.1	0	2.6	0	0	2.3	2.3
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
% Buses	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0	0.1	0	0	0.1	0.2



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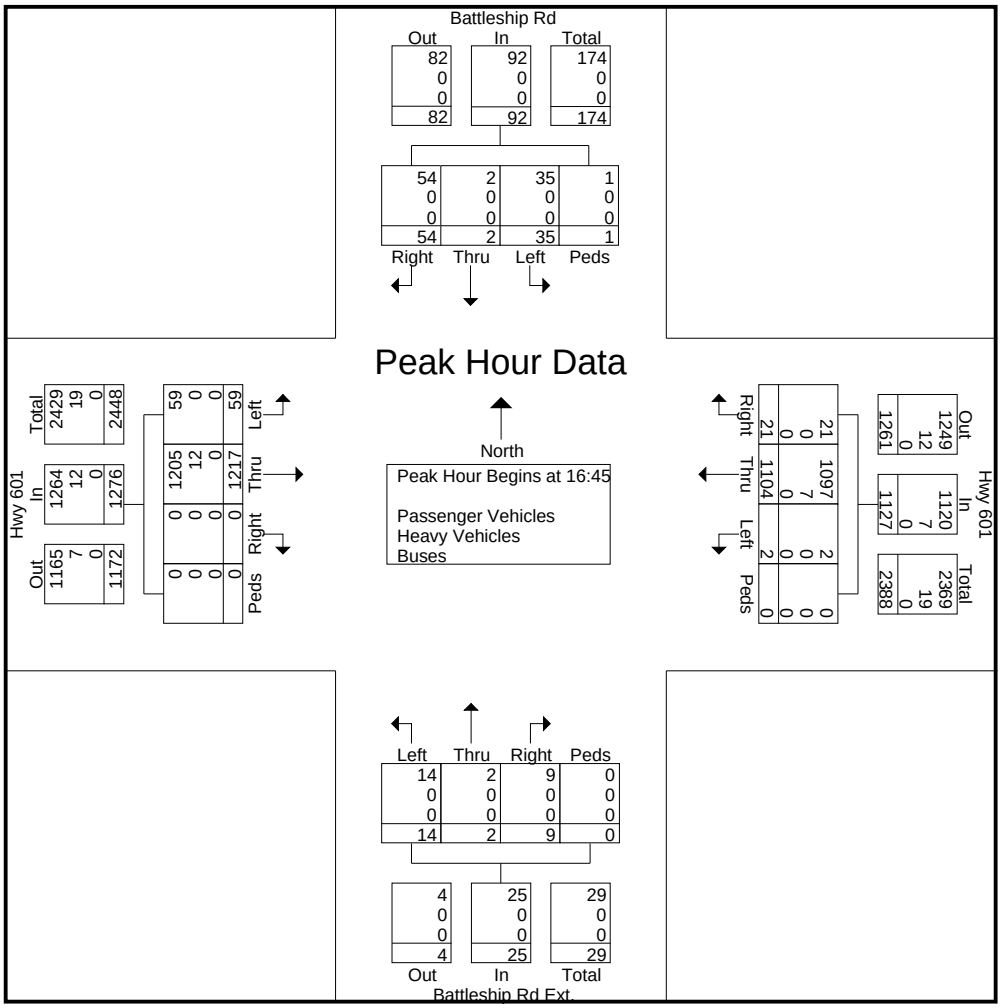
File Name : Hwy 601 @ Battleship Rd
Site Code :
Start Date : 05/16/2023
Page No : 4

	Battleship Rd Southbound					Hwy 601 Westbound					Battleship Rd Ext. Northbound					Hwy 601 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	9	0	12	**1**	22	**2**	261	6	0	269	1	0	1	0	2	**18**	267	0	0	285	578
17:00	**14**	**1**	**17**	0	**32**	0	**365**	**8**	0	**373**	**8**	**1**	**6**	0	**15**	15	288	0	0	303	**723**
17:15	4	0	15	0	19	0	252	2	0	254	0	1	1	0	2	15	329	0	0	**344**	619
17:30	8	1	10	0	19	0	226	5	0	231	5	0	1	0	6	11	**333**	0	0	344	600
Total Volume	35	2	54	1	92	2	1104	21	0	1127	14	2	9	0	25	59	1217	0	0	1276	2520
% App. Total	38	2.2	58.7	1.1		0.2	98	1.9	0		56	8	36	0		4.6	95.4	0	0		
PHF	.625	.500	.794	.250	.719	.250	.756	.656	.000	.755	.438	.500	.375	.000	.417	.819	.914	.000	.000	.927	.871
Passenger Vehicles	35	2	54	1	92	2	1097										1205				
% Passenger Vehicles	100	100	100	100	100	100	99.4	100	0	99.4	100	100	100	0	100	100	99.0	0	0	99.1	99.2
Heavy Vehicles	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	12	0	0	12	19
% Heavy Vehicles	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0	1.0	0	0	0.9	0.8
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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735 Maryland St
Columbia, SC 29201

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-

File Name : Battleship Rd @ 5 Bridge Rd
Site Code : 00000000
Start Date : 05/17/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

	Battleship Rd Southbound				Westbound				Battleship Rd Northbound				5 Bridge Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	0	3	0	0	0	0	0	0	0	4	0	0	1	0	9	0	17
07:15	0	10	0	0	0	0	0	0	3	6	0	0	0	0	8	0	27
07:30	0	14	0	0	0	0	0	0	2	3	0	0	2	0	6	0	27
07:45	0	14	1	0	0	0	0	0	1	6	0	0	4	0	5	0	31
Total	0	41	1	0	0	0	0	0	6	19	0	0	7	0	28	0	102
08:00	0	22	0	0	0	0	0	0	3	12	0	0	0	0	8	0	45
08:15	0	16	2	0	0	0	0	0	2	10	0	0	1	0	4	0	35
08:30	0	19	0	0	0	0	0	0	1	12	0	0	0	0	6	0	38
08:45	0	15	2	0	0	0	0	0	2	8	0	0	0	0	5	0	32
Total	0	72	4	0	0	0	0	0	8	42	0	0	1	0	23	0	150
16:00	0	3	4	0	0	0	0	0	6	10	0	0	0	0	5	0	28
16:15	0	2	0	0	0	0	0	0	12	13	0	0	1	0	6	0	34
16:30	0	3	0	0	0	0	0	0	4	11	0	0	1	0	5	0	24
16:45	0	4	1	0	0	0	0	0	6	8	0	0	1	0	6	0	26
Total	0	12	5	0	0	0	0	0	28	42	0	0	3	0	22	0	112
17:00	0	6	2	0	0	0	0	0	12	12	0	0	0	0	7	0	39
17:15	0	9	0	0	0	0	0	0	7	12	0	0	1	0	7	0	36
17:30	0	5	2	0	0	0	0	0	10	11	0	0	0	0	5	0	33
17:45	0	7	0	0	0	0	0	0	5	9	0	0	1	0	5	0	27
Total	0	27	4	0	0	0	0	0	34	44	0	0	2	0	24	0	135
Grand Total	0	152	14	0	0	0	0	0	76	147	0	0	13	0	97	0	499
Apprch %	0	91.6	8.4	0	0	0	0	0	34.1	65.9	0	0	11.8	0	88.2	0	
Total %	0	30.5	2.8	0	0	0	0	0	15.2	29.5	0	0	2.6	0	19.4	0	
Passenger Vehicles	0	151	14	0	0	0	0	0	76	147	0	0	13	0	97	0	498
% Passenger Vehicles	0	99.3	100	0	0	0	0	0	100	100	0	0	100	0	100	0	99.8
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Buses	0	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2

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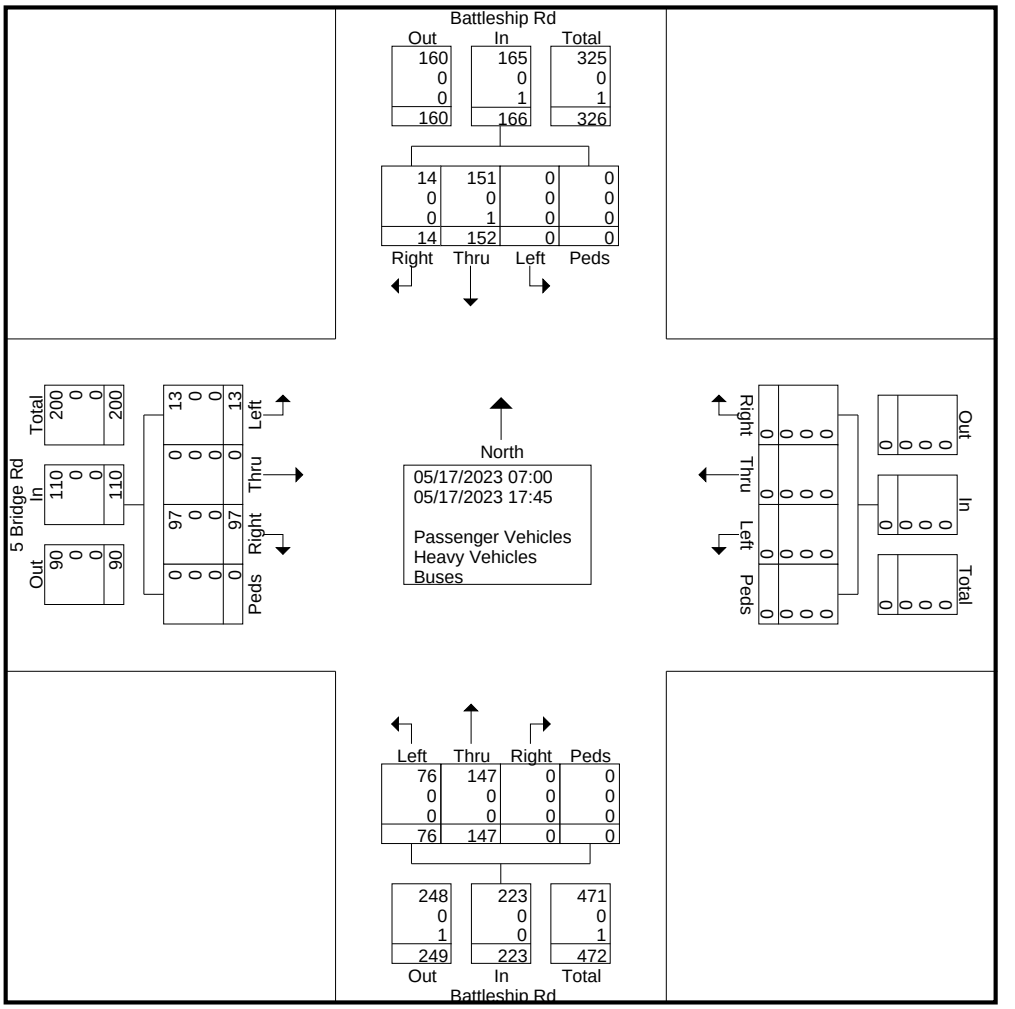
We can't say we're the Best, but you Can!

File Name : Battleship Rd @ 5 Bridge Rd
Site Code : 00000000
Start Date : 05/17/2023
Page No : 2



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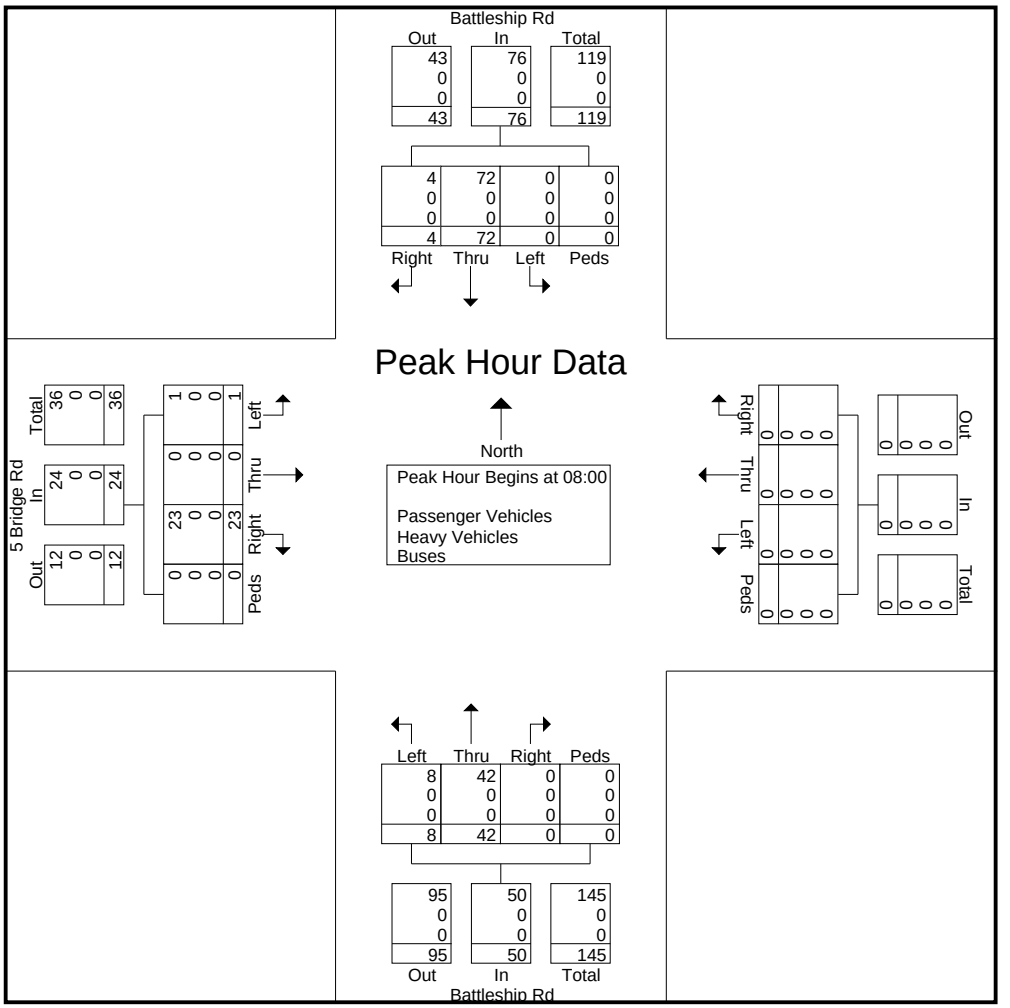
File Name : Battleship Rd @ 5 Bridge Rd
Site Code : 00000000
Start Date : 05/17/2023
Page No : 3

	Battleship Rd Southbound					Westbound					Battleship Rd Northbound					5 Bridge Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00																					
08:00	0	**22**	0	0	**22**	0	0	0	0	0	**3**	**12**	0	0	**15**	0	0	**8**	0	**8**	**45**
08:15	0	16	**2**	0	18	0	0	0	0	0	2	10	0	0	12	**1**	0	4	0	5	35
08:30	0	19	0	0	19	0	0	0	0	0	1	12	0	0	13	0	0	6	0	6	38
08:45	0	15	2	0	17	0	0	0	0	0	2	8	0	0	10	0	0	5	0	5	32
Total Volume	0	72	4	0	76	0	0	0	0	0	8	42	0	0	50	1	0	23	0	24	150
% App. Total	0	94.7	5.3	0		0	0	0	0		16	84	0	0		4.2	0	95.8	0		
PHF	.000	.818	.500	.000	.864	.000	.000	.000	.000	.000	.667	.875	.000	.000	.833	.250	.000	.719	.000	.750	.833
Passenger Vehicles	0	72	4	0	76	0	0	0	0	0	8	42	0	0	50	1	0	23	0	24	150
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



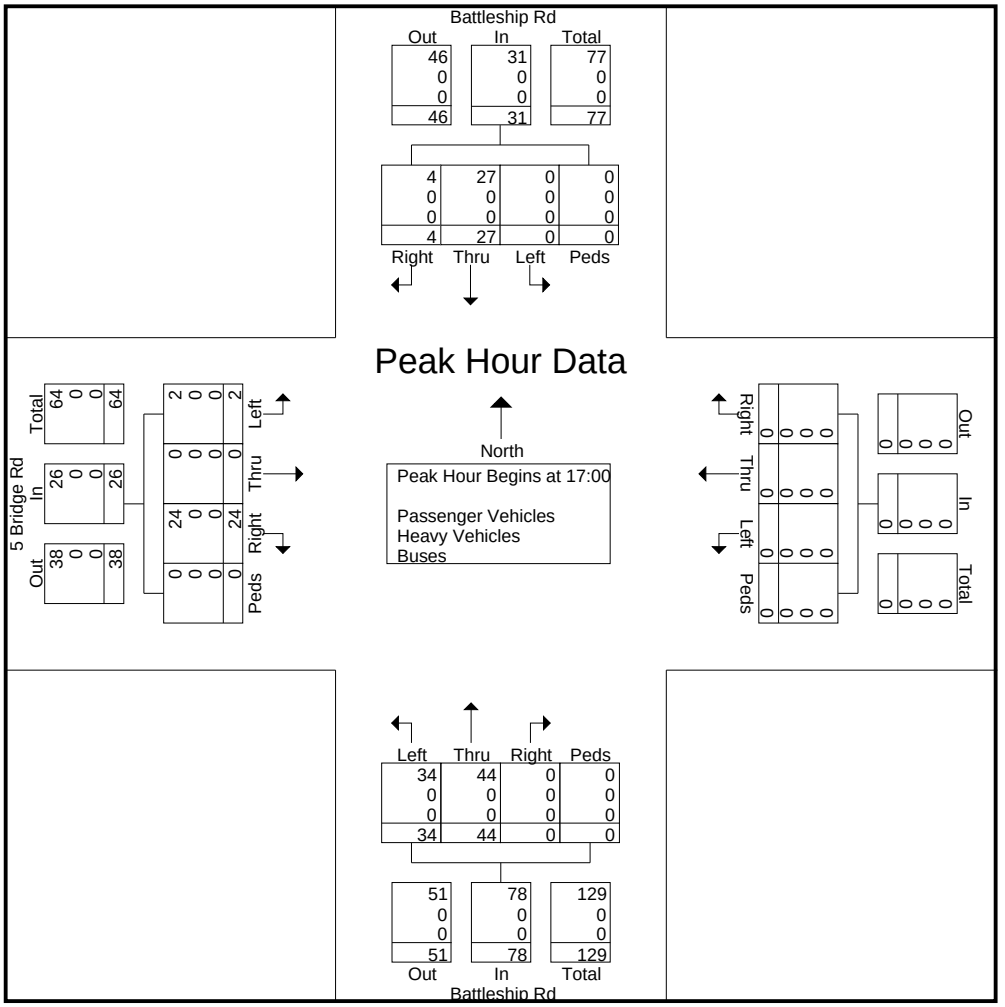
SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Battleship Rd @ 5 Bridge Rd
Site Code : 00000000
Start Date : 05/17/2023
Page No : 4

	Battleship Rd Southbound					Westbound					Battleship Rd Northbound					5 Bridge Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	6	**2**	0	8	0	0	0	0	0	**12**	**12**	0	0	**24**	0	0	**7**	0	7	**39**
17:15	0	**9**	0	0	**9**	0	0	0	0	0	7	12	0	0	19	**1**	0	7	0	**8**	36
17:30	0	5	2	0	7	0	0	0	0	0	10	11	0	0	21	0	0	5	0	5	33
17:45	0	7	0	0	7	0	0	0	0	0	5	9	0	0	14	1	0	5	0	6	27
Total Volume	0	27	4	0	31	0	0	0	0	0	34	44	0	0	78	2	0	24	0	26	135
% App. Total	0	87.1	12.9	0		0	0	0	0		43.6	56.4	0	0		7.7	0	92.3	0		
PHF	.000	.750	.500	.000	.861	.000	.000	.000	.000	.000	.708	.917	.000	.000	.813	.500	.000	.857	.000	.813	.865
Passenger Vehicles	0	27	4	0	31	0	0	0	0	0	34	44	0	0	78	2	0	24	0	26	135
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201
We can't say we're the Best, but you Can!

-

File Name : Battleship Rd @ Carter St
Site Code : 00516203
Start Date : 05/16/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

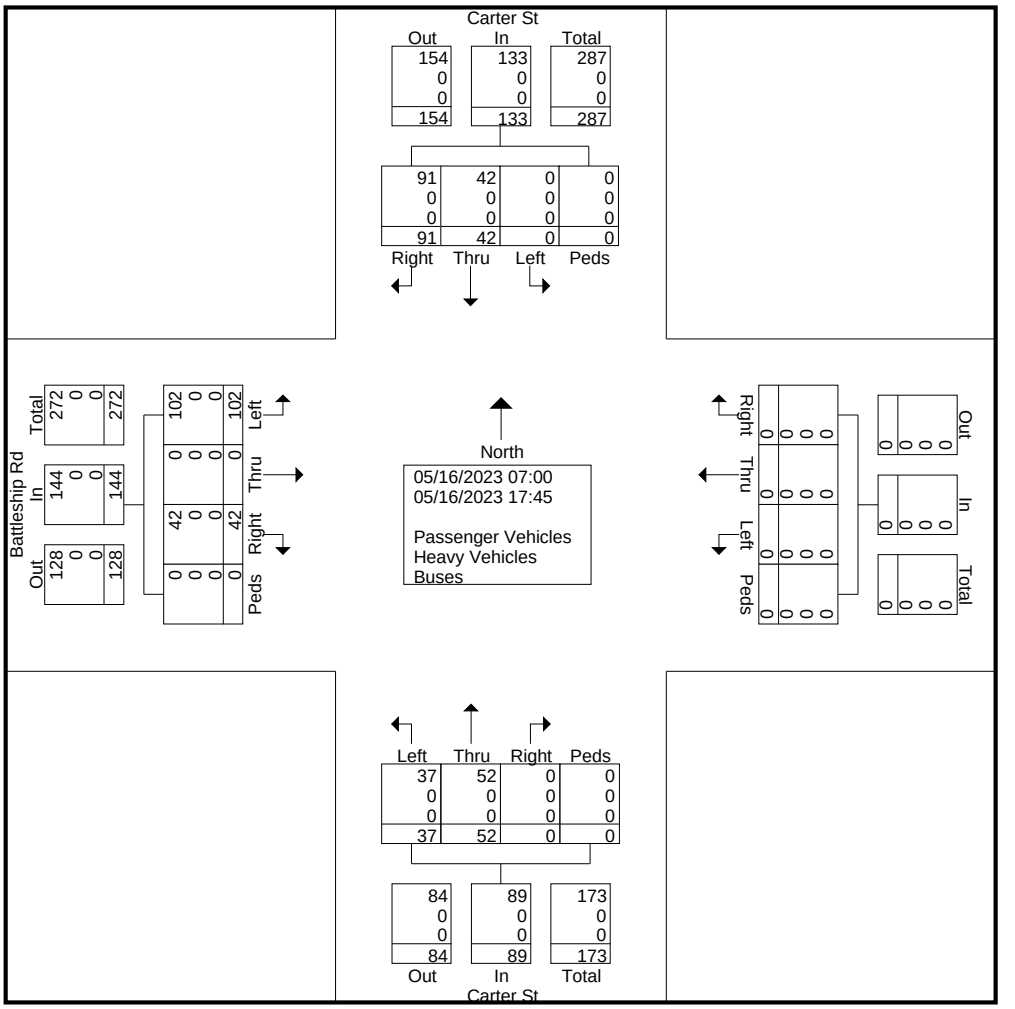
	Carter St Southbound				Westbound				Carter St Northbound				Battleship Rd Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	0	5	2	0	0	0	0	0	0	2	0	0	2	0	5	0	16
07:15	0	4	9	0	0	0	0	0	2	2	0	0	3	0	5	0	25
07:30	0	3	10	0	0	0	0	0	3	7	0	0	5	0	2	0	30
07:45	0	3	15	0	0	0	0	0	4	1	0	0	4	0	2	0	29
Total	0	15	36	0	0	0	0	0	9	12	0	0	14	0	14	0	100
08:00	0	2	13	0	0	0	0	0	3	3	0	0	12	0	1	0	34
08:15	0	2	4	0	0	0	0	0	3	2	0	0	11	0	2	0	24
08:30	0	0	5	0	0	0	0	0	2	3	0	0	4	0	1	0	15
08:45	0	1	3	0	0	0	0	0	2	3	0	0	2	0	1	0	12
Total	0	5	25	0	0	0	0	0	10	11	0	0	29	0	5	0	85
16:00	0	2	4	0	0	0	0	0	0	3	0	0	8	0	3	0	20
16:15	0	2	2	0	0	0	0	0	1	4	0	0	11	0	4	0	24
16:30	0	3	2	0	0	0	0	0	1	4	0	0	4	0	5	0	19
16:45	0	3	3	0	0	0	0	0	3	4	0	0	9	0	2	0	24
Total	0	10	11	0	0	0	0	0	5	15	0	0	32	0	14	0	87
17:00	0	4	6	0	0	0	0	0	3	5	0	0	8	0	3	0	29
17:15	0	2	4	0	0	0	0	0	4	0	0	0	6	0	2	0	18
17:30	0	4	5	0	0	0	0	0	2	5	0	0	7	0	2	0	25
17:45	0	2	4	0	0	0	0	0	4	4	0	0	6	0	2	0	22
Total	0	12	19	0	0	0	0	0	13	14	0	0	27	0	9	0	94
Grand Total	0	42	91	0	0	0	0	0	37	52	0	0	102	0	42	0	366
Apprch %	0	31.6	68.4	0	0	0	0	0	41.6	58.4	0	0	70.8	0	29.2	0	
Total %	0	11.5	24.9	0	0	0	0	0	10.1	14.2	0	0	27.9	0	11.5	0	
Passenger Vehicles	0	42	91	0	0	0	0	0	37	52	0	0	102	0	42	0	366
% Passenger Vehicles	0	100	100	0	0	0	0	0	100	100	0	0	100	0	100	0	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Battleship Rd @ Carter St
Site Code : 00516203
Start Date : 05/16/2023
Page No : 2



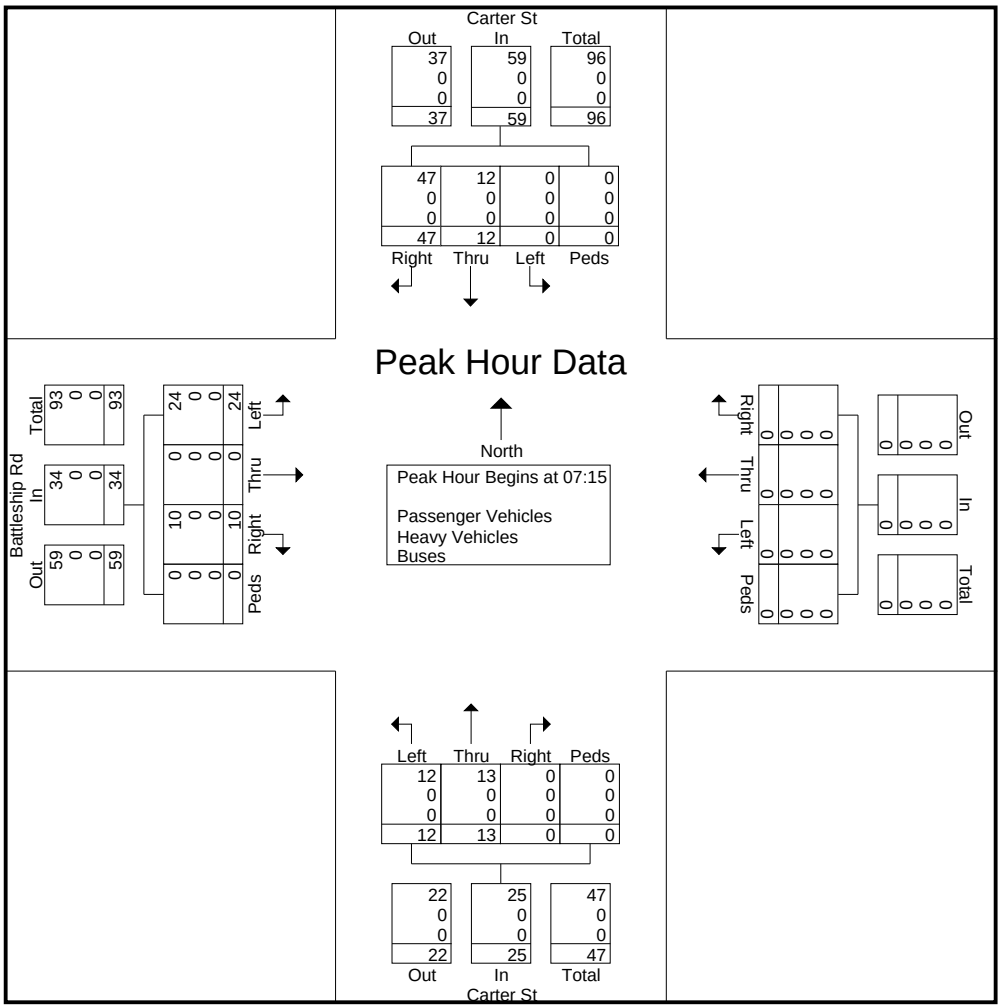
SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Battleship Rd @ Carter St
Site Code : 00516203
Start Date : 05/16/2023
Page No : 3

	Carter St Southbound					Westbound					Carter St Northbound					Battleship Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	**4**	9	0	13	0	0	0	0	0	2	2	0	0	4	3	0	**5**	0	8	25
07:30	0	3	10	0	13	0	0	0	0	0	3	**7**	0	0	**10**	5	0	2	0	7	30
07:45	0	3	**15**	0	**18**	0	0	0	0	0	**4**	1	0	0	5	4	0	2	0	6	29
08:00	0	2	13	0	15	0	0	0	0	0	3	3	0	0	6	**12**	0	1	0	**13**	**34**
Total Volume	0	12	47	0	59	0	0	0	0	0	12	13	0	0	25	24	0	10	0	34	118
% App. Total	0	20.3	79.7	0		0	0	0	0		48	52	0	0		70.6	0	29.4	0		
PHF	.000	.750	.783	.000	.819	.000	.000	.000	.000	.000	.750	.464	.000	.000	.625	.500	.000	.500	.000	.654	.868
Passenger Vehicles	0	12	47	0	59	0	0	0	0	0	12	13	0	0	25	24	0	10	0	34	118
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

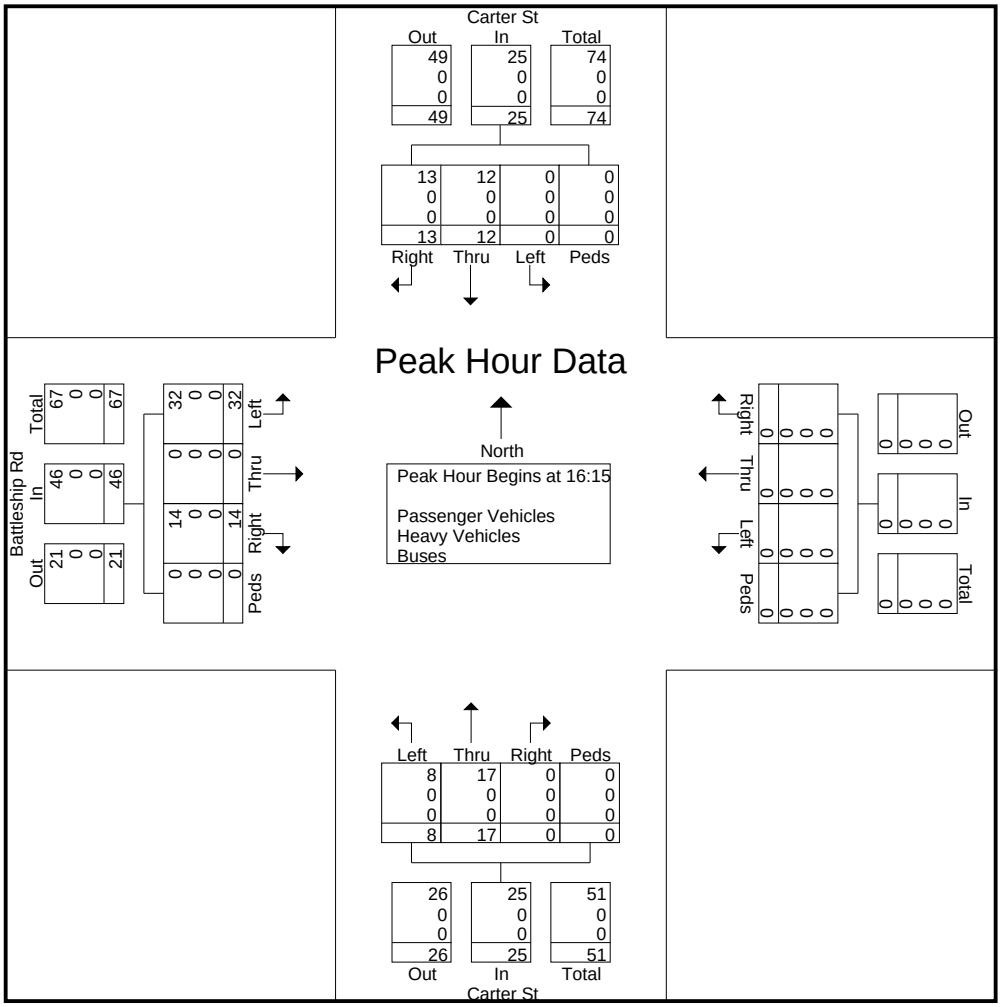


SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201
We can't say we're the Best, but you Can!

File Name : Battleship Rd @ Carter St
Site Code : 00516203
Start Date : 05/16/2023
Page No : 4

	Carter St Southbound					Westbound					Carter St Northbound					Battleship Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	0	2	2	0	4	0	0	0	0	0	1	4	0	0	5	**11**	0	4	0	**15**	24
16:30	0	3	2	0	5	0	0	0	0	0	1	4	0	0	5	4	0	**5**	0	9	19
16:45	0	3	3	0	6	0	0	0	0	0	**3**	4	0	0	7	9	0	2	0	11	24
17:00	0	**4**	**6**	0	**10**	0	0	0	0	0	3	**5**	0	0	**8**	8	0	3	0	11	**29**
Total Volume	0	12	13	0	25	0	0	0	0	0	8	17	0	0	25	32	0	14	0	46	96
% App. Total	0	48	52	0		0	0	0	0		32	68	0	0		69.6	0	30.4	0		
PHF	.000	.750	.542	.000	.625	.000	.000	.000	.000	.000	.667	.850	.000	.000	.781	.727	.000	.700	.000	.767	.828
Passenger Vehicles	0	12	13	0	25	0	0	0	0	0	8	17	0	0	25	32	0	14	0	46	96
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Carter St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

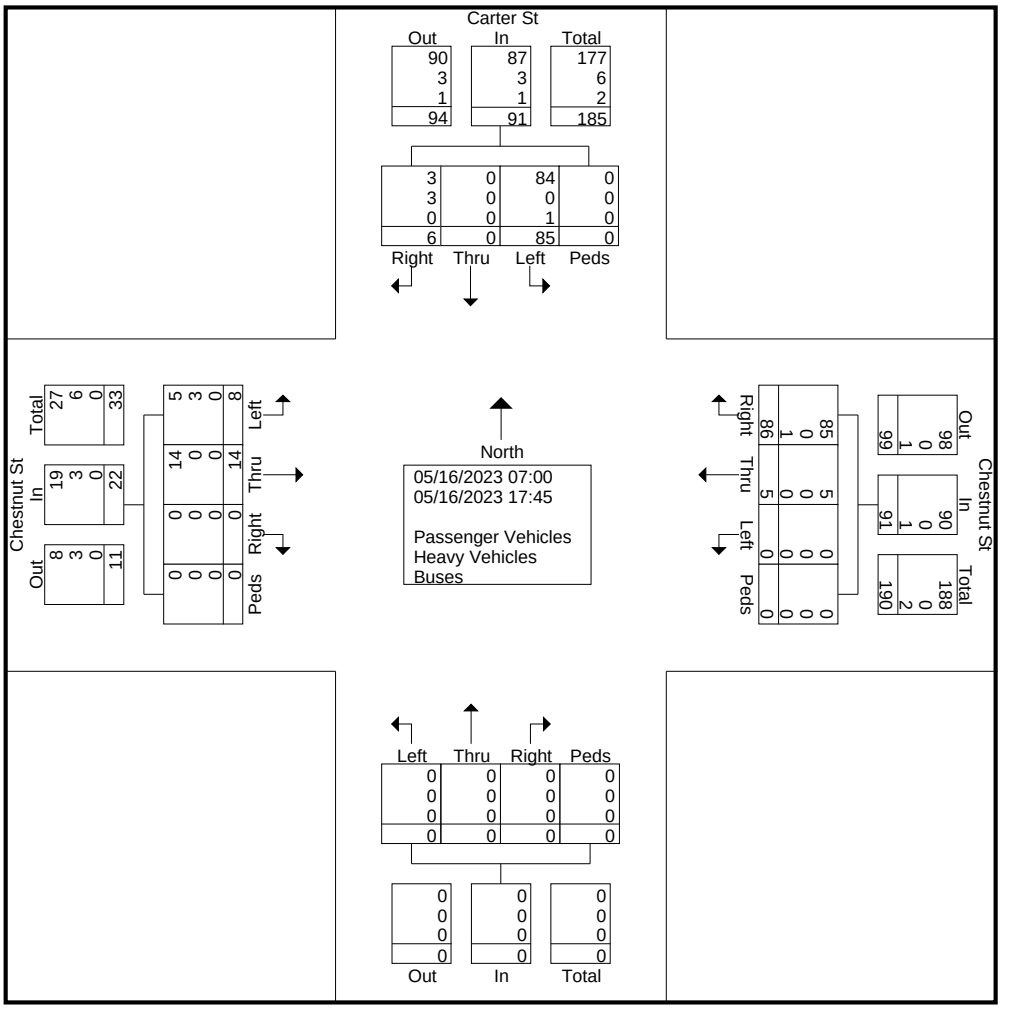
	Carter St Southbound				Chestnut St Westbound				Northbound				Chestnut St Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	10	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	12
07:15	8	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	13
07:30	2	0	0	0	0	0	6	0	0	0	0	0	0	2	0	0	10
07:45	5	0	0	0	0	0	5	0	0	0	0	0	2	0	0	0	12
Total	25	0	1	0	0	0	17	0	0	0	0	0	2	2	0	0	47
08:00	2	0	0	0	0	1	7	0	0	0	0	0	0	2	0	0	12
08:15	4	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	9
08:30	1	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	6
08:45	5	0	0	0	0	0	4	0	0	0	0	0	1	0	0	0	10
Total	12	0	0	0	0	1	20	0	0	0	0	0	1	3	0	0	37
16:00	2	0	0	0	0	1	7	0	0	0	0	0	0	4	0	0	14
16:15	7	0	1	0	0	0	3	0	0	0	0	0	1	0	0	0	12
16:30	7	0	0	0	0	1	6	0	0	0	0	0	1	1	0	0	16
16:45	9	0	0	0	0	2	7	0	0	0	0	0	1	1	0	0	20
Total	25	0	1	0	0	4	23	0	0	0	0	0	3	6	0	0	62
17:00	7	0	2	0	0	0	9	0	0	0	0	0	1	1	0	0	20
17:15	3	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	9
17:30	7	0	0	0	0	0	9	0	0	0	0	0	1	0	0	0	17
17:45	6	0	1	0	0	0	3	0	0	0	0	0	0	2	0	0	12
Total	23	0	4	0	0	0	26	0	0	0	0	0	2	3	0	0	58
Grand Total	85	0	6	0	0	5	86	0	0	0	0	0	8	14	0	0	204
Apprch %	93.4	0	6.6	0	0	5.5	94.5	0	0	0	0	0	36.4	63.6	0	0	
Total %	41.7	0	2.9	0	0	2.5	42.2	0	0	0	0	0	3.9	6.9	0	0	
Passenger Vehicles	84	0	3	0	0	5	85	0	0	0	0	0	5	14	0	0	196
% Passenger Vehicles	98.8	0	50	0	0	100	98.8	0	0	0	0	0	62.5	100	0	0	96.1
Heavy Vehicles	0	0	3	0	0	0	0	0	0	0	0	0	3	0	0	0	6
% Heavy Vehicles	0	0	50	0	0	0	0	0	0	0	0	0	37.5	0	0	0	2.9
Buses	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
% Buses	1.2	0	0	0	0	0	1.2	0	0	0	0	0	0	0	0	0	1

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Carter St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 2

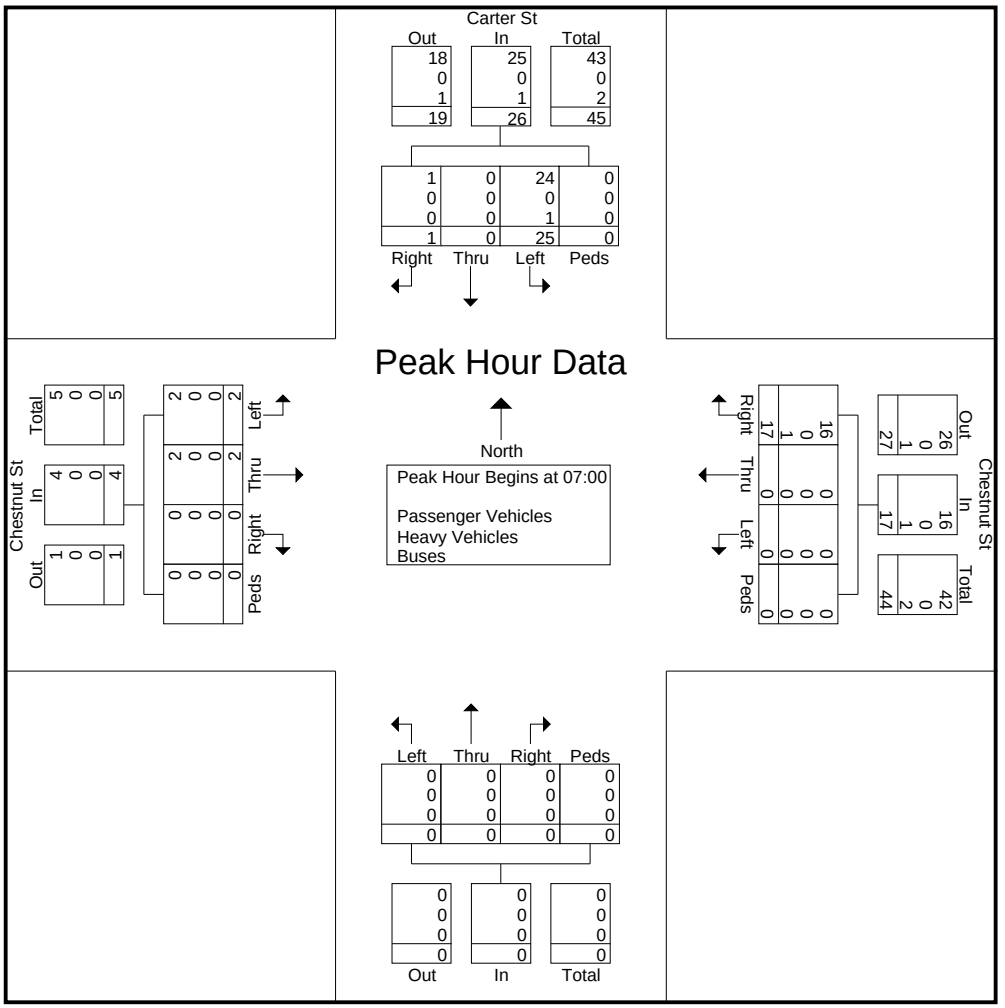


SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201
We can't say we're the Best, but you Can!

File Name : Carter St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 3

	Carter St Southbound					Chestnut St Westbound					Northbound					Chestnut St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	**10**	0	0	0	**10**	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	12
07:15	8	0	**1**	0	9	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	**13**
07:30	2	0	0	0	2	0	0	**6**	0	**6**	0	0	0	0	0	0	**2**	0	0	**2**	10
07:45	5	0	0	0	5	0	0	5	0	5	0	0	0	0	0	**2**	0	0	0	2	12
Total Volume	25	0	1	0	26	0	0	17	0	17	0	0	0	0	0	2	2	0	0	4	47
% App. Total	96.2	0	3.8	0		0	0	100	0		0	0	0	0		50	50	0	0		
PHF	.625	.000	.250	.000	.650	.000	.000	.708	.000	.708	.000	.000	.000	.000	.000	.250	.250	.000	.000	.500	.904
Passenger Vehicles	24	0	1	0	25	0	0	16	0	16	0	0	0	0	0	2	2	0	0	4	45
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
% Buses	4.0	0	0	0	3.8	0	0	5.9	0	5.9	0	0	0	0	0	0	0	0	0	0	4.3

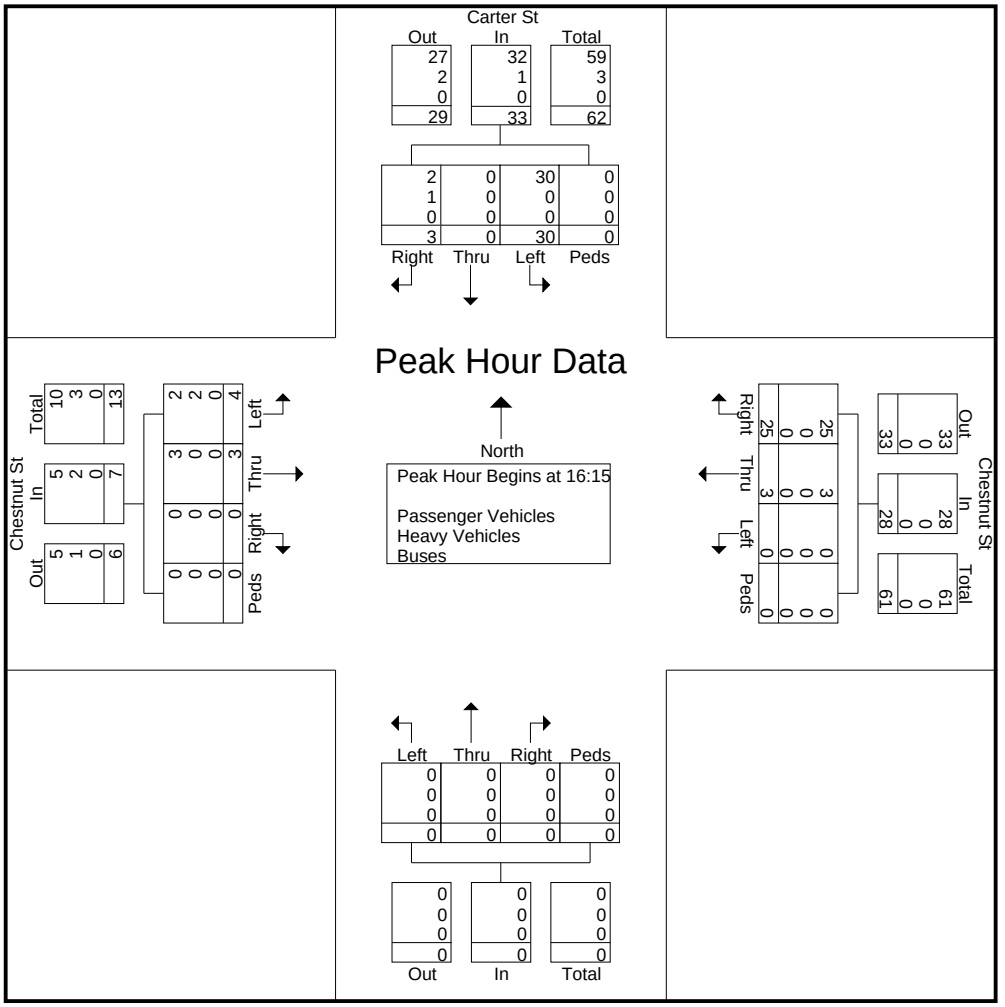


SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201
We can't say we're the Best, but you Can!

File Name : Carter St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 4

	Carter St Southbound					Chestnut St Westbound					Northbound					Chestnut St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	7	0	1	0	8	0	0	3	0	3	0	0	0	0	0	**1**	0	0	0	1	12
16:30	7	0	0	0	7	0	1	6	0	7	0	0	0	0	0	1	**1**	0	0	**2**	16
16:45	**9**	0	0	0	**9**	0	**2**	7	0	**9**	0	0	0	0	0	1	1	0	0	2	**20**
17:00	7	0	**2**	0	9	0	0	**9**	0	9	0	0	0	0	0	1	1	0	0	2	20
Total Volume	30	0	3	0	33	0	3	25	0	28	0	0	0	0	0	4	3	0	0	7	68
% App. Total	90.9	0	9.1	0		0	10.7	89.3	0		0	0	0	0		57.1	42.9	0	0		
PHF	.833	.000	.375	.000	.917	.000	.375	.694	.000	.778	.000	.000	.000	.000	.000	1.00	.750	.000	.000	.875	.850
Passenger Vehicles	30	0	2	0	32	0	3	25	0	28	0	0	0	0	0	2	3	0	0	5	65
% Passenger Vehicles																					
Heavy Vehicles	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	3
% Heavy Vehicles	0	0	33.3	0	3.0	0	0	0	0	0	0	0	0	0	0	50.0	0	0	0	28.6	4.4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Broad St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

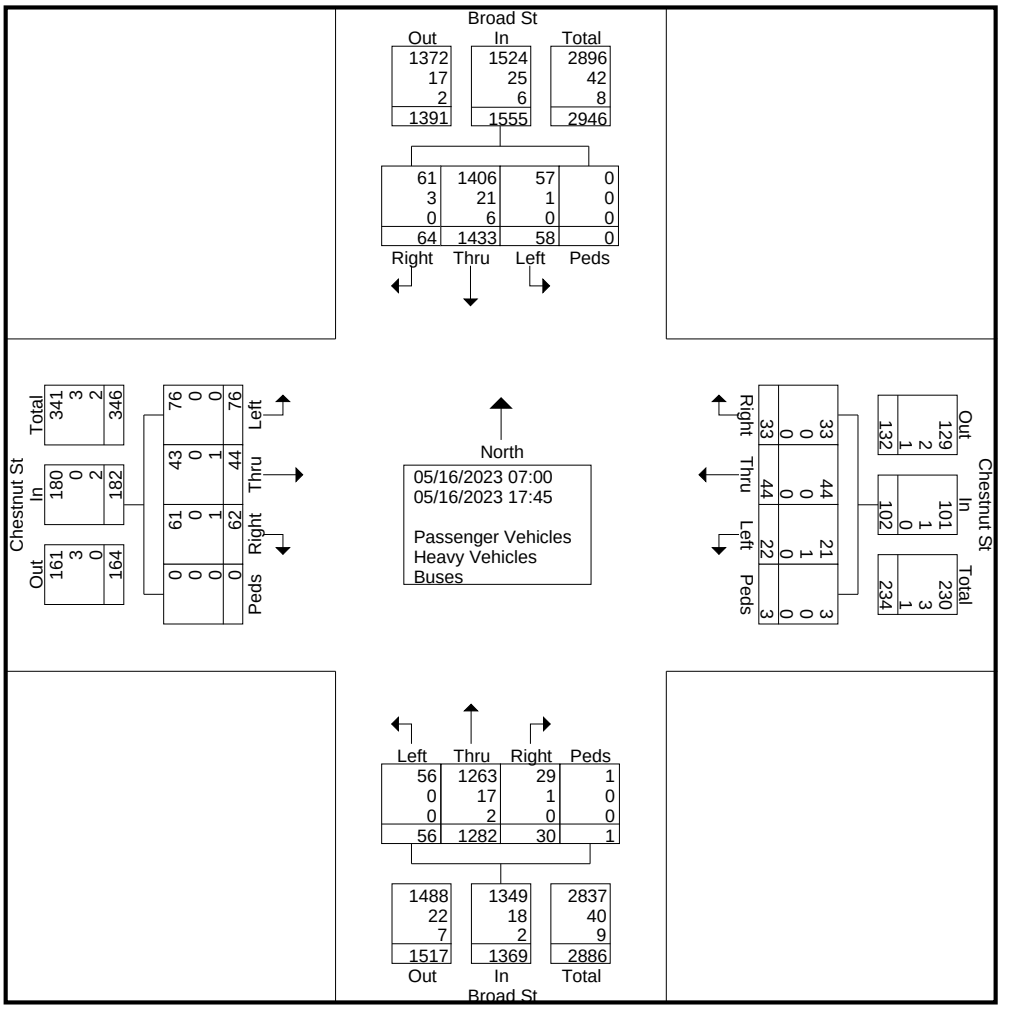
	Broad St Southbound				Chestnut St Westbound				Broad St Northbound				Chestnut St Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	10	81	1	0	0	2	0	0	3	43	1	0	4	7	8	0	160
07:15	11	106	6	0	2	3	0	1	4	79	3	0	0	7	7	0	229
07:30	3	91	6	0	1	1	1	0	5	46	1	0	3	5	4	0	167
07:45	2	134	7	0	1	1	4	0	5	70	2	1	7	1	2	0	237
Total	26	412	20	0	4	7	5	1	17	238	7	1	14	20	21	0	793
08:00	1	87	3	0	2	5	0	0	4	51	1	0	2	1	2	0	159
08:15	0	81	2	0	2	4	0	0	3	62	2	0	3	1	3	0	163
08:30	5	80	1	0	1	5	1	1	2	47	1	0	2	2	2	0	150
08:45	2	79	1	0	0	3	4	1	2	62	1	0	6	1	3	0	165
Total	8	327	7	0	5	17	5	2	11	222	5	0	13	5	10	0	637
16:00	0	80	3	0	3	3	7	0	3	106	2	0	5	5	4	0	221
16:15	3	70	4	0	0	4	2	0	5	105	1	0	9	4	4	0	211
16:30	5	77	5	0	4	2	1	0	4	100	3	0	5	3	5	0	214
16:45	5	90	6	0	1	4	3	0	3	94	5	0	6	0	4	0	221
Total	13	317	18	0	8	13	13	0	15	405	11	0	25	12	17	0	867
17:00	3	95	7	0	0	1	4	0	3	137	0	0	9	0	3	0	262
17:15	1	104	3	0	4	2	1	0	3	108	2	0	3	0	2	0	233
17:30	3	100	6	0	1	4	2	0	4	100	4	0	5	2	4	0	235
17:45	4	78	3	0	0	0	3	0	3	72	1	0	7	5	5	0	181
Total	11	377	19	0	5	7	10	0	13	417	7	0	24	7	14	0	911
Grand Total	58	1433	64	0	22	44	33	3	56	1282	30	1	76	44	62	0	3208
Apprch %	3.7	92.2	4.1	0	21.6	43.1	32.4	2.9	4.1	93.6	2.2	0.1	41.8	24.2	34.1	0	
Total %	1.8	44.7	2	0	0.7	1.4	1	0.1	1.7	40	0.9	0	2.4	1.4	1.9	0	
Passenger Vehicles	57	1406	61	0	21	44	33	3	56	1263	29	1	76	43	61	0	3154
% Passenger Vehicles	98.3	98.1	95.3	0	95.5	100	100	100	100	98.5	96.7	100	100	97.7	98.4	0	98.3
Heavy Vehicles	1	21	3	0	1	0	0	0	0	17	1	0	0	0	0	0	44
% Heavy Vehicles	1.7	1.5	4.7	0	4.5	0	0	0	0	1.3	3.3	0	0	0	0	0	1.4
Buses	0	6	0	0	0	0	0	0	0	2	0	0	0	1	1	0	10
% Buses	0	0.4	0	0	0	0	0	0	0	0.2	0	0	0	2.3	1.6	0	0.3

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Broad St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 2



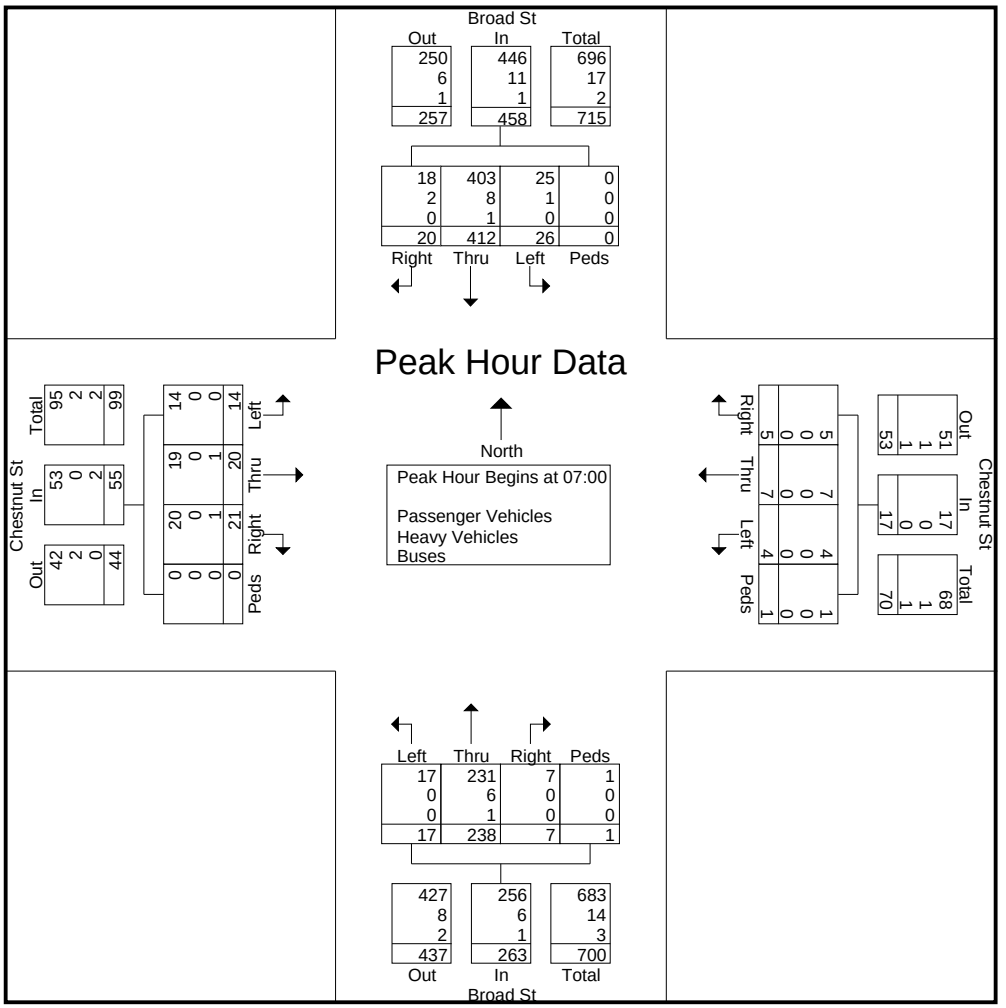
SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Broad St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 3

	Broad St Southbound					Chestnut St Westbound					Broad St Northbound					Chestnut St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	10	81	1	0	92	0	2	0	0	2	3	43	1	0	47	4	**7**	**8**	0	**19**	160
07:15	**11**	106	6	0	123	**2**	**3**	0	**1**	**6**	4	**79**	**3**	0	**86**	0	7	7	0	14	229
07:30	3	91	6	0	100	1	1	1	0	3	**5**	46	1	0	52	3	5	4	0	12	167
07:45	2	**134**	**7**	0	**143**	1	1	**4**	0	6	5	70	2	**1**	78	**7**	1	2	0	10	**237**
Total Volume	26	412	20	0	458	4	7	5	1	17	17	238	7	1	263	14	20	21	0	55	793
% App. Total	5.7	90	4.4	0		23.5	41.2	29.4	5.9		6.5	90.5	2.7	0.4		25.5	36.4	38.2	0		
PHF	.591	.769	.714	.000	.801	.500	.583	.313	.250	.708	.850	.753	.583	.250	.765	.500	.714	.656	.000	.724	.836
Passenger Vehicles	25	403	18	0	446	4	7	5	1	17	17	231	7	1	256	14	19	20	0	53	772
% Passenger Vehicles																					
Heavy Vehicles	1	8	2	0	11	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	17
% Heavy Vehicles	3.8	1.9	10.0	0	2.4	0	0	0	0	0	0	2.5	0	0	2.3	0	0	0	0	0	2.1
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	4
% Buses	0	0.2	0	0	0.2	0	0	0	0	0	0	0.4	0	0	0.4	0	5.0	4.8	0	3.6	0.5



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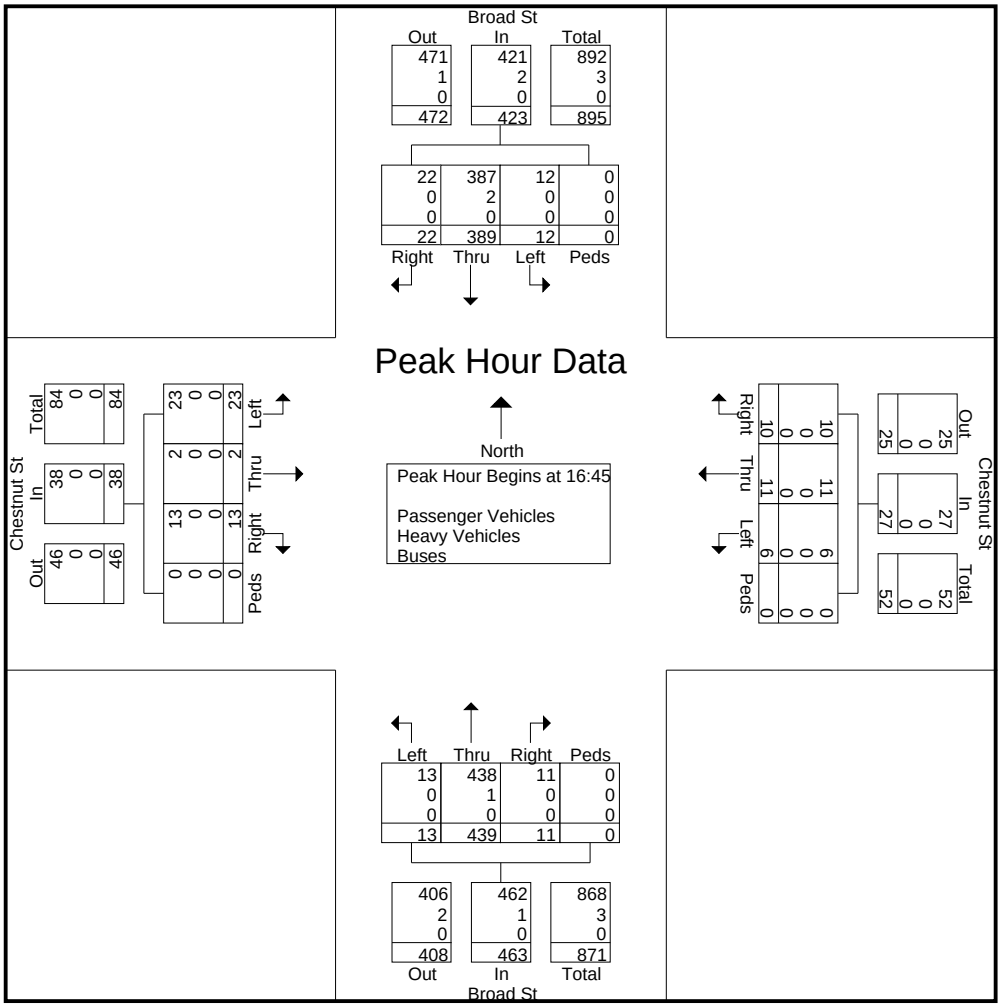
File Name : Broad St @ Chestnut St
Site Code :
Start Date : 05/16/2023
Page No : 4

	Broad St Southbound					Chestnut St Westbound					Broad St Northbound					Chestnut St Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	**5**	90	6	0	101	1	**4**	3	0	**8**	3	94	**5**	0	102	6	0	**4**	0	10	221
17:00	3	95	**7**	0	105	0	1	**4**	0	5	3	**137**	0	0	**140**	**9**	0	3	0	**12**	**262**
17:15	1	**104**	3	0	108	**4**	2	1	0	7	3	108	2	0	113	3	0	2	0	5	233
17:30	3	100	6	0	**109**	1	4	2	0	7	**4**	100	4	0	108	5	**2**	4	0	11	235
Total Volume	12	389	22	0	423	6	11	10	0	27	13	439	11	0	463	23	2	13	0	38	951
% App. Total	2.8	92	5.2	0		22.2	40.7	37	0		2.8	94.8	2.4	0		60.5	5.3	34.2	0		
PHF	.600	.935	.786	.000	.970	.375	.688	.625	.000	.844	.813	.801	.550	.000	.827	.639	.250	.813	.000	.792	.907
Passenger Vehicles	12	387	22	0	421	6	11	10	0	27	13	438	11	0	462	23	2	13	0	38	948
% Passenger Vehicles																					
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3
% Heavy Vehicles	0	0.5	0	0	0.5	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0.3
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Appendix C Intersection Reports

Table of Contents

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2023 Existing.pdf

Scenario 1 AM 2023 Existing
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.374	6.8	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.001	9.5	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.042	9.3	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.038	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	WB Left	0.201	6.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.374

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	4	1	9	27	2	63	95	924	21	6	854	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.10	7.10	7.10	2.00	2.00	2.00	2.30	2.30	2.30	2.30	2.30	2.30
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1	9	27	2	63	95	924	21	6	854	27
Peak Hour Factor	0.7000	0.7000	0.7000	0.7190	0.7190	0.7190	0.8810	0.8810	0.8810	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	9	1	22	27	262	6	2	237	8
Total Analysis Volume [veh/h]	6	1	13	38	3	88	108	1049	24	7	949	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	22	0	0	22	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	9	9	59	59	59	59	59	59
g / C, Green / Cycle	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.19	0.30	0.02	0.01	0.26	0.26
s, saturation flow rate [veh/h]	1638	1641	573	3552	1586	524	1865	1845
c, Capacity [veh/h]	253	253	436	2597	1159	397	1364	1349
d1, Uniform Delay [s]	31.43	33.58	7.77	4.10	2.94	6.94	3.93	3.93
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	1.58	1.36	0.47	0.03	0.08	0.74	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.51	0.25	0.40	0.02	0.02	0.36	0.36
d, Delay for Lane Group [s/veh]	31.56	35.16	9.13	4.57	2.97	7.02	4.67	4.68
Lane Group LOS	C	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.35	2.41	0.89	2.12	0.07	0.05	2.04	2.02
50th-Percentile Queue Length [ft/ln]	8.69	60.33	22.31	53.09	1.86	1.26	50.92	50.45
95th-Percentile Queue Length [veh/ln]	0.63	4.34	1.61	3.82	0.13	0.09	3.67	3.63
95th-Percentile Queue Length [ft/ln]	15.64	108.60	40.16	95.56	3.36	2.27	91.66	90.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.56	31.56	31.56	35.16	35.16	35.16	9.13	4.57	2.97	7.02	4.68	4.68
Movement LOS	C	C	C	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	31.56			35.16			4.96			4.69		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	6.76											
Intersection LOS	A											
Intersection V/C	0.374											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	1.747	2.017	2.939	2.892
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1300	1300
d_b, Bicycle Delay [s]	25.59	25.59	4.90	4.90
l_b,int, Bicycle LOS Score for Intersection	1.593	1.772	2.534	2.373
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Base Volume Input [veh/h]	8	42	72	4	1	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	42	72	4	1	23
Peak Hour Factor	0.8330	0.8330	0.8640	0.8640	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	13	21	1	0	8
Total Analysis Volume [veh/h]	10	50	83	5	1	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	0.00	9.46	8.83
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.00	0.00	2.56	2.56
d_A, Approach Delay [s/veh]	1.23		0.00		8.85	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.98					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	12	13	12	47	24	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	13	12	47	24	10
Peak Hour Factor	0.6250	0.6250	0.8190	0.8190	0.6540	0.6540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	5	4	14	9	4
Total Analysis Volume [veh/h]	19	21	15	57	37	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.30	8.74
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	0.94	0.94	0.00	0.00	4.48	4.48
d_A, Approach Delay [s/veh]	3.51		0.00		9.14	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.75					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.038

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	25	1	2	2	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1	2	2	0	17
Peak Hour Factor	0.6500	0.6500	0.7080	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	1	1	0	6
Total Analysis Volume [veh/h]	38	2	3	3	0	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.77	8.52	7.27	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.13	3.13	0.14	0.14	0.00	0.00
d_A, Approach Delay [s/veh]	8.76		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.32					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	6.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.201

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	17	238	7	26	412	20	14	20	21	4	7	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.30	2.30	2.30	2.40	2.40	2.40	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	238	7	26	412	20	14	20	21	4	7	5
Peak Hour Factor	0.7650	0.7650	0.7650	0.8010	0.8010	0.8010	0.7240	0.7240	0.7240	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	78	2	8	129	6	5	7	7	1	2	2
Total Analysis Volume [veh/h]	22	311	9	32	514	25	19	28	29	6	10	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	60	60	60	60	8	8	8	8
g / C, Green / Cycle	0.75	0.75	0.75	0.75	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.17	0.17	0.01	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1675	1682	1752	1670	1396	1716	1346	1743
c, Capacity [veh/h]	1302	1256	1359	1247	192	177	159	179
d1, Uniform Delay [s]	2.82	2.84	3.04	3.07	34.85	33.28	36.16	32.50
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.22	0.37	0.41	0.22	1.05	0.10	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.13	0.22	0.22	0.10	0.32	0.04	0.09
d, Delay for Lane Group [s/veh]	3.04	3.06	3.40	3.48	35.08	34.33	36.26	32.72
Lane Group LOS	A	A	A	A	D	C	D	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.56	0.54	1.01	0.97	0.35	1.06	0.11	0.30
50th-Percentile Queue Length [ft/ln]	13.94	13.56	25.24	24.31	8.83	26.43	2.85	7.60
95th-Percentile Queue Length [veh/ln]	1.00	0.98	1.82	1.75	0.64	1.90	0.21	0.55
95th-Percentile Queue Length [ft/ln]	25.08	24.40	45.43	43.75	15.90	47.57	5.13	13.69

Movement, Approach, & Intersection Results

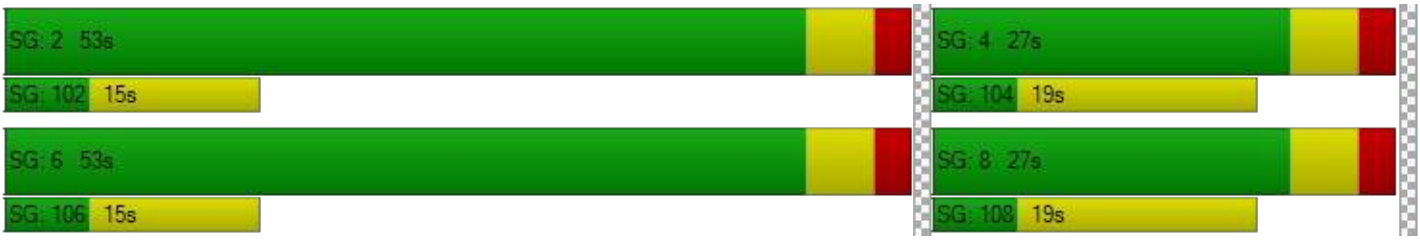
d_M, Delay for Movement [s/veh]	3.04	3.05	3.06	3.40	3.44	3.48	35.08	34.33	34.33	36.26	32.72	32.72
Movement LOS	A	A	A	A	A	A	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	3.05			3.44			34.52			33.64		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.33											
Intersection LOS	A											
Intersection V/C	0.201											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	2.389	2.412	2.010	2.011
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.75	21.75
l_b,int, Bicycle LOS Score for Intersection	1.842	2.031	1.685	1.598
Bicycle LOS	A	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	4	1	9	27	2	63	95	924	21	6	854	27	2033

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	8	42	72	4	1	23	150

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	12	13	12	47	24	10	118

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	25	1	2	2	0	17	47

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	17	238	7	26	412	20	14	20	21	4	7	5	791

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6/13/2023

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	4	1	9	27	2	63	95	924	21	6	854	27	2033
		Growth 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	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**4**	**1**	**9**	**27**	**2**	**63**	**95**	**924**	**21**	**6**	**854**	**27**	**2033**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	8	42	72	4	1	23	150
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**8**	**42**	**72**	**4**	**1**	**23**	**150**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	12	13	12	47	24	10	118
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**12**	**13**	**12**	**47**	**24**	**10**	**118**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	25	1	2	2	0	17	47
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**25**	**1**	**2**	**2**	**0**	**17**	**47**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	17	238	7	26	412	20	14	20	21	4	7	5	791
		Growth 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	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**17**	**238**	**7**	**26**	**412**	**20**	**14**	**20**	**21**	**4**	**7**	**5**	**791**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	76	50	24
2	74	49	23
3	72	48	23
4	68	45	21
5	60	40	19
6	59	39	19
7	59	39	18
8	53	35	17
9	52	35	17
10	52	34	16
11	45	30	14
12	42	28	13
13	41	27	13
14	30	20	10
15	30	20	10
16	21	14	7
17	12	8	4
18	12	8	4
19	7	5	2
20	4	3	1
21	2	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	126	1	24	No	No	No	No	No	No	No	No	No	No
2	1	123	1	23	No	No	No	No	No	No	No	No	No	No
3	1	120	1	23	No	No	No	No	No	No	No	No	No	No
4	1	113	1	21	No	No	No	No	No	No	No	No	No	No
5	1	100	1	19	No	No	No	No	No	No	No	No	No	No
6	1	98	1	19	No	No	No	No	No	No	No	No	No	No
7	1	98	1	18	No	No	No	No	No	No	No	No	No	No
8	1	88	1	17	No	No	No	No	No	No	No	No	No	No
9	1	87	1	17	No	No	No	No	No	No	No	No	No	No
10	1	86	1	16	No	No	No	No	No	No	No	No	No	No
11	1	75	1	14	No	No	No	No	No	No	No	No	No	No
12	1	70	1	13	No	No	No	No	No	No	No	No	No	No
13	1	68	1	13	No	No	No	No	No	No	No	No	No	No
14	1	50	1	10	No	No	No	No	No	No	No	No	No	No
15	1	50	1	10	No	No	No	No	No	No	No	No	No	No
16	1	35	1	7	No	No	No	No	No	No	No	No	No	No
17	1	20	1	4	No	No	No	No	No	No	No	No	No	No
18	1	20	1	4	No	No	No	No	No	No	No	No	No	No
19	1	12	1	2	No	No	No	No	No	No	No	No	No	No
20	1	7	1	1	No	No	No	No	No	No	No	No	No	No
21	1	4	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	24
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	150
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	25	59	34
2	24	57	33
3	24	56	32
4	22	53	30
5	20	47	27
6	20	46	27
7	19	45	26
8	18	41	24
9	17	41	23
10	17	40	23
11	15	35	20
12	14	32	19
13	14	32	18
14	10	24	14
15	10	24	14
16	7	17	10
17	4	9	5
18	4	9	5
19	2	5	3
20	1	3	2
21	1	2	1
22	0	1	0
23	0	1	0
24	0	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	84	1	34	No	No	No	No	No	No	No	No	No	No
2	1	81	1	33	No	No	No	No	No	No	No	No	No	No
3	1	80	1	32	No	No	No	No	No	No	No	No	No	No
4	1	75	1	30	No	No	No	No	No	No	No	No	No	No
5	1	67	1	27	No	No	No	No	No	No	No	No	No	No
6	1	66	1	27	No	No	No	No	No	No	No	No	No	No
7	1	64	1	26	No	No	No	No	No	No	No	No	No	No
8	1	59	1	24	No	No	No	No	No	No	No	No	No	No
9	1	58	1	23	No	No	No	No	No	No	No	No	No	No
10	1	57	1	23	No	No	No	No	No	No	No	No	No	No
11	1	50	1	20	No	No	No	No	No	No	No	No	No	No
12	1	46	1	19	No	No	No	No	No	No	No	No	No	No
13	1	46	1	18	No	No	No	No	No	No	No	No	No	No
14	1	34	1	14	No	No	No	No	No	No	No	No	No	No
15	1	34	1	14	No	No	No	No	No	No	No	No	No	No
16	1	24	1	10	No	No	No	No	No	No	No	No	No	No
17	1	13	1	5	No	No	No	No	No	No	No	No	No	No
18	1	13	1	5	No	No	No	No	No	No	No	No	No	No
19	1	7	1	3	No	No	No	No	No	No	No	No	No	No
20	1	4	1	2	No	No	No	No	No	No	No	No	No	No
21	1	3	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	34
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	118
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	17	4	26
2	16	4	25
3	16	4	25
4	15	4	23
5	13	3	21
6	13	3	20
7	13	3	20
8	12	3	18
9	12	3	18
10	12	3	18
11	10	2	15
12	9	2	14
13	9	2	14
14	7	2	10
15	7	2	10
16	5	1	7
17	3	1	4
18	3	1	4
19	2	0	2
20	1	0	1
21	1	0	1
22	0	0	0
23	0	0	0
24	0	0	0

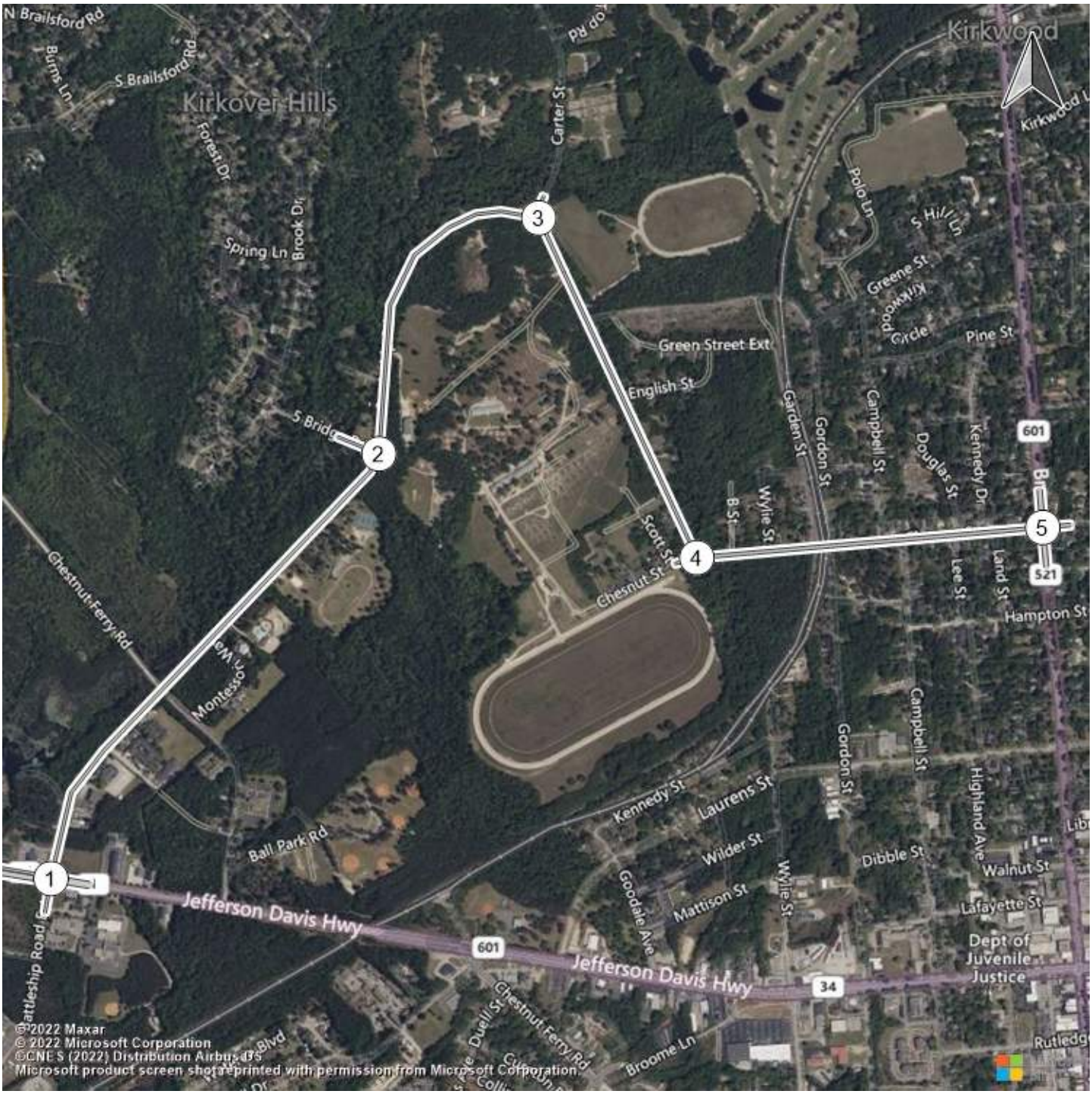
Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	21	1	26	No	No	No	No	No	No	No	No	No	No
2	1	20	1	25	No	No	No	No	No	No	No	No	No	No
3	1	20	1	25	No	No	No	No	No	No	No	No	No	No
4	1	19	1	23	No	No	No	No	No	No	No	No	No	No
5	1	16	1	21	No	No	No	No	No	No	No	No	No	No
6	1	16	1	20	No	No	No	No	No	No	No	No	No	No
7	1	16	1	20	No	No	No	No	No	No	No	No	No	No
8	1	15	1	18	No	No	No	No	No	No	No	No	No	No
9	1	15	1	18	No	No	No	No	No	No	No	No	No	No
10	1	15	1	18	No	No	No	No	No	No	No	No	No	No
11	1	12	1	15	No	No	No	No	No	No	No	No	No	No
12	1	11	1	14	No	No	No	No	No	No	No	No	No	No
13	1	11	1	14	No	No	No	No	No	No	No	No	No	No
14	1	9	1	10	No	No	No	No	No	No	No	No	No	No
15	1	9	1	10	No	No	No	No	No	No	No	No	No	No
16	1	6	1	7	No	No	No	No	No	No	No	No	No	No
17	1	4	1	4	No	No	No	No	No	No	No	No	No	No
18	1	4	1	4	No	No	No	No	No	No	No	No	No	No
19	1	2	1	2	No	No	No	No	No	No	No	No	No	No
20	1	1	1	1	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

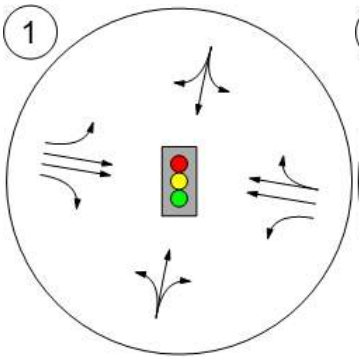
Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	26
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	47
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Study Intersections

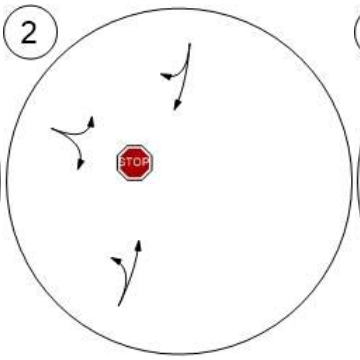


Lane Configuration and Traffic Control

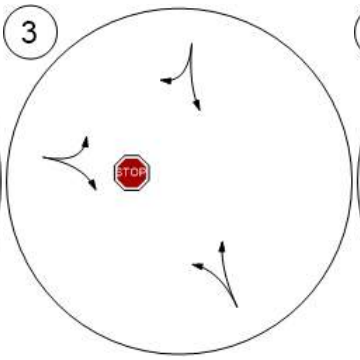
W. Dekalb St & Battleship Rd



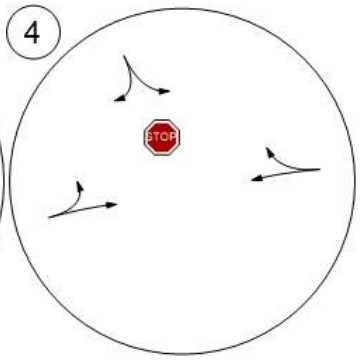
Battleship Rd & 5 Bridge Rd



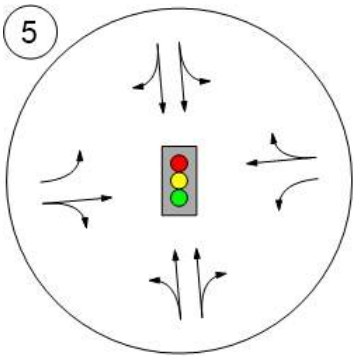
Carter St & Battleship Rd



Chesnut St & Carter St

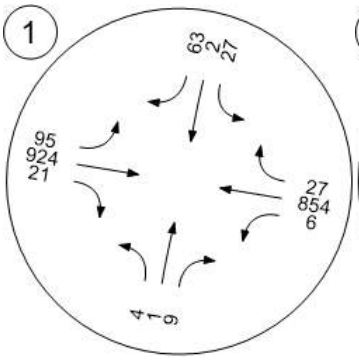


Broad St & Chestnut St

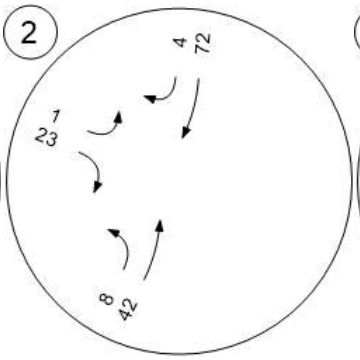


Traffic Volume - Base Volume

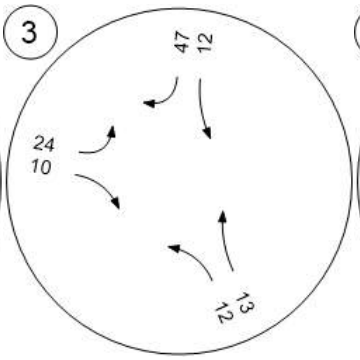
W. Dekalb St & Battleship Rd



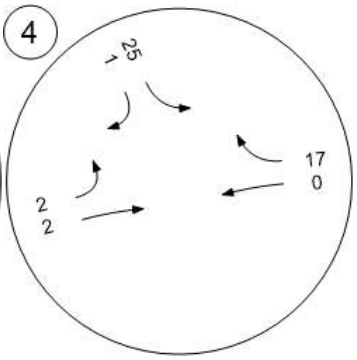
Battleship Rd & 5 Bridge Rd



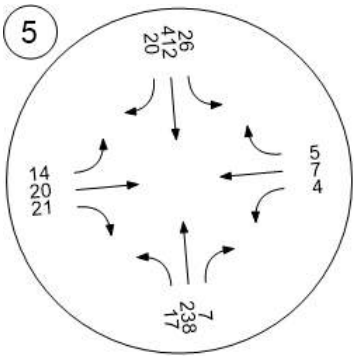
Carter St & Battleship Rd



Chesnut St & Carter St

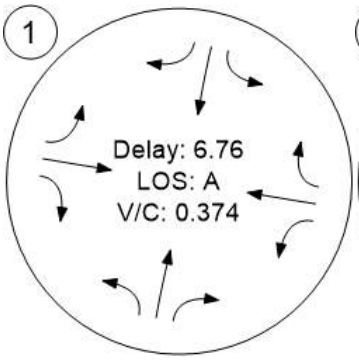


Broad St & Chestnut St

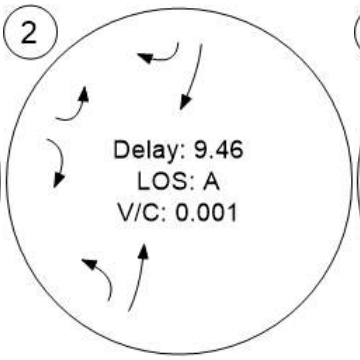


Traffic Conditions

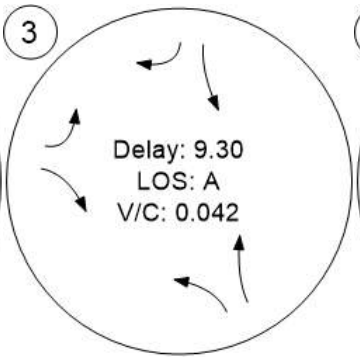
W. Dekalb St & Battleship Rd



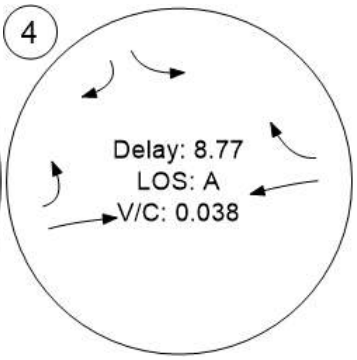
Battleship Rd & 5 Bridge Rd



Carter St & Battleship Rd



Chesnut St & Carter St



Broad St & Chestnut St

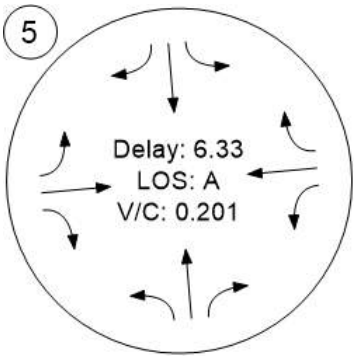


Table of Contents

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2026 No Build.pdf

Scenario 2 AM 2026 No Build
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.385	6.8	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.001	9.5	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.043	9.3	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.040	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	WB Left	0.208	6.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	4	1	9	27	2	63	95	924	21	6	854	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.10	7.10	7.10	2.00	2.00	2.00	2.30	2.30	2.30	2.30	2.30	2.30
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1	9	28	2	65	98	952	22	6	880	28
Peak Hour Factor	0.7000	0.7000	0.7000	0.7190	0.7190	0.7190	0.8810	0.8810	0.8810	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	10	1	23	28	270	6	2	244	8
Total Analysis Volume [veh/h]	6	1	13	39	3	90	111	1081	25	7	978	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	22	0	0	22	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	10	10	58	58	58	58	58	58
g / C, Green / Cycle	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.20	0.30	0.02	0.01	0.27	0.27
s, saturation flow rate [veh/h]	1636	1641	557	3552	1586	508	1865	1845
c, Capacity [veh/h]	254	254	423	2595	1158	385	1363	1348
d1, Uniform Delay [s]	31.40	33.61	8.07	4.17	2.95	7.14	3.99	3.99
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	1.64	1.50	0.49	0.03	0.09	0.78	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.52	0.26	0.42	0.02	0.02	0.37	0.37
d, Delay for Lane Group [s/veh]	31.53	35.25	9.57	4.67	2.98	7.22	4.77	4.77
Lane Group LOS	C	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.35	2.47	0.95	2.23	0.08	0.05	2.13	2.11
50th-Percentile Queue Length [ft/ln]	8.68	61.87	23.76	55.66	1.95	1.29	53.30	52.81
95th-Percentile Queue Length [veh/ln]	0.63	4.45	1.71	4.01	0.14	0.09	3.84	3.80
95th-Percentile Queue Length [ft/ln]	15.63	111.36	42.76	100.18	3.51	2.32	95.94	95.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.53	31.53	31.53	35.25	35.25	35.25	9.57	4.67	2.98	7.22	4.77	4.77
Movement LOS	C	C	C	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	31.53			35.25			5.08			4.79		
Approach LOS	C			D			A			A		
d_I, Intersection Delay [s/veh]	6.85											
Intersection LOS	A											
Intersection V/C	0.385											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	1.747	2.025	2.953	2.910
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1300	1300
d_b, Bicycle Delay [s]	25.59	25.59	4.90	4.90
l_b,int, Bicycle LOS Score for Intersection	1.593	1.777	2.564	2.398
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Base Volume Input [veh/h]	8	42	72	4	1	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	43	74	4	1	24
Peak Hour Factor	0.8330	0.8330	0.8640	0.8640	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	13	21	1	0	8
Total Analysis Volume [veh/h]	10	52	86	5	1	32
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	0.00	9.50	8.84
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.00	0.00	2.65	2.65
d_A, Approach Delay [s/veh]	1.20		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.97					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.043

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	12	13	12	47	24	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	13	12	48	25	10
Peak Hour Factor	0.6250	0.6250	0.8190	0.8190	0.6540	0.6540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	5	4	15	10	4
Total Analysis Volume [veh/h]	19	21	15	59	38	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.31	8.75
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	0.95	0.95	0.00	0.00	4.58	4.58
d_A, Approach Delay [s/veh]	3.51		0.00		9.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.75					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	25	1	2	2	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	1	2	2	0	18
Peak Hour Factor	0.6500	0.6500	0.7080	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	0	1	1	0	6
Total Analysis Volume [veh/h]	40	2	3	3	0	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.78	8.53	7.27	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	3.30	3.30	0.14	0.14	0.00	0.00
d_A, Approach Delay [s/veh]	8.77		3.63		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.35					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	6.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.208

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	17	238	7	26	412	20	14	20	21	4	7	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.30	2.30	2.30	2.40	2.40	2.40	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	245	7	27	424	21	14	21	22	4	7	5
Peak Hour Factor	0.7650	0.7650	0.7650	0.8010	0.8010	0.8010	0.7240	0.7240	0.7240	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	80	2	8	132	7	5	7	8	1	2	2
Total Analysis Volume [veh/h]	24	320	9	34	529	26	19	29	30	6	10	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	60	60	60	60	8	8	8	8
g / C, Green / Cycle	0.75	0.75	0.75	0.75	0.10	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.17	0.17	0.01	0.03	0.00	0.01
s, saturation flow rate [veh/h]	1657	1682	1746	1669	1396	1716	1344	1743
c, Capacity [veh/h]	1287	1255	1353	1245	193	178	159	181
d1, Uniform Delay [s]	2.85	2.88	3.08	3.11	34.78	33.25	36.17	32.42
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.23	0.38	0.43	0.22	1.07	0.10	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.14	0.22	0.23	0.10	0.33	0.04	0.09
d, Delay for Lane Group [s/veh]	3.08	3.11	3.46	3.54	35.00	34.32	36.26	32.64
Lane Group LOS	A	A	A	A	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.58	0.57	1.05	1.02	0.35	1.09	0.11	0.30
50th-Percentile Queue Length [ft/ln]	14.51	14.22	26.37	25.50	8.82	27.35	2.85	7.59
95th-Percentile Queue Length [veh/ln]	1.04	1.02	1.90	1.84	0.64	1.97	0.21	0.55
95th-Percentile Queue Length [ft/ln]	26.12	25.60	47.46	45.89	15.88	49.24	5.13	13.66

Movement, Approach, & Intersection Results

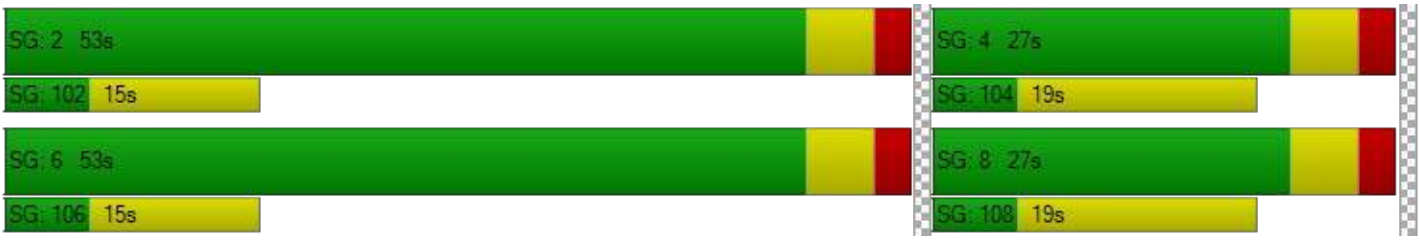
d_M, Delay for Movement [s/veh]	3.08	3.09	3.11	3.46	3.50	3.54	35.00	34.32	34.32	36.26	32.64	32.64
Movement LOS	A	A	A	A	A	A	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	3.09			3.50			34.49			33.59		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	6.34											
Intersection LOS	A											
Intersection V/C	0.208											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	2.396	2.420	2.015	2.015
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.75	21.75
l_b,int, Bicycle LOS Score for Intersection	1.851	2.046	1.688	1.598
Bicycle LOS	A	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	4	1	9	28	2	65	98	952	22	6	880	28	2095

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	8	43	74	4	1	24	154

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	12	13	12	48	25	10	120

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	26	1	2	2	0	18	49

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	18	245	7	27	424	21	14	21	22	4	7	5	815

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	4	1	9	27	2	63	95	924	21	6	854	27	2033
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**4**	**1**	**9**	**28**	**2**	**65**	**98**	**952**	**22**	**6**	**880**	**28**	**2095**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	8	42	72	4	1	23	150
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**8**	**43**	**74**	**4**	**1**	**24**	**154**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	12	13	12	47	24	10	118
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**12**	**13**	**12**	**48**	**25**	**10**	**120**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	25	1	2	2	0	17	47
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**26**	**1**	**2**	**2**	**0**	**18**	**49**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	17	238	7	26	412	20	14	20	21	4	7	5	791
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**18**	**245**	**7**	**27**	**424**	**21**	**14**	**21**	**22**	**4**	**7**	**5**	**815**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	78	51	25
2	76	49	24
3	74	48	24
4	69	45	22
5	62	40	20
6	61	40	20
7	60	39	19
8	55	36	18
9	54	35	17
10	53	35	17
11	46	30	15
12	43	28	14
13	42	28	14
14	31	20	10
15	31	20	10
16	22	14	7
17	12	8	4
18	12	8	4
19	7	5	2
20	4	3	1
21	2	2	1
22	1	1	0
23	1	1	0
24	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	129	1	25	No	No	No	No	No	No	No	No	No	No
2	1	125	1	24	No	No	No	No	No	No	No	No	No	No
3	1	122	1	24	No	No	No	No	No	No	No	No	No	No
4	1	114	1	22	No	No	No	No	No	No	No	No	No	No
5	1	102	1	20	No	No	No	No	No	No	No	No	No	No
6	1	101	1	20	No	No	No	No	No	No	No	No	No	No
7	1	99	1	19	No	No	No	No	No	No	No	No	No	No
8	1	91	1	18	No	No	No	No	No	No	No	No	No	No
9	1	89	1	17	No	No	No	No	No	No	No	No	No	No
10	1	88	1	17	No	No	No	No	No	No	No	No	No	No
11	1	76	1	15	No	No	No	No	No	No	No	No	No	No
12	1	71	1	14	No	No	No	No	No	No	No	No	No	No
13	1	70	1	14	No	No	No	No	No	No	No	No	No	No
14	1	51	1	10	No	No	No	No	No	No	No	No	No	No
15	1	51	1	10	No	No	No	No	No	No	No	No	No	No
16	1	36	1	7	No	No	No	No	No	No	No	No	No	No
17	1	20	1	4	No	No	No	No	No	No	No	No	No	No
18	1	20	1	4	No	No	No	No	No	No	No	No	No	No
19	1	12	1	2	No	No	No	No	No	No	No	No	No	No
20	1	7	1	1	No	No	No	No	No	No	No	No	No	No
21	1	4	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	25
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	154
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	25	60	35
2	24	58	34
3	24	57	33
4	22	53	31
5	20	47	28
6	20	47	27
7	19	46	27
8	18	42	25
9	17	41	24
10	17	41	24
11	15	35	21
12	14	33	19
13	14	32	19
14	10	24	14
15	10	24	14
16	7	17	10
17	4	10	6
18	4	10	6
19	2	5	3
20	1	3	2
21	1	2	1
22	0	1	0
23	0	1	0
24	0	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	85	1	35	No	No	No	No	No	No	No	No	No	No
2	1	82	1	34	No	No	No	No	No	No	No	No	No	No
3	1	81	1	33	No	No	No	No	No	No	No	No	No	No
4	1	75	1	31	No	No	No	No	No	No	No	No	No	No
5	1	67	1	28	No	No	No	No	No	No	No	No	No	No
6	1	67	1	27	No	No	No	No	No	No	No	No	No	No
7	1	65	1	27	No	No	No	No	No	No	No	No	No	No
8	1	60	1	25	No	No	No	No	No	No	No	No	No	No
9	1	58	1	24	No	No	No	No	No	No	No	No	No	No
10	1	58	1	24	No	No	No	No	No	No	No	No	No	No
11	1	50	1	21	No	No	No	No	No	No	No	No	No	No
12	1	47	1	19	No	No	No	No	No	No	No	No	No	No
13	1	46	1	19	No	No	No	No	No	No	No	No	No	No
14	1	34	1	14	No	No	No	No	No	No	No	No	No	No
15	1	34	1	14	No	No	No	No	No	No	No	No	No	No
16	1	24	1	10	No	No	No	No	No	No	No	No	No	No
17	1	14	1	6	No	No	No	No	No	No	No	No	No	No
18	1	14	1	6	No	No	No	No	No	No	No	No	No	No
19	1	7	1	3	No	No	No	No	No	No	No	No	No	No
20	1	4	1	2	No	No	No	No	No	No	No	No	No	No
21	1	3	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:05
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	35
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	120
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	18	4	27
2	17	4	26
3	17	4	26
4	16	4	24
5	14	3	21
6	14	3	21
7	14	3	21
8	13	3	19
9	12	3	19
10	12	3	18
11	11	2	16
12	10	2	15
13	10	2	15
14	7	2	11
15	7	2	11
16	5	1	8
17	3	1	4
18	3	1	4
19	2	0	2
20	1	0	1
21	1	0	1
22	0	0	0
23	0	0	0
24	0	0	0

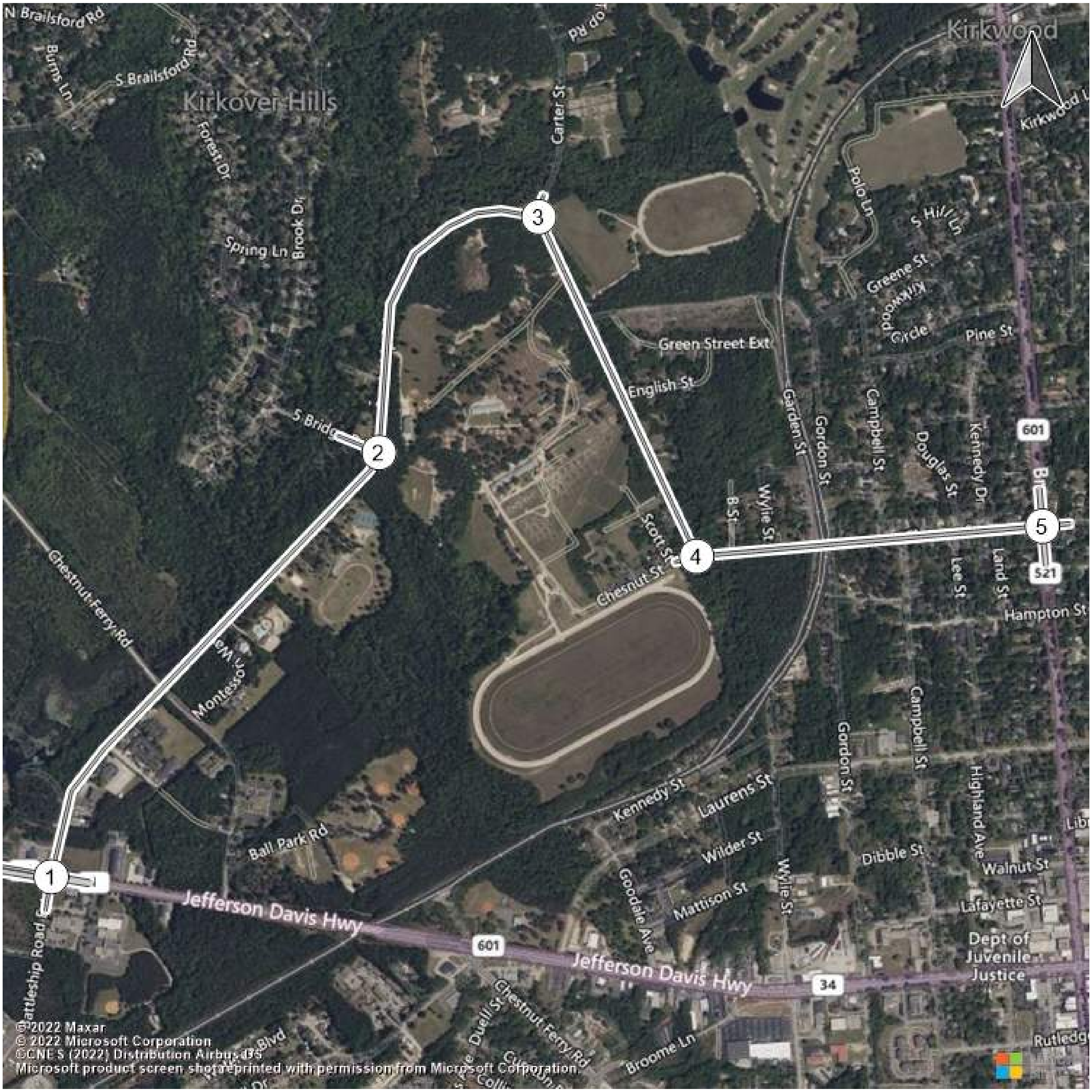
Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	22	1	27	No	No	No	No	No	No	No	No	No	No
2	1	21	1	26	No	No	No	No	No	No	No	No	No	No
3	1	21	1	26	No	No	No	No	No	No	No	No	No	No
4	1	20	1	24	No	No	No	No	No	No	No	No	No	No
5	1	17	1	21	No	No	No	No	No	No	No	No	No	No
6	1	17	1	21	No	No	No	No	No	No	No	No	No	No
7	1	17	1	21	No	No	No	No	No	No	No	No	No	No
8	1	16	1	19	No	No	No	No	No	No	No	No	No	No
9	1	15	1	19	No	No	No	No	No	No	No	No	No	No
10	1	15	1	18	No	No	No	No	No	No	No	No	No	No
11	1	13	1	16	No	No	No	No	No	No	No	No	No	No
12	1	12	1	15	No	No	No	No	No	No	No	No	No	No
13	1	12	1	15	No	No	No	No	No	No	No	No	No	No
14	1	9	1	11	No	No	No	No	No	No	No	No	No	No
15	1	9	1	11	No	No	No	No	No	No	No	No	No	No
16	1	6	1	8	No	No	No	No	No	No	No	No	No	No
17	1	4	1	4	No	No	No	No	No	No	No	No	No	No
18	1	4	1	4	No	No	No	No	No	No	No	No	No	No
19	1	2	1	2	No	No	No	No	No	No	No	No	No	No
20	1	1	1	1	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

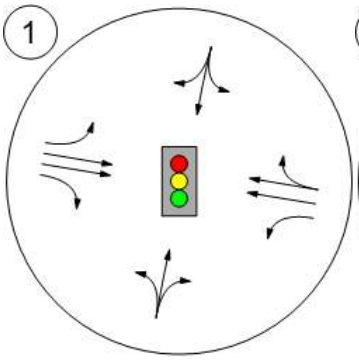
Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	27
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	49
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Study Intersections

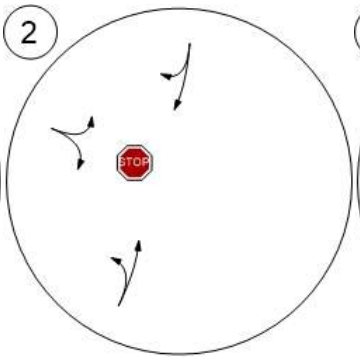


Lane Configuration and Traffic Control

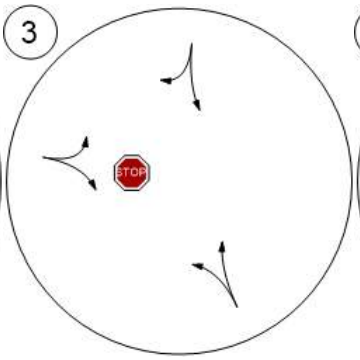
W. Dekalb St & Battleship Rd



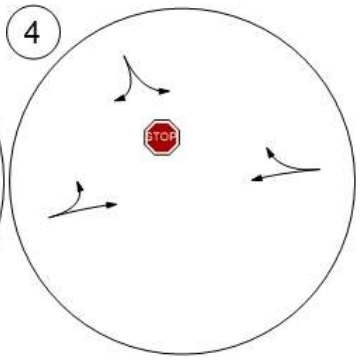
Battleship Rd & 5 Bridge Rd



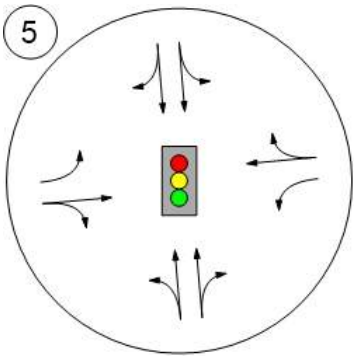
Carter St & Battleship Rd



Chesnut St & Carter St

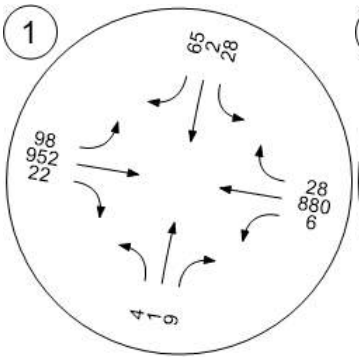


Broad St & Chestnut St

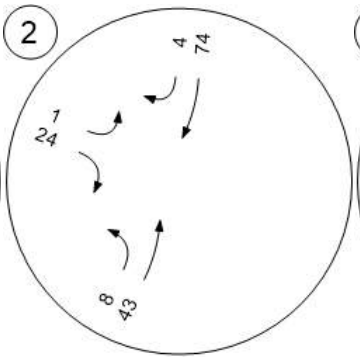


Traffic Volume - Future Background Volume

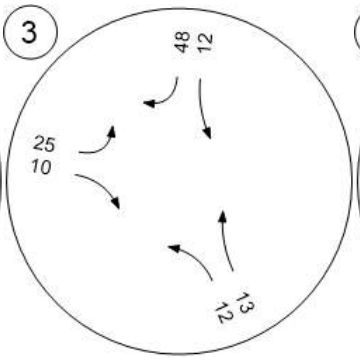
W. Dekalb St & Battleship Rd



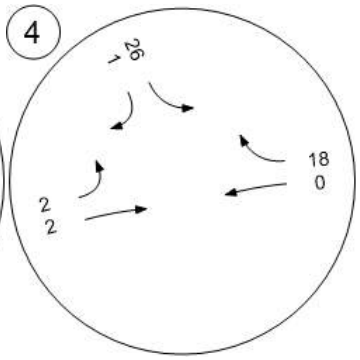
Battleship Rd & 5 Bridge Rd



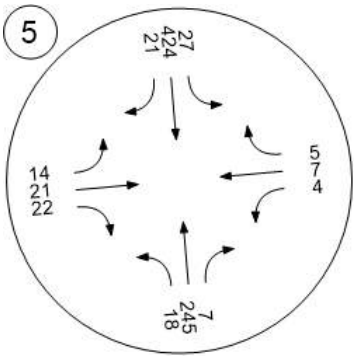
Carter St & Battleship Rd



Chesnut St & Carter St

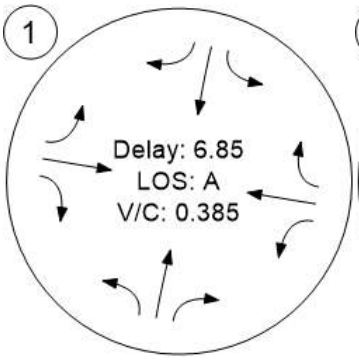


Broad St & Chestnut St

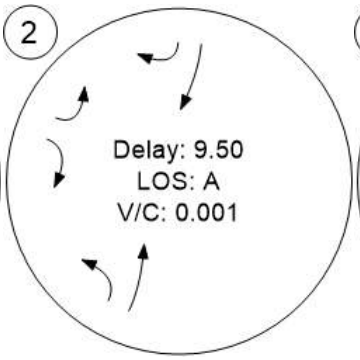


Traffic Conditions

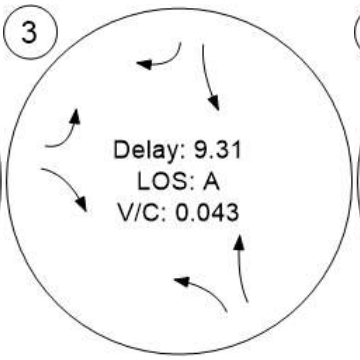
W. Dekalb St & Battleship Rd



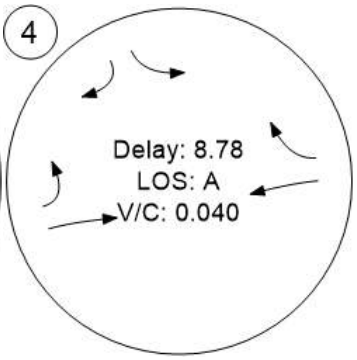
Battleship Rd & 5 Bridge Rd



Carter St & Battleship Rd



Chesnut St & Carter St



Broad St & Chestnut St

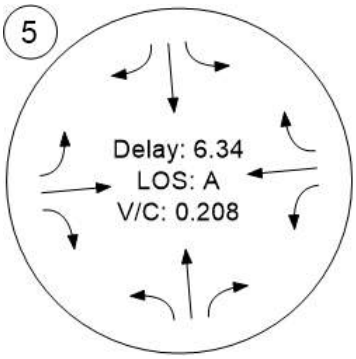


Table of Contents

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2026 Build.pdf

Scenario 3 AM 2026 Build
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.682	53.7	D
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	WB Left	0.434	15.7	C
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.059	11.2	B
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.161	10.2	B
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Right	0.286	11.4	B
6	Carter St & Access 2/3	Two-way stop	HCM 6th Edition	EB Left	0.003	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	53.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	4	1	9	27	2	63	95	924	21	6	854	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	7.10	7.10	7.10	2.00	2.00	2.00	2.30	2.30	2.30	2.30	2.30	2.30
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	155	5	149	57	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	1	9	183	7	214	155	952	22	6	880	79
Peak Hour Factor	0.7000	0.7000	0.7000	0.7190	0.7190	0.7190	0.8810	0.8810	0.8810	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	3	64	2	74	44	270	6	2	244	22
Total Analysis Volume [veh/h]	6	1	13	255	10	298	176	1081	25	7	978	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	22	0	0	22	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	16	16	52	52	52	52	52	52
g / C, Green / Cycle	0.20	0.20	0.65	0.65	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.01	0.35	0.33	0.30	0.02	0.01	0.29	0.29
s, saturation flow rate [veh/h]	1467	1614	528	3552	1586	508	1865	1812
c, Capacity [veh/h]	354	391	339	2303	1028	324	1209	1175
d1, Uniform Delay [s]	25.80	33.08	16.74	7.10	5.02	11.77	6.96	6.96
k, delay calibration	0.11	0.36	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	208.59	5.59	0.69	0.04	0.12	1.20	1.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	1.44	0.52	0.47	0.02	0.02	0.45	0.45
d, Delay for Lane Group [s/veh]	25.87	241.67	22.32	7.79	5.07	11.89	8.16	8.19
Lane Group LOS	C	F	C	A	A	B	A	A
Critical Lane Group	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.31	30.11	2.74	3.68	0.13	0.07	3.79	3.70
50th-Percentile Queue Length [ft/ln]	7.69	752.69	68.46	92.05	3.14	1.80	94.86	92.46
95th-Percentile Queue Length [veh/ln]	0.55	46.12	4.93	6.63	0.23	0.13	6.83	6.66
95th-Percentile Queue Length [ft/ln]	13.84	1153.03	123.22	165.70	5.65	3.25	170.74	166.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.87	25.87	25.87	241.67	241.67	241.67	22.32	7.79	5.07	11.89	8.17	8.19
Movement LOS	C	C	C	F	F	F	C	A	A	B	A	A
d_A, Approach Delay [s/veh]	25.87			241.67			9.74			8.20		
Approach LOS	C			F			A			A		
d_I, Intersection Delay [s/veh]	53.73											
Intersection LOS	D											
Intersection V/C	0.682											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.49	31.49	31.49	31.49
l_p,int, Pedestrian LOS Score for Intersection	1.751	2.432	3.013	3.288
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1301	1301
d_b, Bicycle Delay [s]	25.59	25.59	4.89	4.89
l_b,int, Bicycle LOS Score for Intersection	1.593	2.489	2.617	2.445
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	15.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

Intersection Setup

Name	Battleship Rd (S-194)			Battleship Rd (S-194)			5 Bridge Rd (S-198)			Access 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Battleship Rd (S-194)			Battleship Rd (S-194)			5 Bridge Rd (S-198)			Access 1		
Base Volume Input [veh/h]	8	42	0	0	72	4	1	0	23	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0000	1.0000	1.0300	1.0300	1.0300	1.0000	1.0300	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	17	91	7	48	0	0	0	0	261	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	60	91	7	122	4	1	0	24	261	0	17
Peak Hour Factor	0.8330	0.8330	0.8330	0.8640	0.8640	0.8640	0.7500	0.7500	0.7500	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	18	27	2	35	1	0	0	8	65	0	4
Total Analysis Volume [veh/h]	10	72	109	8	141	5	1	0	32	261	0	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.43	0.00	0.02
d_M, Delay for Movement [s/veh]	7.52	0.00	0.00	7.60	0.00	0.00	10.96	11.60	9.14	15.71	15.76	13.63
Movement LOS	A	A	A	A	A	A	B	B	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.02	0.02	0.02	0.12	0.12	0.12	2.34	2.34	2.34
95th-Percentile Queue Length [ft/ln]	0.53	0.53	0.53	0.43	0.43	0.43	2.88	2.88	2.88	58.58	58.58	58.58
d_A, Approach Delay [s/veh]	0.39			0.39			9.19			15.59		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	7.28											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	12	13	12	47	24	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	55	5	4	0	0	34
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	18	16	48	25	44
Peak Hour Factor	0.6250	0.6250	0.8190	0.8190	0.6540	0.6540
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	7	5	15	10	17
Total Analysis Volume [veh/h]	107	29	20	59	38	67
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.06	0.07
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	0.00	11.16	9.14
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.00	0.00	0.42	0.42
95th-Percentile Queue Length [ft/ln]	5.68	5.68	0.00	0.00	10.60	10.60
d_A, Approach Delay [s/veh]	5.94		0.00		9.87	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.76					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.161

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	25	1	2	2	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	61	2	2	62	19	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	3	4	64	19	39
Peak Hour Factor	0.6500	0.6500	0.7080	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	1	1	23	7	14
Total Analysis Volume [veh/h]	134	5	6	90	27	55
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.19	9.41	7.39	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.59	0.59	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	14.84	14.84	0.30	0.30	0.00	0.00
d_A, Approach Delay [s/veh]	10.16		0.46		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.59					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.286

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	17	238	7	26	412	20	14	20	21	4	7	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.30	2.30	2.30	2.40	2.40	2.40	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	14	0	0	0	0	26	44	9	70	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	245	7	27	424	47	58	30	92	4	7	5
Peak Hour Factor	0.7650	0.7650	0.7650	0.8010	0.8010	0.8010	0.7240	0.7240	0.7240	0.7080	0.7080	0.7080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	80	2	8	132	15	20	10	32	1	2	2
Total Analysis Volume [veh/h]	42	320	9	34	529	59	80	41	127	6	10	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	58	58	58	58	10	10	10	10
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.12	0.11	0.18	0.18	0.06	0.10	0.00	0.01
s, saturation flow rate [veh/h]	1458	1684	1751	1639	1396	1650	1217	1743
c, Capacity [veh/h]	1106	1213	1311	1181	231	214	106	226
d1, Uniform Delay [s]	3.47	3.53	3.78	3.83	34.25	33.71	39.14	30.57
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.28	0.45	0.52	0.89	6.24	0.22	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.16	0.25	0.25	0.35	0.79	0.06	0.08
d, Delay for Lane Group [s/veh]	3.79	3.81	4.23	4.35	35.13	39.95	39.36	30.71
Lane Group LOS	A	A	A	A	D	D	D	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.71	0.76	1.37	1.30	1.51	3.45	0.12	0.29
50th-Percentile Queue Length [ft/ln]	17.85	18.96	34.19	32.59	37.68	86.25	3.03	7.28
95th-Percentile Queue Length [veh/ln]	1.29	1.37	2.46	2.35	2.71	6.21	0.22	0.52
95th-Percentile Queue Length [ft/ln]	32.13	34.14	61.54	58.66	67.83	155.25	5.46	13.11

Movement, Approach, & Intersection Results

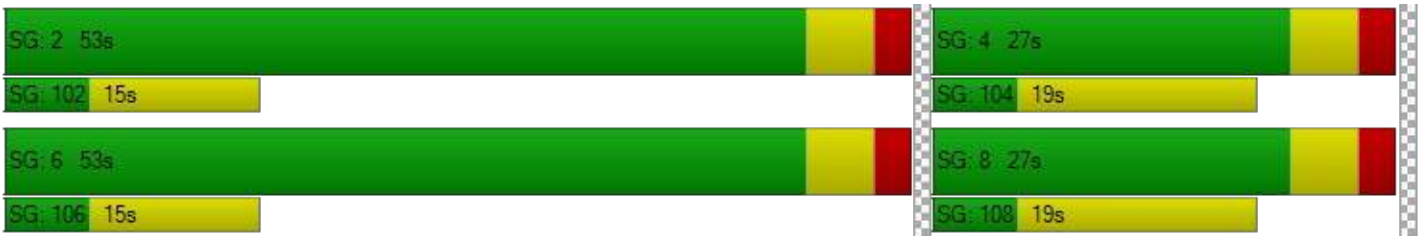
d_M, Delay for Movement [s/veh]	3.79	3.80	3.81	4.23	4.28	4.35	35.13	39.95	39.95	39.36	30.71	30.71
Movement LOS	A	A	A	A	A	A	D	D	D	D	C	C
d_A, Approach Delay [s/veh]	3.80			4.29			38.40			32.97		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	11.36											
Intersection LOS	B											
Intersection V/C	0.286											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.49	31.49	31.49	31.49
l_p,int, Pedestrian LOS Score for Intersection	2.429	2.533	2.112	2.019
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.74	21.74
l_b,int, Bicycle LOS Score for Intersection	1.866	2.073	1.969	1.598
Bicycle LOS	A	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Carter St & Access 2/3

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Carter St (S-393)			Carter St (S-393)			Access 2			Access 3		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Carter St (S-393)			Carter St (S-393)			Access 2			Access 3		
Base Volume Input [veh/h]	0	25	0	0	22	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	9	6	17	19	2	2	0	25	19	0	49
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	35	6	17	42	2	2	0	25	19	0	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	9	2	4	11	1	1	0	6	5	0	12
Total Analysis Volume [veh/h]	8	35	6	17	42	2	2	0	25	19	0	49
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.05
d_M, Delay for Movement [s/veh]	7.31	0.00	0.00	7.32	0.00	0.00	9.82	9.94	8.60	9.81	10.11	8.77
Movement LOS	A	A	A	A	A	A	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.03	0.03	0.03	0.08	0.08	0.08	0.23	0.23	0.23
95th-Percentile Queue Length [ft/ln]	0.39	0.39	0.39	0.82	0.82	0.82	2.08	2.08	2.08	5.74	5.74	5.74
d_A, Approach Delay [s/veh]	1.19			2.04			8.69			9.06		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	5.04											
Intersection LOS	A											

Camden Tract TIA

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Scenario 3 AM 2026 Build
6/13/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	4	1	9	183	7	214	155	952	22	6	880	79	2512

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Battleship Rd & 5 Bridge Rd	8	60	91	7	122	4	1	0	24	261	0	17	595

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	67	18	16	48	25	44	218

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	87	3	4	64	19	39	216

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	32	245	7	27	424	47	58	30	92	4	7	5	978

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Carter St & Access 2/3	8	35	6	17	42	2	2	0	25	19	0	49	205

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2026 Build.pdf

Scenario 3 AM 2026 Build
6/13/2023

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	4	1	9	27	2	63	95	924	21	6	854	27	2033
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	155	5	149	57	0	0	0	0	51	417
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**4**	**1**	**9**	**183**	**7**	**214**	**155**	**952**	**22**	**6**	**880**	**79**	**2512**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	8	42	0	0	72	4	1	0	23	0	0	0	150
		Growth Factor	1.03	1.03	1.00	1.00	1.03	1.03	1.03	1.00	1.03	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	17	91	7	48	0	0	0	0	261	0	17	441
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**8**	**60**	**91**	**7**	**122**	**4**	**1**	**0**	**24**	**261**	**0**	**17**	**595**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	12	13	12	47	24	10	118
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	55	5	4	0	0	34	98
		Other	0	0	0	0	0	0	0
		Future Total	**67**	**18**	**16**	**48**	**25**	**44**	**218**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	25	1	2	2	0	17	47
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	61	2	2	62	19	21	167
		Other	0	0	0	0	0	0	0
		Future Total	**87**	**3**	**4**	**64**	**19**	**39**	**216**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	17	238	7	26	412	20	14	20	21	4	7	5	791
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	14	0	0	0	0	26	44	9	70	0	0	0	163
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**32**	**245**	**7**	**27**	**424**	**47**	**58**	**30**	**92**	**4**	**7**	**5**	**978**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Carter St & Access 2/3	Final Base	0	25	0	0	22	0	0	0	0	0	0	0	47
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	8	9	6	17	19	2	2	0	25	19	0	49	156
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**8**	**35**	**6**	**17**	**42**	**2**	**2**	**0**	**25**	**19**	**0**	**49**	**205**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	133	159	278	25
2	129	154	270	24
3	126	151	264	24
4	118	142	247	22
5	105	126	220	20
6	104	124	217	20
7	102	122	214	19
8	93	111	195	18
9	92	110	192	17
10	90	108	189	17
11	78	94	164	15
12	73	87	153	14
13	72	86	150	14
14	53	64	111	10
15	53	64	111	10
16	37	45	78	7
17	21	25	44	4
18	21	25	44	4
19	12	14	25	2
20	7	8	14	1
21	4	5	8	1
22	1	2	3	0
23	1	2	3	0
24	1	2	3	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	292	1	278	No	No	No	Yes	No	No	No	No	No	No
2	1	283	1	270	No	No	No	Yes	No	No	No	No	No	No
3	1	277	1	264	No	No	No	No	No	No	No	No	No	No
4	1	260	1	247	No	No	No	No	No	No	No	No	No	No
5	1	231	1	220	No	No	No	No	No	No	No	No	No	No
6	1	228	1	217	No	No	No	No	No	No	No	No	No	No
7	1	224	1	214	No	No	No	No	No	No	No	No	No	No
8	1	204	1	195	No	No	No	No	No	No	No	No	No	No
9	1	202	1	192	No	No	No	No	No	No	No	No	No	No
10	1	198	1	189	No	No	No	No	No	No	No	No	No	No
11	1	172	1	164	No	No	No	No	No	No	No	No	No	No
12	1	160	1	153	No	No	No	No	No	No	No	No	No	No
13	1	158	1	150	No	No	No	No	No	No	No	No	No	No
14	1	117	1	111	No	No	No	No	No	No	No	No	No	No
15	1	117	1	111	No	No	No	No	No	No	No	No	No	No
16	1	82	1	78	No	No	No	No	No	No	No	No	No	No
17	1	46	1	44	No	No	No	No	No	No	No	No	No	No
18	1	46	1	44	No	No	No	No	No	No	No	No	No	No
19	1	26	1	25	No	No	No	No	No	No	No	No	No	No
20	1	15	1	14	No	No	No	No	No	No	No	No	No	No
21	1	9	1	8	No	No	No	No	No	No	No	No	No	No
22	1	3	1	3	No	No	No	No	No	No	No	No	No	No
23	1	3	1	3	No	No	No	No	No	No	No	No	No	No
24	1	3	1	3	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	2	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	15.6	9.2
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:12	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	278	25
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	595	595
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	85	64	69
2	82	62	67
3	81	61	66
4	76	57	61
5	67	51	55
6	66	50	54
7	65	49	53
8	59	45	48
9	59	44	48
10	58	44	47
11	50	38	41
12	47	35	38
13	46	35	37
14	34	26	28
15	34	26	28
16	24	18	19
17	14	10	11
18	14	10	11
19	8	6	6
20	4	3	3
21	3	2	2
22	1	1	1
23	1	1	1
24	1	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	149	1	69	No	No	No	No	No	No	No	No	No	No
2	1	144	1	67	No	No	No	No	No	No	No	No	No	No
3	1	142	1	66	No	No	No	No	No	No	No	No	No	No
4	1	133	1	61	No	No	No	No	No	No	No	No	No	No
5	1	118	1	55	No	No	No	No	No	No	No	No	No	No
6	1	116	1	54	No	No	No	No	No	No	No	No	No	No
7	1	114	1	53	No	No	No	No	No	No	No	No	No	No
8	1	104	1	48	No	No	No	No	No	No	No	No	No	No
9	1	103	1	48	No	No	No	No	No	No	No	No	No	No
10	1	102	1	47	No	No	No	No	No	No	No	No	No	No
11	1	88	1	41	No	No	No	No	No	No	No	No	No	No
12	1	82	1	38	No	No	No	No	No	No	No	No	No	No
13	1	81	1	37	No	No	No	No	No	No	No	No	No	No
14	1	60	1	28	No	No	No	No	No	No	No	No	No	No
15	1	60	1	28	No	No	No	No	No	No	No	No	No	No
16	1	42	1	19	No	No	No	No	No	No	No	No	No	No
17	1	24	1	11	No	No	No	No	No	No	No	No	No	No
18	1	24	1	11	No	No	No	No	No	No	No	No	No	No
19	1	14	1	6	No	No	No	No	No	No	No	No	No	No
20	1	7	1	3	No	No	No	No	No	No	No	No	No	No
21	1	5	1	2	No	No	No	No	No	No	No	No	No	No
22	1	2	1	1	No	No	No	No	No	No	No	No	No	No
23	1	2	1	1	No	No	No	No	No	No	No	No	No	No
24	1	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:11
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	69
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	218
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	58	68	90
2	56	66	87
3	55	65	86
4	52	61	80
5	46	54	71
6	45	53	70
7	45	52	69
8	41	48	63
9	40	47	62
10	39	46	61
11	34	40	53
12	32	37	50
13	31	37	49
14	23	27	36
15	23	27	36
16	16	19	25
17	9	11	14
18	9	11	14
19	5	6	8
20	3	3	5
21	2	2	3
22	1	1	1
23	1	1	1
24	1	1	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	126	1	90	No	No	No	No	No	No	No	No	No	No
2	1	122	1	87	No	No	No	No	No	No	No	No	No	No
3	1	120	1	86	No	No	No	No	No	No	No	No	No	No
4	1	113	1	80	No	No	No	No	No	No	No	No	No	No
5	1	100	1	71	No	No	No	No	No	No	No	No	No	No
6	1	98	1	70	No	No	No	No	No	No	No	No	No	No
7	1	97	1	69	No	No	No	No	No	No	No	No	No	No
8	1	89	1	63	No	No	No	No	No	No	No	No	No	No
9	1	87	1	62	No	No	No	No	No	No	No	No	No	No
10	1	85	1	61	No	No	No	No	No	No	No	No	No	No
11	1	74	1	53	No	No	No	No	No	No	No	No	No	No
12	1	69	1	50	No	No	No	No	No	No	No	No	No	No
13	1	68	1	49	No	No	No	No	No	No	No	No	No	No
14	1	50	1	36	No	No	No	No	No	No	No	No	No	No
15	1	50	1	36	No	No	No	No	No	No	No	No	No	No
16	1	35	1	25	No	No	No	No	No	No	No	No	No	No
17	1	20	1	14	No	No	No	No	No	No	No	No	No	No
18	1	20	1	14	No	No	No	No	No	No	No	No	No	No
19	1	11	1	8	No	No	No	No	No	No	No	No	No	No
20	1	6	1	5	No	No	No	No	No	No	No	No	No	No
21	1	4	1	3	No	No	No	No	No	No	No	No	No	No
22	1	2	1	1	No	No	No	No	No	No	No	No	No	No
23	1	2	1	1	No	No	No	No	No	No	No	No	No	No
24	1	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:15
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	90
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	216
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 6: Carter St & Access 2/3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	49	61	68	27
2	48	59	66	26
3	47	58	65	26
4	44	54	61	24
5	39	48	54	21
6	38	48	53	21
7	38	47	52	21
8	34	43	48	19
9	34	42	47	19
10	33	41	46	18
11	29	36	40	16
12	27	34	37	15
13	26	33	37	15
14	20	24	27	11
15	20	24	27	11
16	14	17	19	8
17	8	10	11	4
18	8	10	11	4
19	4	5	6	2
20	2	3	3	1
21	1	2	2	1
22	0	1	1	0
23	0	1	1	0
24	0	1	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	110	1	68	No	No	No	No	No	No	No	No	No	No
2	1	107	1	66	No	No	No	No	No	No	No	No	No	No
3	1	105	1	65	No	No	No	No	No	No	No	No	No	No
4	1	98	1	61	No	No	No	No	No	No	No	No	No	No
5	1	87	1	54	No	No	No	No	No	No	No	No	No	No
6	1	86	1	53	No	No	No	No	No	No	No	No	No	No
7	1	85	1	52	No	No	No	No	No	No	No	No	No	No
8	1	77	1	48	No	No	No	No	No	No	No	No	No	No
9	1	76	1	47	No	No	No	No	No	No	No	No	No	No
10	1	74	1	46	No	No	No	No	No	No	No	No	No	No
11	1	65	1	40	No	No	No	No	No	No	No	No	No	No
12	1	61	1	37	No	No	No	No	No	No	No	No	No	No
13	1	59	1	37	No	No	No	No	No	No	No	No	No	No
14	1	44	1	27	No	No	No	No	No	No	No	No	No	No
15	1	44	1	27	No	No	No	No	No	No	No	No	No	No
16	1	31	1	19	No	No	No	No	No	No	No	No	No	No
17	1	18	1	11	No	No	No	No	No	No	No	No	No	No
18	1	18	1	11	No	No	No	No	No	No	No	No	No	No
19	1	9	1	6	No	No	No	No	No	No	No	No	No	No
20	1	5	1	3	No	No	No	No	No	No	No	No	No	No
21	1	3	1	2	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.1	8.7
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:10	0:03
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	68	27
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	205	205
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2026 Build.pdf

Scenario 3 AM 2026 Build
6/13/2023

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: 43' Wide Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	150.000	50.00	50.00	30	84	114	19.29
2: 53' Simply Ryan Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	135.000	50.00	50.00	27	76	103	17.43
3: 53' Lifestyle Lots	Single-Family Detached Housing	210	Dwelling Units	0.750	220.000	26.00	74.00	43	122	165	27.92
4: 53' Renaissance Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	154.000	50.00	50.00	30	87	117	19.80
5: 65' Wide Estate Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	119.000	50.00	50.00	24	68	92	15.57
					Added Trips Total			**154**	**437**	**591**	**100.00**

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA AM.vistro
Report File: C:\...\213738 Vistro Report AM 2026 Build.pdf

Scenario 3 AM 2026 Build
6/13/2023

Trip Distribution summary

Zone / Gate	Zone 1: 43' Wide Lots			
	To 43' Wide Lots:		From 43' Wide Lots:	
	Share %	Trips	Share %	Trips
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	17.00	5	10.00	8
7: Chesnut St East	1.00	0	2.00	2
8: Broad St South	9.00	3	16.00	13
9: W DeKalb St East	32.00	10	36.00	30
10: Battleship Rd South	1.00	0	1.00	1
11: W DeKalb St West	38.00	11	34.00	29
12: 5 Bridge Rd West	0.00	0	0.00	0
13: Carter St North	2.00	1	1.00	1
Total	**100.00**	**30**	**100.00**	**84**

Zone / Gate	Zone 2: 53' Simply Ryan Lots			
	To 53' Simply Ryan Lots:		From 53' Simply Ryan Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	17.00	5	10.00	8
7: Chesnut St East	1.00	0	2.00	2
8: Broad St South	9.00	2	16.00	12
9: W DeKalb St East	32.00	9	36.00	26
10: Battleship Rd South	1.00	0	1.00	1
11: W DeKalb St West	38.00	10	34.00	26
12: 5 Bridge Rd West	0.00	0	0.00	0
13: Carter St North	2.00	1	1.00	1
Total	**100.00**	**27**	**100.00**	**76**

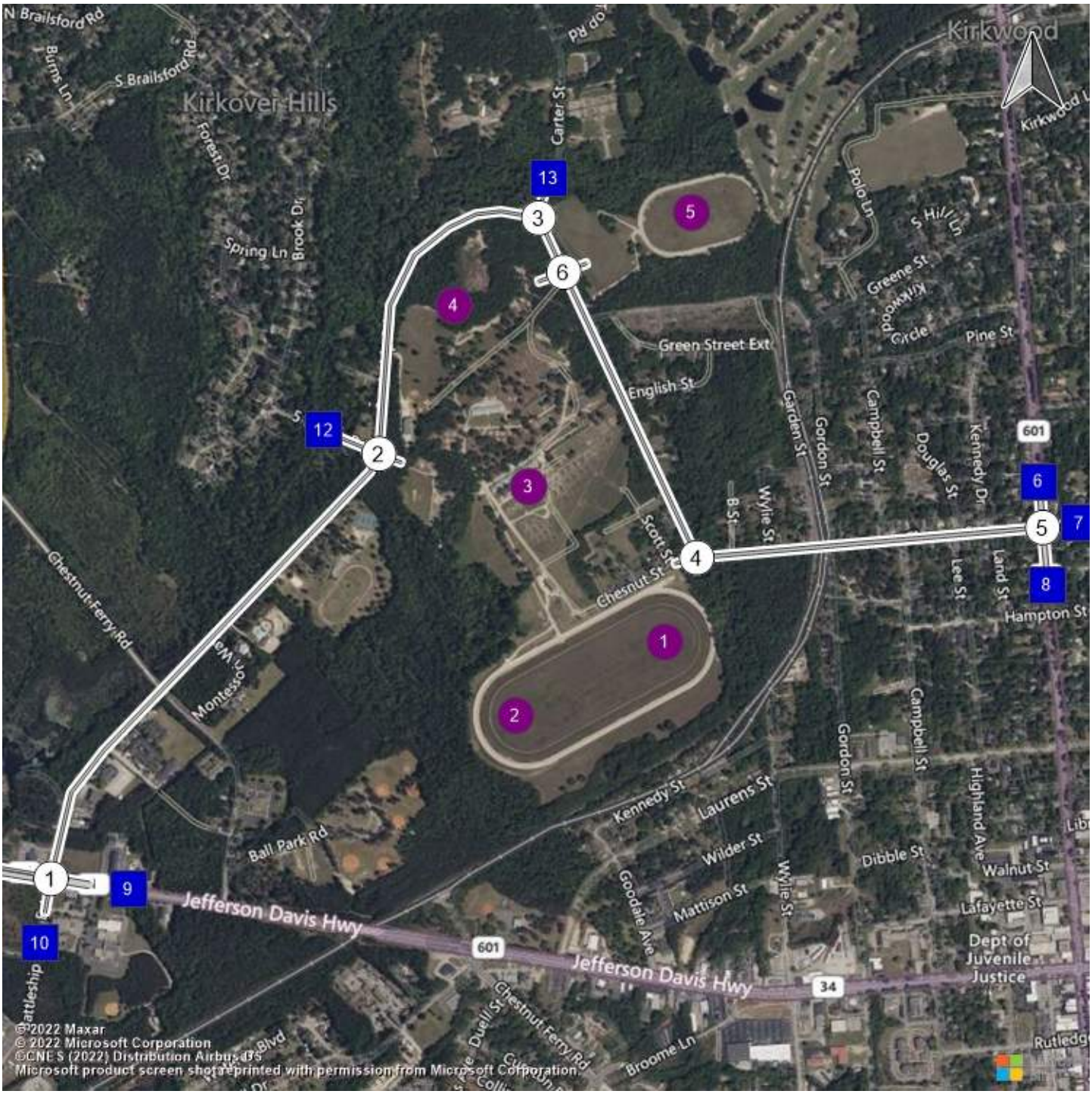
Zone / Gate	Zone 3: 53' Lifestyle Lots			
	To 53' Lifestyle Lots:		From 53' Lifestyle Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	17.00	7	10.00	12
7: Chesnut St East	1.00	0	2.00	2
8: Broad St South	9.00	4	16.00	20
9: W DeKalb St East	32.00	14	36.00	45
10: Battleship Rd South	1.00	0	1.00	1
11: W DeKalb St West	38.00	16	34.00	41
12: 5 Bridge Rd West	0.00	0	0.00	0
13: Carter St North	2.00	1	1.00	1
Total	**100.00**	**42**	**100.00**	**122**

Zone / Gate	Zone 4: 53' Renaissance Lots			
	To 53' Renaissance Lots:		From 53' Renaissance Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	17.00	5	10.00	9
7: Chesnut St East	1.00	0	2.00	2
8: Broad St South	9.00	3	16.00	14
9: W DeKalb St East	32.00	10	36.00	30
10: Battleship Rd South	1.00	0	1.00	1
11: W DeKalb St West	38.00	11	34.00	30
12: 5 Bridge Rd West	0.00	0	0.00	0
13: Carter St North	2.00	1	1.00	1
Total	**100.00**	**30**	**100.00**	**87**

Zone / Gate	Zone 5: 65' Wide Estate Lots			
	To 65' Wide Estate Lots:		From 65' Wide Estate Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
6: Broad St North	17.00	4	10.00	7
7: Chesnut St East	1.00	0	2.00	1
8: Broad St South	9.00	2	16.00	11
9: W DeKalb St East	32.00	8	36.00	24
10: Battleship Rd South	1.00	0	1.00	1
11: W DeKalb St West	38.00	9	34.00	23
12: 5 Bridge Rd West	0.00	0	0.00	0

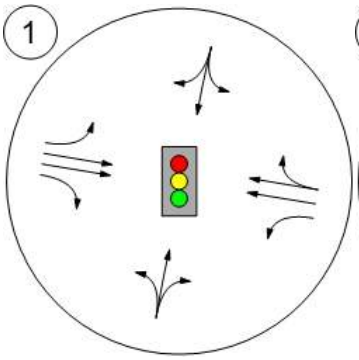
13: Carter St North	2.00	0	1.00	1
Total	**100.00**	**23**	**100.00**	**68**

Study Intersections

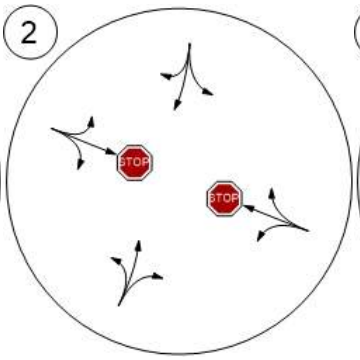


Lane Configuration and Traffic Control

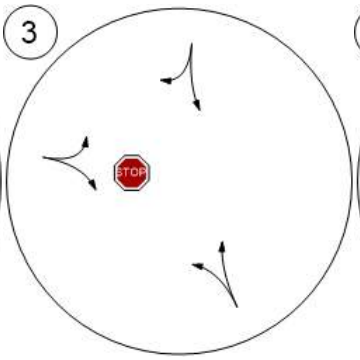
W. Dekalb St & Battleship Rd



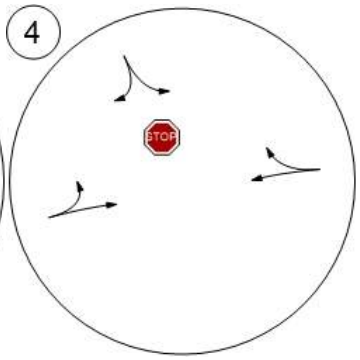
Battleship Rd & 5 Bridge Rd



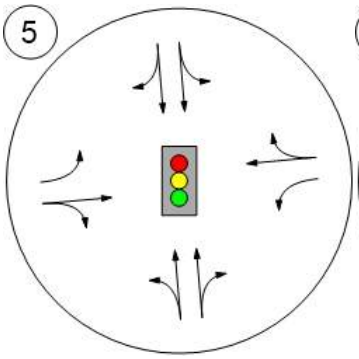
Carter St & Battleship Rd



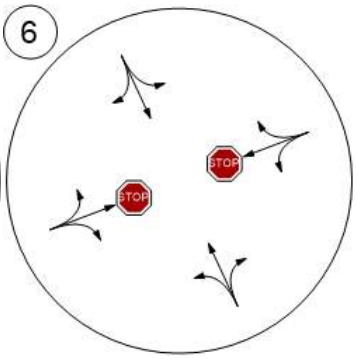
Chesnut St & Carter St



Broad St & Chestnut St

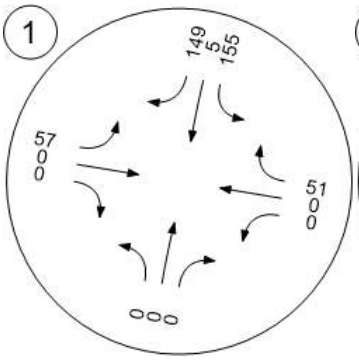


Carter St & Access 2/3

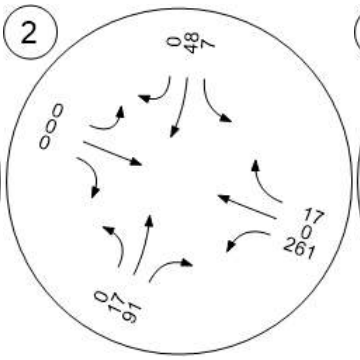


Traffic Volume - Net New Site Trips

W. Dekalb St & Battleship Rd



Battleship Rd & 5 Bridge Rd



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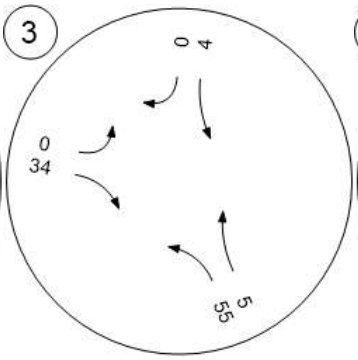
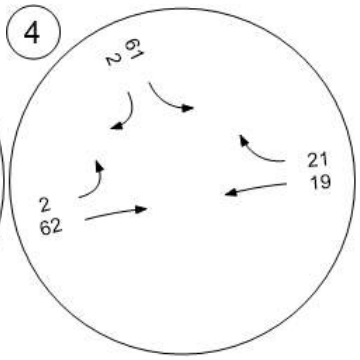


Chesnut St & Carter St



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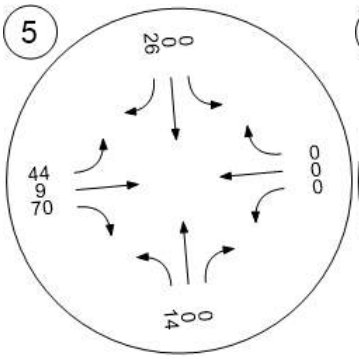
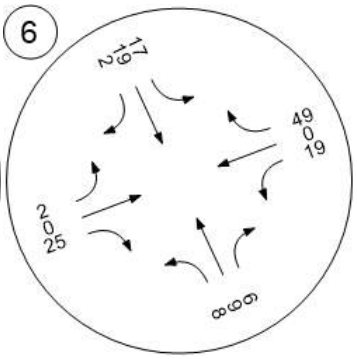
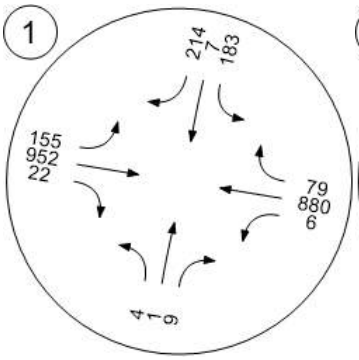


Carter St & Access 2/3

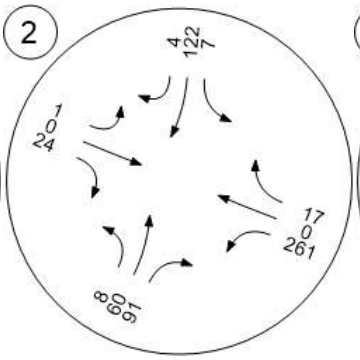


Traffic Volume - Future Total Volume

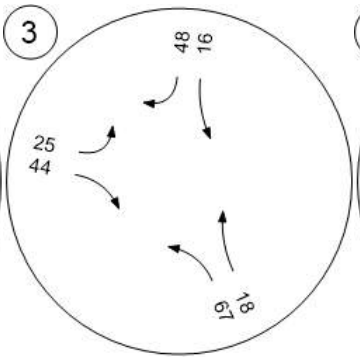
W. Dekalb St & Battleship Rd



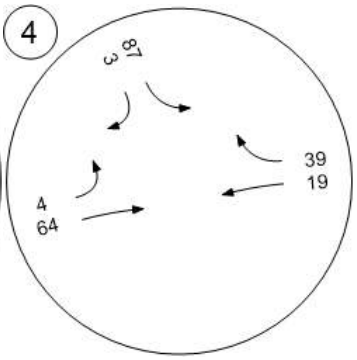
Battleship Rd & 5 Bridge Rd



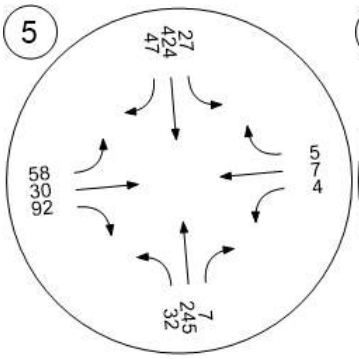
Carter St & Battleship Rd



Chesnut St & Carter St



Broad St & Chestnut St



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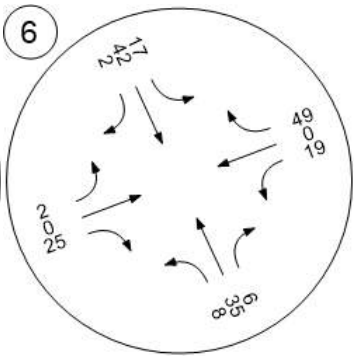
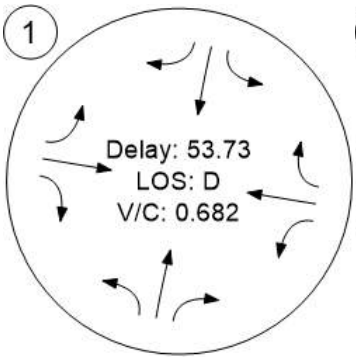
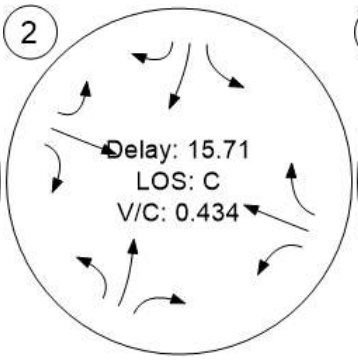


Traffic Conditions

W. Dekalb St & Battleship Rd



Battleship Rd & 5 Bridge Rd



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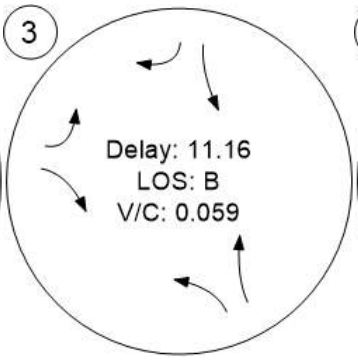

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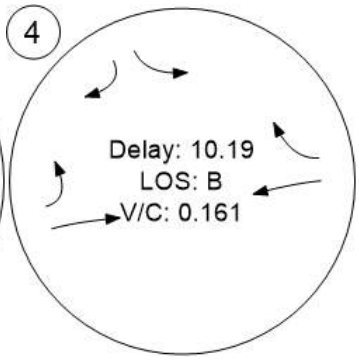

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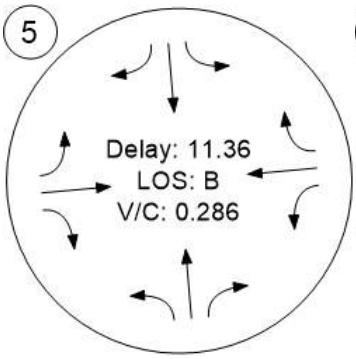

Carter St & Access 2/3

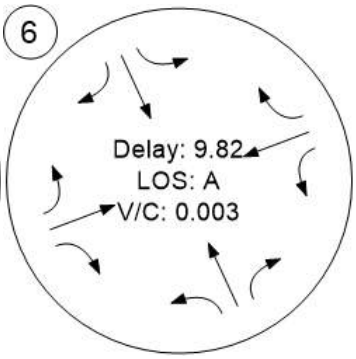

Table of Contents

Camden Tract TIA

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Scenario 1 PM 2023 Existing
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.476	7.7	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.003	9.6	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.045	9.1	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.034	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.181	5.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	14	2	9	35	2	54	59	1217	0	2	1104	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	2	9	35	2	54	59	1217	0	2	1104	21
Peak Hour Factor	0.5000	0.5000	0.5000	0.7190	0.7190	0.7190	0.9000	0.9000	0.9000	0.7550	0.7550	0.7550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	1	5	12	1	19	16	338	0	1	366	7
Total Analysis Volume [veh/h]	28	4	18	49	3	75	66	1352	0	3	1462	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	22	0	0	22	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	9	9	59	59	59	59	59	59
g / C, Green / Cycle	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.19	0.38	0.00	0.01	0.40	0.40
s, saturation flow rate [veh/h]	1544	1679	353	3560	1589	403	1870	1858
c, Capacity [veh/h]	253	261	273	2604	1163	305	1368	1359
d1, Uniform Delay [s]	31.98	33.43	11.40	4.65	0.00	8.77	4.80	4.81
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	1.40	2.09	0.74	0.00	0.06	1.57	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.49	0.24	0.52	0.00	0.01	0.55	0.55
d, Delay for Lane Group [s/veh]	32.36	34.82	13.49	5.40	0.00	8.83	6.37	6.40
Lane Group LOS	C	C	B	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	2.35	0.75	3.12	0.00	0.03	3.85	3.84
50th-Percentile Queue Length [ft/ln]	22.18	58.85	18.87	78.07	0.00	0.65	96.31	96.09
95th-Percentile Queue Length [veh/ln]	1.60	4.24	1.36	5.62	0.00	0.05	6.93	6.92
95th-Percentile Queue Length [ft/ln]	39.92	105.93	33.97	140.53	0.00	1.18	173.36	172.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.36	32.36	32.36	34.82	34.82	34.82	13.49	5.40	0.00	8.83	6.39	6.40
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	32.36			34.82			5.77			6.39		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.70											
Intersection LOS	A											
Intersection V/C	0.476											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	1.742	1.932	3.135	3.122
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1300	1300
d_b, Bicycle Delay [s]	25.59	25.59	4.90	4.90
l_b,int, Bicycle LOS Score for Intersection	1.642	1.769	2.729	2.791
Bicycle LOS	A	A	B	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Base Volume Input [veh/h]	34	44	27	4	2	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	44	27	4	2	24
Peak Hour Factor	0.8130	0.8130	0.8610	0.8610	0.8130	0.8130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	14	8	1	1	7
Total Analysis Volume [veh/h]	42	54	31	5	2	30
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.64	8.58
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.05	2.05	0.00	0.00	2.43	2.43
d_A, Approach Delay [s/veh]	3.21		0.00		8.64	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	8	17	12	13	32	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	17	12	13	32	14
Peak Hour Factor	0.7810	0.7810	0.6250	0.6250	0.7670	0.7670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	5	5	5	10	5
Total Analysis Volume [veh/h]	10	22	19	21	42	18
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.02
d_M, Delay for Movement [s/veh]	7.31	0.00	0.00	0.00	9.14	8.69
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.48	0.48	0.00	0.00	5.00	5.00
d_A, Approach Delay [s/veh]	2.28		0.00		9.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.65					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	30	3	4	3	3	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	3	4	3	3	25
Peak Hour Factor	0.9000	0.9000	0.8750	0.8750	0.7780	0.7780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	1	1	1	1	8
Total Analysis Volume [veh/h]	33	3	5	3	4	32
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.54	7.29	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.85	2.85	0.24	0.24	0.00	0.00
d_A, Approach Delay [s/veh]	8.80		4.56		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.42					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.181

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	13	439	11	12	389	22	23	2	13	6	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	439	11	12	389	22	23	2	13	6	11	10
Peak Hour Factor	0.8270	0.8270	0.8270	0.9000	0.9000	0.9000	0.7920	0.7920	0.7920	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	133	3	3	108	6	7	1	4	2	3	3
Total Analysis Volume [veh/h]	16	531	13	13	432	24	29	3	16	7	13	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	61	61	61	61	7	7	7	7
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.14	0.13	0.02	0.01	0.01	0.01
s, saturation flow rate [veh/h]	1813	1687	1808	1670	1386	1628	1393	1724
c, Capacity [veh/h]	1438	1294	1434	1281	157	135	161	143
d1, Uniform Delay [s]	2.57	2.58	2.50	2.51	36.97	34.02	36.18	34.11
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.37	0.26	0.30	0.56	0.47	0.11	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.21	0.17	0.18	0.18	0.14	0.04	0.17
d, Delay for Lane Group [s/veh]	2.89	2.95	2.76	2.81	37.53	34.49	36.29	34.69
Lane Group LOS	A	A	A	A	D	C	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.83	0.79	0.68	0.64	0.57	0.35	0.13	0.47
50th-Percentile Queue Length [ft/ln]	20.86	19.74	17.01	15.99	14.14	8.85	3.33	11.67
95th-Percentile Queue Length [veh/ln]	1.50	1.42	1.22	1.15	1.02	0.64	0.24	0.84
95th-Percentile Queue Length [ft/ln]	37.55	35.53	30.62	28.79	25.45	15.93	5.99	21.01

Movement, Approach, & Intersection Results

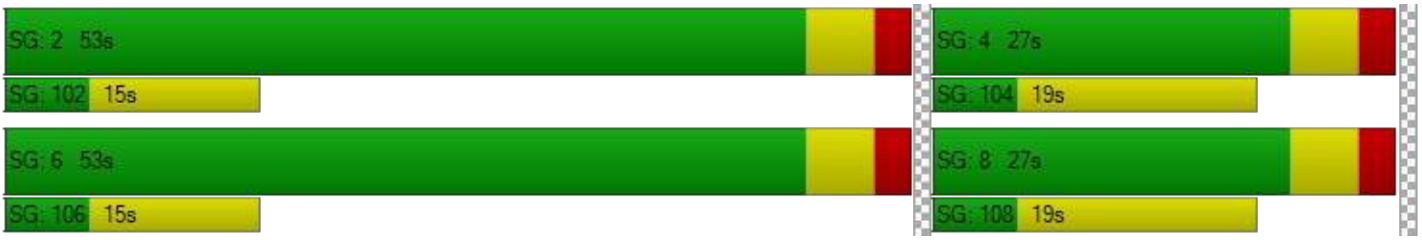
d_M, Delay for Movement [s/veh]	2.89	2.92	2.95	2.76	2.78	2.81	37.53	34.49	34.49	36.29	34.69	34.69
Movement LOS	A	A	A	A	A	A	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	2.92			2.78			36.32			35.04		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	5.23											
Intersection LOS	A											
Intersection V/C	0.181											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	2.425	2.464	1.991	1.974
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.75	21.75
l_b,int, Bicycle LOS Score for Intersection	2.022	1.947	1.639	1.612
Bicycle LOS	B	A	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Camden Tract TIA

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Scenario 1 PM 2023 Existing
6/13/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	14	2	9	35	2	54	59	1217	0	2	1104	21	2519

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	34	44	27	4	2	24	135

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	8	17	12	13	32	14	96

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	30	3	4	3	3	25	68

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	13	439	11	12	389	22	23	2	13	6	11	10	951

Camden Tract TIA

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Scenario 1 PM 2023 Existing
6/13/2023

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	14	2	9	35	2	54	59	1217	0	2	1104	21	2519
		Growth 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	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**2**	**9**	**35**	**2**	**54**	**59**	**1217**	**0**	**2**	**1104**	**21**	**2519**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	34	44	27	4	2	24	135
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**34**	**44**	**27**	**4**	**2**	**24**	**135**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	8	17	12	13	32	14	96
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**8**	**17**	**12**	**13**	**32**	**14**	**96**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	30	3	4	3	3	25	68
		Growth Factor	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**30**	**3**	**4**	**3**	**3**	**25**	**68**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	13	439	11	12	389	22	23	2	13	6	11	10	951
		Growth 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	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**13**	**439**	**11**	**12**	**389**	**22**	**23**	**2**	**13**	**6**	**11**	**10**	**951**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	31	78	26
2	30	76	25
3	29	74	25
4	28	69	23
5	24	62	21
6	24	61	20
7	24	60	20
8	22	55	18
9	21	54	18
10	21	53	18
11	18	46	15
12	17	43	14
13	17	42	14
14	12	31	10
15	12	31	10
16	9	22	7
17	5	12	4
18	5	12	4
19	3	7	2
20	2	4	1
21	1	2	1
22	0	1	0
23	0	1	0
24	0	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	109	1	26	No	No	No	No	No	No	No	No	No	No
2	1	106	1	25	No	No	No	No	No	No	No	No	No	No
3	1	103	1	25	No	No	No	No	No	No	No	No	No	No
4	1	97	1	23	No	No	No	No	No	No	No	No	No	No
5	1	86	1	21	No	No	No	No	No	No	No	No	No	No
6	1	85	1	20	No	No	No	No	No	No	No	No	No	No
7	1	84	1	20	No	No	No	No	No	No	No	No	No	No
8	1	77	1	18	No	No	No	No	No	No	No	No	No	No
9	1	75	1	18	No	No	No	No	No	No	No	No	No	No
10	1	74	1	18	No	No	No	No	No	No	No	No	No	No
11	1	64	1	15	No	No	No	No	No	No	No	No	No	No
12	1	60	1	14	No	No	No	No	No	No	No	No	No	No
13	1	59	1	14	No	No	No	No	No	No	No	No	No	No
14	1	43	1	10	No	No	No	No	No	No	No	No	No	No
15	1	43	1	10	No	No	No	No	No	No	No	No	No	No
16	1	31	1	7	No	No	No	No	No	No	No	No	No	No
17	1	17	1	4	No	No	No	No	No	No	No	No	No	No
18	1	17	1	4	No	No	No	No	No	No	No	No	No	No
19	1	10	1	2	No	No	No	No	No	No	No	No	No	No
20	1	6	1	1	No	No	No	No	No	No	No	No	No	No
21	1	3	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	26
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	135
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	25	25	46
2	24	24	45
3	24	24	44
4	22	22	41
5	20	20	36
6	20	20	36
7	19	19	35
8	18	18	32
9	17	17	32
10	17	17	31
11	15	15	27
12	14	14	25
13	14	14	25
14	10	10	18
15	10	10	18
16	7	7	13
17	4	4	7
18	4	4	7
19	2	2	4
20	1	1	2
21	1	1	1
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	50	1	46	No	No	No	No	No	No	No	No	No	No
2	1	48	1	45	No	No	No	No	No	No	No	No	No	No
3	1	48	1	44	No	No	No	No	No	No	No	No	No	No
4	1	44	1	41	No	No	No	No	No	No	No	No	No	No
5	1	40	1	36	No	No	No	No	No	No	No	No	No	No
6	1	40	1	36	No	No	No	No	No	No	No	No	No	No
7	1	38	1	35	No	No	No	No	No	No	No	No	No	No
8	1	36	1	32	No	No	No	No	No	No	No	No	No	No
9	1	34	1	32	No	No	No	No	No	No	No	No	No	No
10	1	34	1	31	No	No	No	No	No	No	No	No	No	No
11	1	30	1	27	No	No	No	No	No	No	No	No	No	No
12	1	28	1	25	No	No	No	No	No	No	No	No	No	No
13	1	28	1	25	No	No	No	No	No	No	No	No	No	No
14	1	20	1	18	No	No	No	No	No	No	No	No	No	No
15	1	20	1	18	No	No	No	No	No	No	No	No	No	No
16	1	14	1	13	No	No	No	No	No	No	No	No	No	No
17	1	8	1	7	No	No	No	No	No	No	No	No	No	No
18	1	8	1	7	No	No	No	No	No	No	No	No	No	No
19	1	4	1	4	No	No	No	No	No	No	No	No	No	No
20	1	2	1	2	No	No	No	No	No	No	No	No	No	No
21	1	2	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	46
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	96
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	28	7	33
2	27	7	32
3	27	7	31
4	25	6	29
5	22	6	26
6	22	5	26
7	22	5	25
8	20	5	23
9	19	5	23
10	19	5	22
11	17	4	19
12	15	4	18
13	15	4	18
14	11	3	13
15	11	3	13
16	8	2	9
17	4	1	5
18	4	1	5
19	3	1	3
20	1	0	2
21	1	0	1
22	0	0	0
23	0	0	0
24	0	0	0

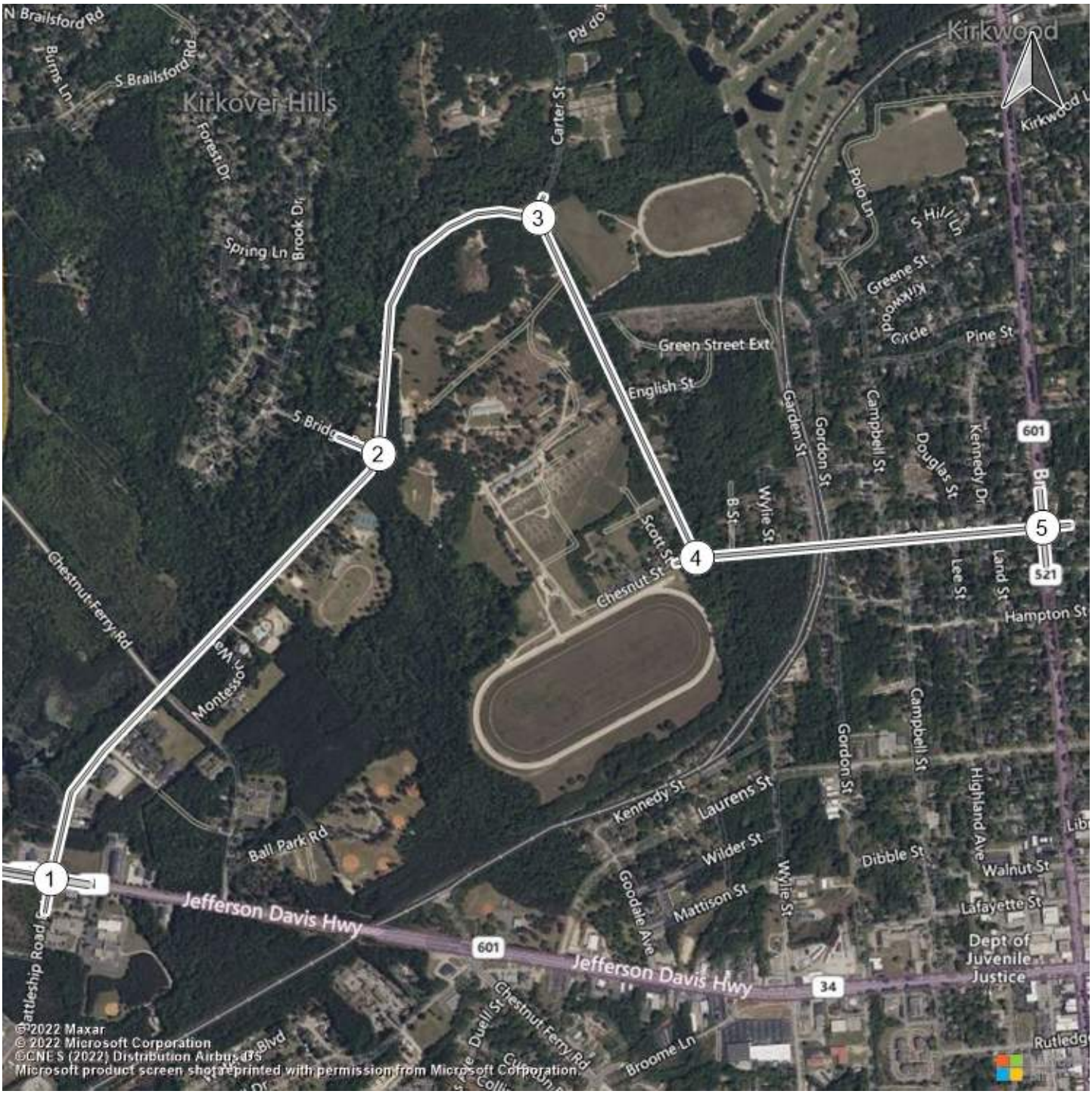
Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	35	1	33	No	No	No	No	No	No	No	No	No	No
2	1	34	1	32	No	No	No	No	No	No	No	No	No	No
3	1	34	1	31	No	No	No	No	No	No	No	No	No	No
4	1	31	1	29	No	No	No	No	No	No	No	No	No	No
5	1	28	1	26	No	No	No	No	No	No	No	No	No	No
6	1	27	1	26	No	No	No	No	No	No	No	No	No	No
7	1	27	1	25	No	No	No	No	No	No	No	No	No	No
8	1	25	1	23	No	No	No	No	No	No	No	No	No	No
9	1	24	1	23	No	No	No	No	No	No	No	No	No	No
10	1	24	1	22	No	No	No	No	No	No	No	No	No	No
11	1	21	1	19	No	No	No	No	No	No	No	No	No	No
12	1	19	1	18	No	No	No	No	No	No	No	No	No	No
13	1	19	1	18	No	No	No	No	No	No	No	No	No	No
14	1	14	1	13	No	No	No	No	No	No	No	No	No	No
15	1	14	1	13	No	No	No	No	No	No	No	No	No	No
16	1	10	1	9	No	No	No	No	No	No	No	No	No	No
17	1	5	1	5	No	No	No	No	No	No	No	No	No	No
18	1	5	1	5	No	No	No	No	No	No	No	No	No	No
19	1	4	1	3	No	No	No	No	No	No	No	No	No	No
20	1	1	1	2	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

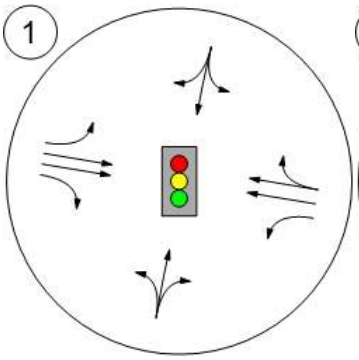
Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	33
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	68
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Study Intersections

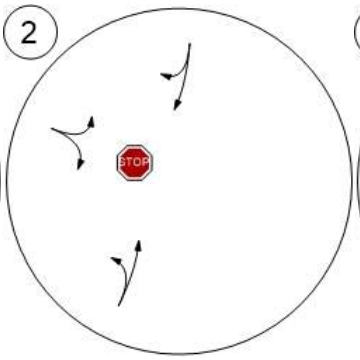


Lane Configuration and Traffic Control

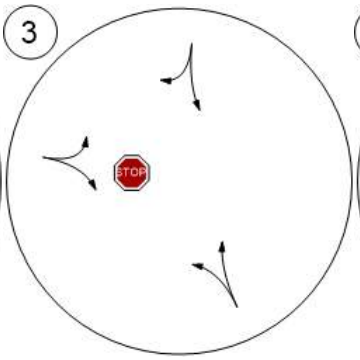
W. Dekalb St & Battleship Rd



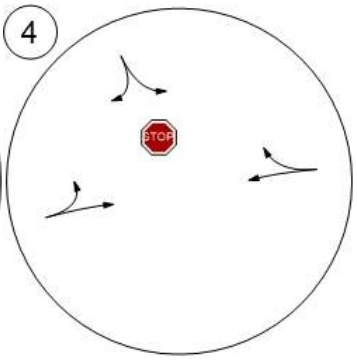
Battleship Rd & 5 Bridge Rd



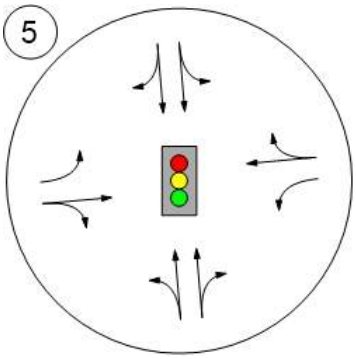
Carter St & Battleship Rd



Chesnut St & Carter St

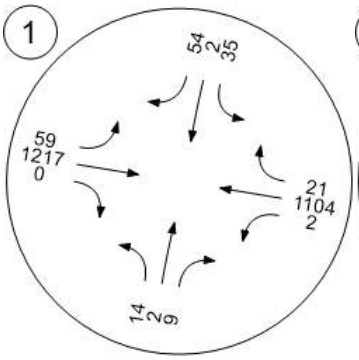


Broad St & Chestnut St

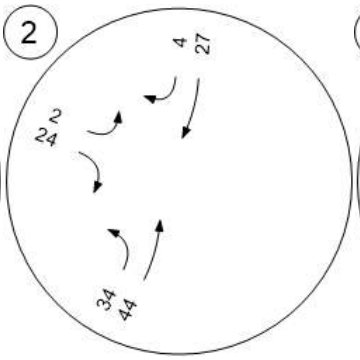


Traffic Volume - Base Volume

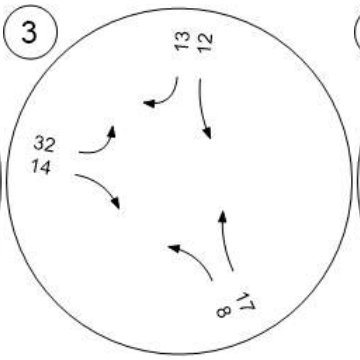
W. Dekalb St & Battleship Rd



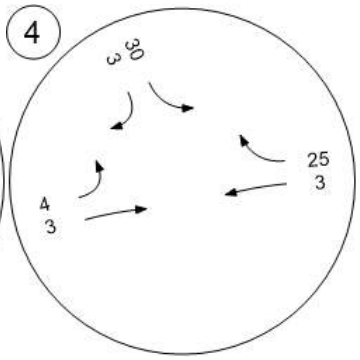
Battleship Rd & 5 Bridge Rd



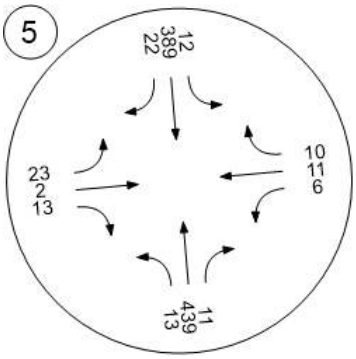
Carter St & Battleship Rd



Chesnut St & Carter St

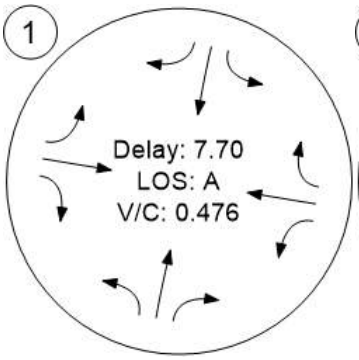


Broad St & Chestnut St

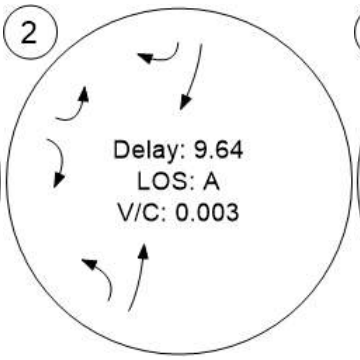


Traffic Conditions

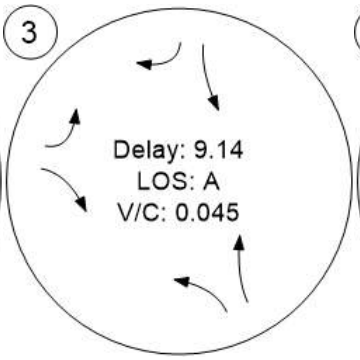
W. Dekalb St & Battleship Rd



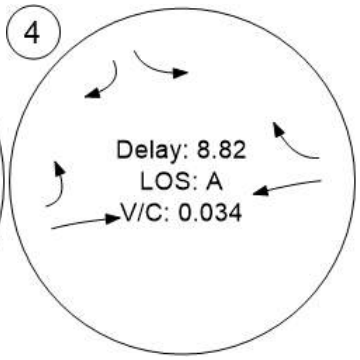
Battleship Rd & 5 Bridge Rd



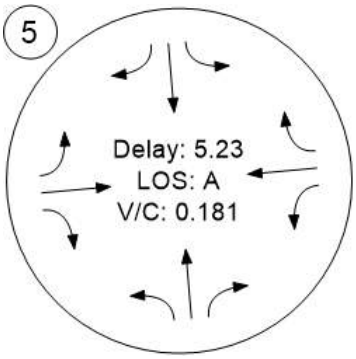
Carter St & Battleship Rd



Chesnut St & Carter St



Broad St & Chestnut St



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Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA PM.vistro
Report File: C:\...\213738 Vistro Report PM 2026 No Build.pdf

Scenario 2 PM 2026 No Build
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	SB Right	0.490	7.9	A
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	EB Left	0.003	9.7	A
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.046	9.1	A
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.035	8.8	A
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.187	5.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	14	2	9	35	2	54	59	1217	0	2	1104	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	2	9	36	2	56	61	1254	0	2	1137	22
Peak Hour Factor	0.5000	0.5000	0.5000	0.7190	0.7190	0.7190	0.9000	0.9000	0.9000	0.7550	0.7550	0.7550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	1	5	13	1	19	17	348	0	1	376	7
Total Analysis Volume [veh/h]	28	4	18	50	3	78	68	1393	0	3	1506	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	22	0	0	22	0	0	58	0	0	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	9	9	58	58	58	58	58	58
g / C, Green / Cycle	0.12	0.12	0.73	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.03	0.08	0.20	0.39	0.00	0.01	0.41	0.41
s, saturation flow rate [veh/h]	1530	1680	338	3560	1589	388	1870	1858
c, Capacity [veh/h]	253	262	262	2602	1162	293	1366	1357
d1, Uniform Delay [s]	31.94	33.46	12.12	4.76	0.00	9.13	4.92	4.93
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	1.47	2.39	0.79	0.00	0.06	1.68	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.50	0.26	0.54	0.00	0.01	0.56	0.56
d, Delay for Lane Group [s/veh]	32.32	34.93	14.52	5.56	0.00	9.19	6.61	6.63
Lane Group LOS	C	C	B	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	2.43	0.82	3.30	0.00	0.03	4.08	4.07
50th-Percentile Queue Length [ft/ln]	22.16	60.87	20.49	82.48	0.00	0.68	101.96	101.80
95th-Percentile Queue Length [veh/ln]	1.60	4.38	1.48	5.94	0.00	0.05	7.34	7.33
95th-Percentile Queue Length [ft/ln]	39.89	109.57	36.88	148.46	0.00	1.22	183.53	183.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.32	32.32	32.32	34.93	34.93	34.93	14.52	5.56	0.00	9.19	6.62	6.63
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	32.32			34.93			5.97			6.62		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	7.90											
Intersection LOS	A											
Intersection V/C	0.490											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	1.742	1.939	3.154	3.146
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	400	1300	1300
d_b, Bicycle Delay [s]	25.59	25.59	4.90	4.90
l_b,int, Bicycle LOS Score for Intersection	1.642	1.776	2.765	2.828
Bicycle LOS	A	A	C	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		35.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Battleship Rd (S-194)		Battleship Rd (S-194)		5 Bridge Rd (S-198)	
Base Volume Input [veh/h]	34	44	27	4	2	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	45	28	4	2	25
Peak Hour Factor	0.8130	0.8130	0.8610	0.8610	0.8130	0.8130
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	14	8	1	1	8
Total Analysis Volume [veh/h]	43	55	33	5	2	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.67	8.59
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.11	2.11	0.00	0.00	2.51	2.51
d_A, Approach Delay [s/veh]	3.23		0.00		8.65	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.56					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	8	17	12	13	32	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	18	12	13	33	14
Peak Hour Factor	0.7810	0.7810	0.6250	0.6250	0.7670	0.7670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	6	5	5	11	5
Total Analysis Volume [veh/h]	10	23	19	21	43	18
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.02
d_M, Delay for Movement [s/veh]	7.31	0.00	0.00	0.00	9.15	8.70
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.48	0.48	0.00	0.00	5.09	5.09
d_A, Approach Delay [s/veh]	2.21		0.00		9.01	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.65					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	30	3	4	3	3	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	3	4	3	3	26
Peak Hour Factor	0.9000	0.9000	0.8750	0.8750	0.7780	0.7780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	1	1	1	1	8
Total Analysis Volume [veh/h]	34	3	5	3	4	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.83	8.55	7.30	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.93	2.93	0.24	0.24	0.00	0.00
d_A, Approach Delay [s/veh]	8.81		4.56		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.42					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.187

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	13	439	11	12	389	22	23	2	13	6	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	452	11	12	401	23	24	2	13	6	11	10
Peak Hour Factor	0.8270	0.8270	0.8270	0.9000	0.9000	0.9000	0.7920	0.7920	0.7920	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	137	3	3	111	6	8	1	4	2	3	3
Total Analysis Volume [veh/h]	16	547	13	13	446	26	30	3	16	7	13	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	61	61	61	61	7	7	7	7
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.08	0.08	0.08	0.08
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.14	0.14	0.02	0.01	0.01	0.01
s, saturation flow rate [veh/h]	1814	1688	1809	1669	1386	1628	1393	1724
c, Capacity [veh/h]	1437	1293	1433	1278	159	137	163	145
d1, Uniform Delay [s]	2.61	2.62	2.53	2.54	36.92	33.95	36.11	34.04
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.38	0.27	0.31	0.57	0.46	0.11	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.21	0.18	0.18	0.19	0.14	0.04	0.17
d, Delay for Lane Group [s/veh]	2.94	3.00	2.80	2.86	37.50	34.41	36.22	34.60
Lane Group LOS	A	A	A	A	D	C	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.87	0.82	0.71	0.67	0.58	0.35	0.13	0.47
50th-Percentile Queue Length [ft/ln]	21.77	20.60	17.85	16.77	14.62	8.84	3.32	11.65
95th-Percentile Queue Length [veh/ln]	1.57	1.48	1.29	1.21	1.05	0.64	0.24	0.84
95th-Percentile Queue Length [ft/ln]	39.18	37.08	32.13	30.19	26.31	15.91	5.98	20.97

Movement, Approach, & Intersection Results

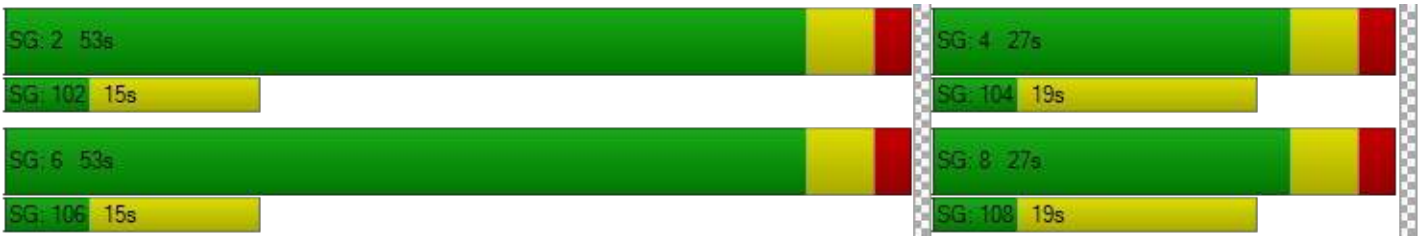
d_M, Delay for Movement [s/veh]	2.94	2.97	3.00	2.80	2.83	2.86	37.50	34.41	34.41	36.22	34.60	34.60
Movement LOS	A	A	A	A	A	A	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	2.97			2.83			36.30			34.96		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	5.23											
Intersection LOS	A											
Intersection V/C	0.187											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	2.434	2.475	1.992	1.974
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.75	21.75
l_b,int, Bicycle LOS Score for Intersection	2.035	1.960	1.640	1.612
Bicycle LOS	B	A	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	14	2	9	36	2	56	61	1254	0	2	1137	22	2595

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	35	45	28	4	2	25	139

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	8	18	12	13	33	14	98

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	31	3	4	3	3	26	70

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	13	452	11	12	401	23	24	2	13	6	11	10	978

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Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	14	2	9	35	2	54	59	1217	0	2	1104	21	2519
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**2**	**9**	**36**	**2**	**56**	**61**	**1254**	**0**	**2**	**1137**	**22**	**2595**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	34	44	27	4	2	24	135
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**35**	**45**	**28**	**4**	**2**	**25**	**139**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	8	17	12	13	32	14	96
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**8**	**18**	**12**	**13**	**33**	**14**	**98**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	30	3	4	3	3	25	68
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0
		Future Total	**31**	**3**	**4**	**3**	**3**	**26**	**70**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	13	439	11	12	389	22	23	2	13	6	11	10	951
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**13**	**452**	**11**	**12**	**401**	**23**	**24**	**2**	**13**	**6**	**11**	**10**	**978**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	N	S	W
1	32	80	27
2	31	78	26
3	30	76	26
4	28	71	24
5	25	63	21
6	25	62	21
7	25	62	21
8	22	56	19
9	22	55	19
10	22	54	18
11	19	47	16
12	18	44	15
13	17	43	15
14	13	32	11
15	13	32	11
16	9	22	8
17	5	13	4
18	5	13	4
19	3	7	2
20	2	4	1
21	1	2	1
22	0	1	0
23	0	1	0
24	0	1	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	112	1	27	No	No	No	No	No	No	No	No	No	No
2	1	109	1	26	No	No	No	No	No	No	No	No	No	No
3	1	106	1	26	No	No	No	No	No	No	No	No	No	No
4	1	99	1	24	No	No	No	No	No	No	No	No	No	No
5	1	88	1	21	No	No	No	No	No	No	No	No	No	No
6	1	87	1	21	No	No	No	No	No	No	No	No	No	No
7	1	87	1	21	No	No	No	No	No	No	No	No	No	No
8	1	78	1	19	No	No	No	No	No	No	No	No	No	No
9	1	77	1	19	No	No	No	No	No	No	No	No	No	No
10	1	76	1	18	No	No	No	No	No	No	No	No	No	No
11	1	66	1	16	No	No	No	No	No	No	No	No	No	No
12	1	62	1	15	No	No	No	No	No	No	No	No	No	No
13	1	60	1	15	No	No	No	No	No	No	No	No	No	No
14	1	45	1	11	No	No	No	No	No	No	No	No	No	No
15	1	45	1	11	No	No	No	No	No	No	No	No	No	No
16	1	31	1	8	No	No	No	No	No	No	No	No	No	No
17	1	18	1	4	No	No	No	No	No	No	No	No	No	No
18	1	18	1	4	No	No	No	No	No	No	No	No	No	No
19	1	10	1	2	No	No	No	No	No	No	No	No	No	No
20	1	6	1	1	No	No	No	No	No	No	No	No	No	No
21	1	3	1	1	No	No	No	No	No	No	No	No	No	No
22	1	1	1	0	No	No	No	No	No	No	No	No	No	No
23	1	1	1	0	No	No	No	No	No	No	No	No	No	No
24	1	1	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.7
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:03
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	27
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	139
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	26	25	47
2	25	24	46
3	25	24	45
4	23	22	42
5	21	20	37
6	20	20	37
7	20	19	36
8	18	18	33
9	18	17	32
10	18	17	32
11	15	15	28
12	14	14	26
13	14	14	25
14	10	10	19
15	10	10	19
16	7	7	13
17	4	4	8
18	4	4	8
19	2	2	4
20	1	1	2
21	1	1	1
22	0	0	0
23	0	0	0
24	0	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	51	1	47	No	No	No	No	No	No	No	No	No	No
2	1	49	1	46	No	No	No	No	No	No	No	No	No	No
3	1	49	1	45	No	No	No	No	No	No	No	No	No	No
4	1	45	1	42	No	No	No	No	No	No	No	No	No	No
5	1	41	1	37	No	No	No	No	No	No	No	No	No	No
6	1	40	1	37	No	No	No	No	No	No	No	No	No	No
7	1	39	1	36	No	No	No	No	No	No	No	No	No	No
8	1	36	1	33	No	No	No	No	No	No	No	No	No	No
9	1	35	1	32	No	No	No	No	No	No	No	No	No	No
10	1	35	1	32	No	No	No	No	No	No	No	No	No	No
11	1	30	1	28	No	No	No	No	No	No	No	No	No	No
12	1	28	1	26	No	No	No	No	No	No	No	No	No	No
13	1	28	1	25	No	No	No	No	No	No	No	No	No	No
14	1	20	1	19	No	No	No	No	No	No	No	No	No	No
15	1	20	1	19	No	No	No	No	No	No	No	No	No	No
16	1	14	1	13	No	No	No	No	No	No	No	No	No	No
17	1	8	1	8	No	No	No	No	No	No	No	No	No	No
18	1	8	1	8	No	No	No	No	No	No	No	No	No	No
19	1	4	1	4	No	No	No	No	No	No	No	No	No	No
20	1	2	1	2	No	No	No	No	No	No	No	No	No	No
21	1	2	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:07
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	47
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	98
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	29	7	34
2	28	7	33
3	28	7	32
4	26	6	30
5	23	6	27
6	23	5	27
7	22	5	26
8	20	5	24
9	20	5	23
10	20	5	23
11	17	4	20
12	16	4	19
13	16	4	18
14	12	3	14
15	12	3	14
16	8	2	10
17	5	1	5
18	5	1	5
19	3	1	3
20	1	0	2
21	1	0	1
22	0	0	0
23	0	0	0
24	0	0	0

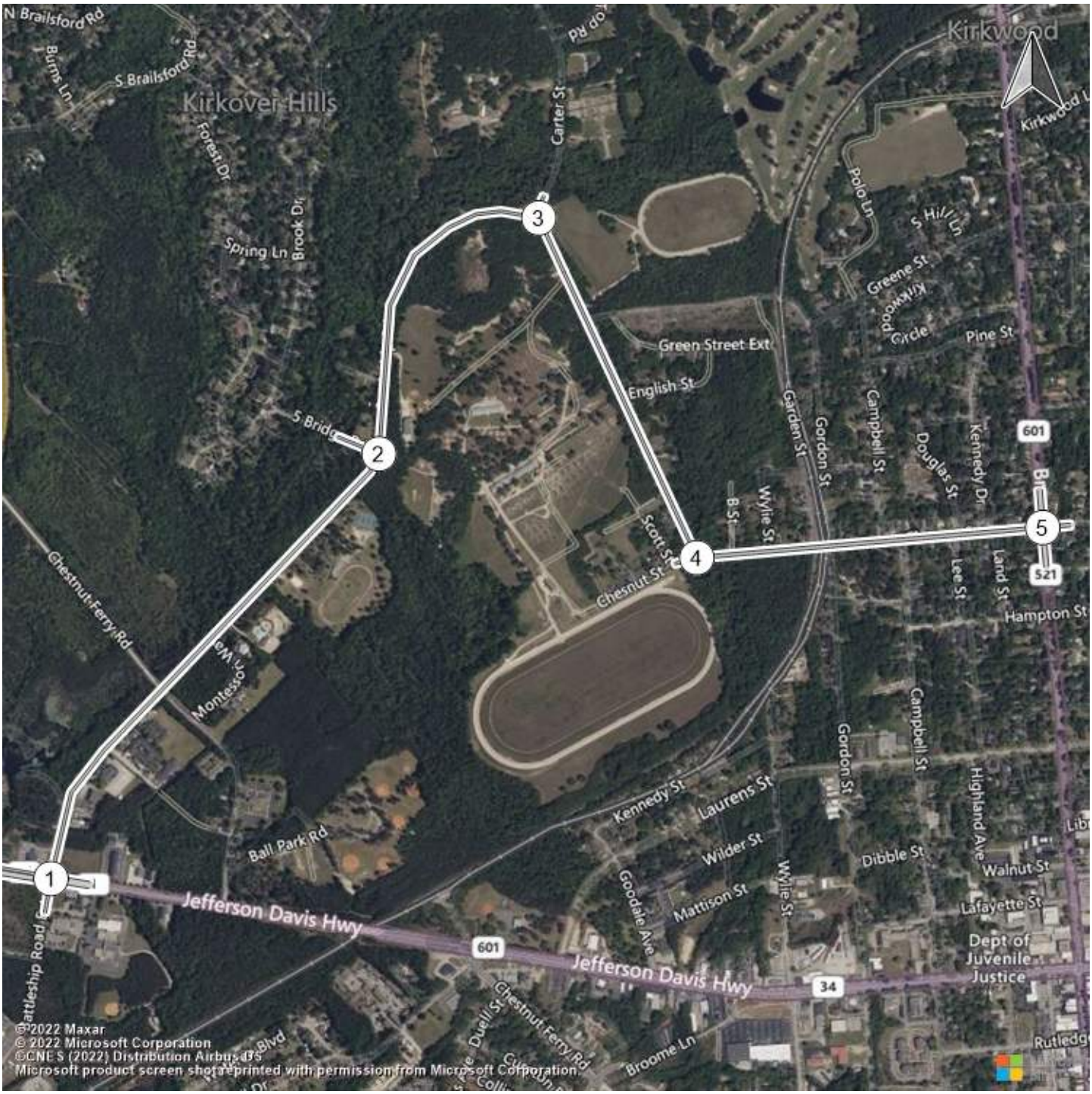
Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	36	1	34	No	No	No	No	No	No	No	No	No	No
2	1	35	1	33	No	No	No	No	No	No	No	No	No	No
3	1	35	1	32	No	No	No	No	No	No	No	No	No	No
4	1	32	1	30	No	No	No	No	No	No	No	No	No	No
5	1	29	1	27	No	No	No	No	No	No	No	No	No	No
6	1	28	1	27	No	No	No	No	No	No	No	No	No	No
7	1	27	1	26	No	No	No	No	No	No	No	No	No	No
8	1	25	1	24	No	No	No	No	No	No	No	No	No	No
9	1	25	1	23	No	No	No	No	No	No	No	No	No	No
10	1	25	1	23	No	No	No	No	No	No	No	No	No	No
11	1	21	1	20	No	No	No	No	No	No	No	No	No	No
12	1	20	1	19	No	No	No	No	No	No	No	No	No	No
13	1	20	1	18	No	No	No	No	No	No	No	No	No	No
14	1	15	1	14	No	No	No	No	No	No	No	No	No	No
15	1	15	1	14	No	No	No	No	No	No	No	No	No	No
16	1	10	1	10	No	No	No	No	No	No	No	No	No	No
17	1	6	1	5	No	No	No	No	No	No	No	No	No	No
18	1	6	1	5	No	No	No	No	No	No	No	No	No	No
19	1	4	1	3	No	No	No	No	No	No	No	No	No	No
20	1	1	1	2	No	No	No	No	No	No	No	No	No	No
21	1	1	1	1	No	No	No	No	No	No	No	No	No	No
22	1	0	1	0	No	No	No	No	No	No	No	No	No	No
23	1	0	1	0	No	No	No	No	No	No	No	No	No	No
24	1	0	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

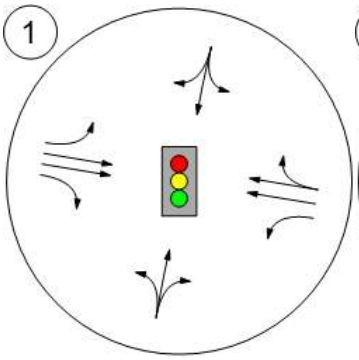
Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	8.8
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:04
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	34
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	70
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Study Intersections

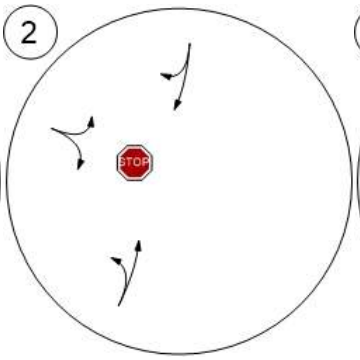


Lane Configuration and Traffic Control

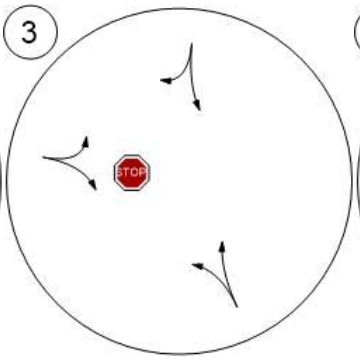
W. Dekalb St & Battleship Rd



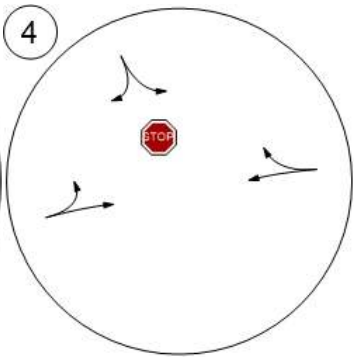
Battleship Rd & 5 Bridge Rd



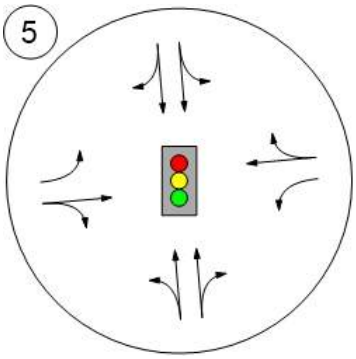
Carter St & Battleship Rd



Chesnut St & Carter St

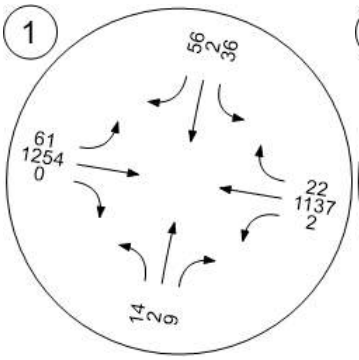


Broad St & Chestnut St

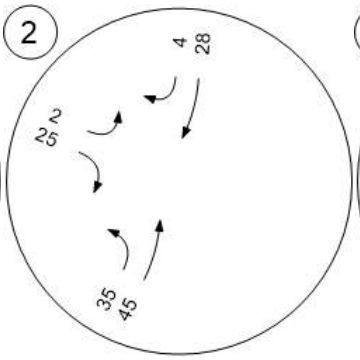


Traffic Volume - Future Background Volume

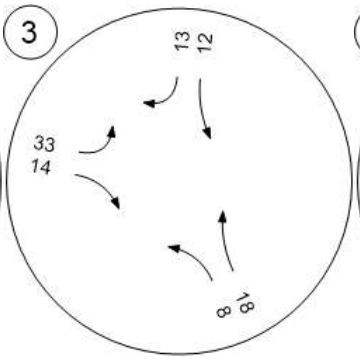
W. Dekalb St & Battleship Rd



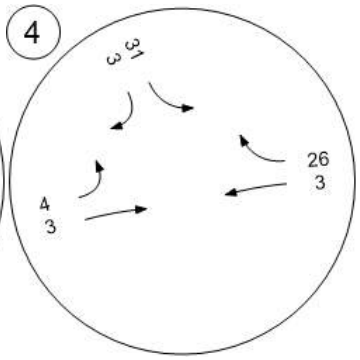
Battleship Rd & 5 Bridge Rd



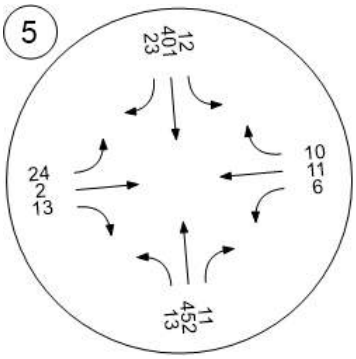
Carter St & Battleship Rd



Chesnut St & Carter St

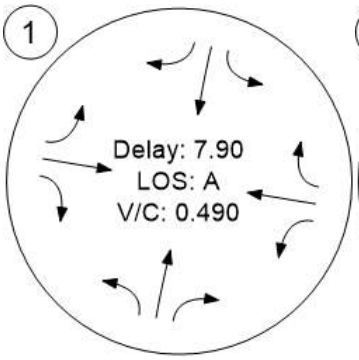


Broad St & Chestnut St

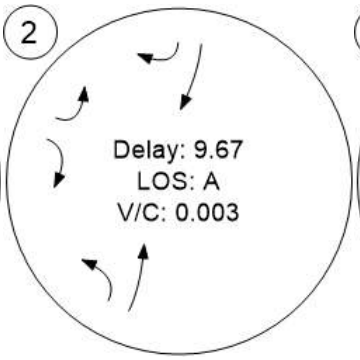


Traffic Conditions

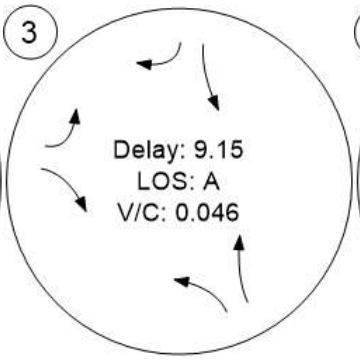
W. Dekalb St & Battleship Rd



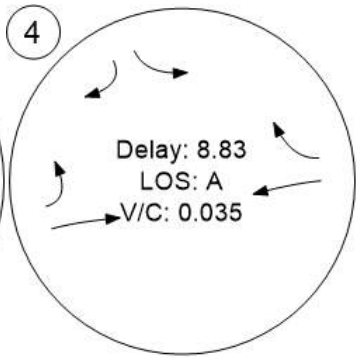
Battleship Rd & 5 Bridge Rd



Carter St & Battleship Rd



Chesnut St & Carter St



Broad St & Chestnut St

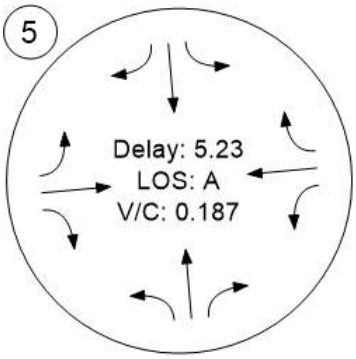


Table of Contents

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA PM.vistro
Report File: C:\...\213738 Vistro Report PM 2026 Build.pdf
Scenario 3 PM 2026 Build
6/13/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	W. Dekalb St & Battleship Rd	Signalized	HCM 6th Edition	EB Left	1.255	43.3	D
2	Battleship Rd & 5 Bridge Rd	Two-way stop	HCM 6th Edition	WB Left	0.389	18.9	C
3	Carter St & Battleship Rd	Two-way stop	HCM 6th Edition	EB Left	0.059	10.7	B
4	Chesnut St & Carter St	Two-way stop	HCM 6th Edition	SB Left	0.100	10.2	B
5	Broad St & Chestnut St	Signalized	HCM 6th Edition	EB Left	0.286	8.0	A
6	Carter St & Access 2/3	Two-way stop	HCM 6th Edition	EB Left	0.003	10.8	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: W. Dekalb St & Battleship Rd

Control Type:	Signalized	Delay (sec / veh):	43.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.255

Intersection Setup

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	17.00	12.00	10.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	640.00	100.00	500.00	150.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			Yes			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Battleship Rd Ext			Battleship Rd (S-194)			W. Dekalb St (US 1)			W. Dekalb St (US 1		
Base Volume Input [veh/h]	14	2	9	35	2	54	59	1217	0	2	1104	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	2	0	103	0	96	187	0	0	0	0	166
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	4	9	139	2	152	248	1254	0	2	1137	188
Peak Hour Factor	0.5000	0.5000	0.5000	0.7190	0.7190	0.7190	0.9000	0.9000	0.9000	0.7550	0.7550	0.7550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	2	5	48	1	53	69	348	0	1	376	62
Total Analysis Volume [veh/h]	28	8	18	193	3	211	276	1393	0	3	1506	249
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	18	0	0	18	0	0	62	0	0	62	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	7	0	0	21	0	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	12	12	56	56	56	56	56	56
g / C, Green / Cycle	0.15	0.15	0.70	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.04	0.25	1.01	0.39	0.00	0.01	0.47	0.49
s, saturation flow rate [veh/h]	1402	1657	273	3560	1589	388	1870	1780
c, Capacity [veh/h]	280	316	193	2489	1111	274	1307	1244
d1, Uniform Delay [s]	29.74	35.00	31.92	5.95	0.00	11.18	6.88	7.08
k, delay calibration	0.11	0.17	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	136.99	219.79	0.92	0.00	0.07	2.83	3.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.19	1.29	1.43	0.56	0.00	0.01	0.68	0.70
d, Delay for Lane Group [s/veh]	30.07	171.99	251.70	6.87	0.00	11.25	9.71	10.37
Lane Group LOS	C	F	F	A	A	B	A	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh/ln]	0.92	18.09	15.45	4.14	0.00	0.03	6.64	6.81
50th-Percentile Queue Length [ft/ln]	22.91	452.13	386.25	103.41	0.00	0.77	166.01	170.34
95th-Percentile Queue Length [veh/ln]	1.65	27.91	27.23	7.45	0.00	0.06	10.87	11.09
95th-Percentile Queue Length [ft/ln]	41.24	697.78	680.78	186.13	0.00	1.39	271.66	277.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.07	30.07	30.07	171.99	171.99	171.99	251.70	6.87	0.00	11.25	9.98	10.37
Movement LOS	C	C	C	F	F	F	F	A	A	B	A	B
d_A, Approach Delay [s/veh]	30.07			171.99			47.35			10.04		
Approach LOS	C			F			D			B		
d_I, Intersection Delay [s/veh]	43.29											
Intersection LOS	D											
Intersection V/C	1.255											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	1.744	2.638	3.228	3.444
Crosswalk LOS	A	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	300	300	1400	1400
d_b, Bicycle Delay [s]	28.89	28.89	3.60	3.60
l_b,int, Bicycle LOS Score for Intersection	1.649	2.231	2.937	3.010
Bicycle LOS	A	B	C	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Battleship Rd & 5 Bridge Rd

Control Type:	Two-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.389

Intersection Setup

Name	Battleship Rd (S-194)			Battleship Rd (S-194)			5 Bridge Rd (S-198)			Access 1		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Battleship Rd (S-194)			Battleship Rd (S-194)			5 Bridge Rd (S-198)			Access 1		
Base Volume Input [veh/h]	34	44	0	0	27	4	2	0	24	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0000	1.0000	1.0300	1.0300	1.0300	1.0000	1.0300	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	55	300	19	33	0	0	0	0	166	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	100	300	19	61	4	2	0	25	166	0	11
Peak Hour Factor	0.8130	0.8130	0.8130	0.8610	0.8610	0.8610	0.8130	0.8130	0.8130	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	31	92	6	18	1	1	0	8	42	0	3
Total Analysis Volume [veh/h]	43	123	369	22	71	5	2	0	31	166	0	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	0.39	0.00	0.02
d_M, Delay for Movement [s/veh]	7.43	0.00	0.00	8.43	0.00	0.00	13.32	15.64	8.79	18.91	18.73	15.38
Movement LOS	A	A	A	A	A	A	B	C	A	C	C	C
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.09	0.06	0.06	0.06	0.11	0.11	0.11	1.92	1.92	1.92
95th-Percentile Queue Length [ft/ln]	2.18	2.18	2.18	1.57	1.57	1.57	2.79	2.79	2.79	48.06	48.06	48.06
d_A, Approach Delay [s/veh]	0.60			1.89			9.06			18.69		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	4.88											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Carter St & Battleship Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Carter St (S-393)		Battleship Rd (S-194)	
Base Volume Input [veh/h]	8	17	12	13	32	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	52	3	4	0	0	66
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	21	16	13	33	80
Peak Hour Factor	0.7810	0.7810	0.6250	0.6250	0.7670	0.7670
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	7	6	5	11	26
Total Analysis Volume [veh/h]	77	27	26	21	43	104
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.06	0.10
d_M, Delay for Movement [s/veh]	7.43	0.00	0.00	0.00	10.65	9.21
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.16	0.16	0.00	0.00	0.56	0.56
95th-Percentile Queue Length [ft/ln]	3.89	3.89	0.00	0.00	14.11	14.11
d_A, Approach Delay [s/veh]	5.50		0.00		9.63	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.67					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Chesnut St & Carter St

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Carter St (S-393)		Chesnut St (S-76)		Chesnut St (S-76)	
Base Volume Input [veh/h]	30	3	4	3	3	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	38	2	1	39	71	67
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	69	5	5	42	74	93
Peak Hour Factor	0.9000	0.9000	0.8750	0.8750	0.7780	0.7780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	1	1	12	24	30
Total Analysis Volume [veh/h]	77	6	6	48	95	120
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.23	9.59	7.67	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.36	0.36	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	8.93	8.93	0.33	0.33	0.00	0.00
d_A, Approach Delay [s/veh]	10.18		0.85		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.53					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Broad St & Chestnut St

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.286

Intersection Setup

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	11.00	11.00	11.00	11.00	11.00	11.00	10.00	10.00	10.00	10.00	10.00	10.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			Yes			No			Yes		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Broad St (US 521)			Broad St (US 521)			Chesnut St (S-76)			Chesnut St (S-76)		
Base Volume Input [veh/h]	13	439	11	12	389	22	23	2	13	6	11	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	71	0	0	0	0	65	40	3	33	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	84	452	11	12	401	88	64	5	46	6	12	10
Peak Hour Factor	0.8270	0.8270	0.8270	0.9000	0.9000	0.9000	0.7920	0.7920	0.7920	0.8440	0.8440	0.8440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	137	3	3	111	24	20	2	15	2	4	3
Total Analysis Volume [veh/h]	102	547	13	13	446	98	81	6	58	7	14	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
All red [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Split [s]	0	53	0	0	53	0	0	27	0	0	27	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	14	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	58	58	58	58	10	10	10	10
g / C, Green / Cycle	0.73	0.73	0.73	0.73	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.23	0.22	0.16	0.16	0.06	0.04	0.01	0.02
s, saturation flow rate [veh/h]	1300	1691	1824	1596	1384	1612	1338	1729
c, Capacity [veh/h]	1008	1233	1377	1163	209	195	175	209
d1, Uniform Delay [s]	3.64	3.75	3.49	3.51	35.46	32.17	35.25	31.36
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.62	0.36	0.45	1.17	0.97	0.09	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.30	0.22	0.22	0.39	0.33	0.04	0.12
d, Delay for Lane Group [s/veh]	4.38	4.37	3.85	3.96	36.63	33.14	35.34	31.63
Lane Group LOS	A	A	A	A	D	C	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.22	1.57	1.16	1.05	1.57	1.16	0.13	0.45
50th-Percentile Queue Length [ft/ln]	30.61	39.21	28.95	26.20	39.18	29.07	3.27	11.37
95th-Percentile Queue Length [veh/ln]	2.20	2.82	2.08	1.89	2.82	2.09	0.24	0.82
95th-Percentile Queue Length [ft/ln]	55.10	70.58	52.11	47.16	70.53	52.32	5.88	20.47

Movement, Approach, & Intersection Results

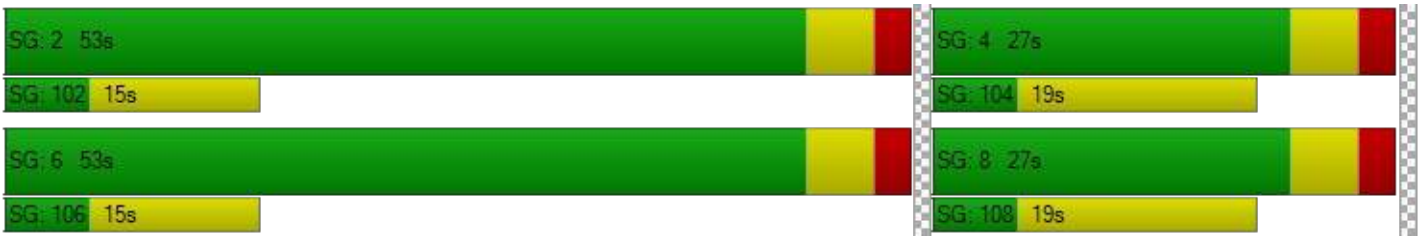
d_M, Delay for Movement [s/veh]	4.38	4.37	4.37	3.85	3.89	3.96	36.63	33.14	33.14	35.34	31.63	31.63
Movement LOS	A	A	A	A	A	A	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	4.37			3.90			35.09			32.41		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	8.03											
Intersection LOS	A											
Intersection V/C	0.286											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.50	31.50	31.50	31.50
l_p,int, Pedestrian LOS Score for Intersection	2.470	2.582	2.198	1.975
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	525	525
d_b, Bicycle Delay [s]	6.80	6.80	21.75	21.75
l_b,int, Bicycle LOS Score for Intersection	2.106	2.019	1.799	1.614
Bicycle LOS	B	B	A	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Carter St & Access 2/3

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Carter St (S-393)			Carter St (S-393)			Access 2			Access 3		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Carter St (S-393)			Carter St (S-393)			Access 2			Access 3		
Base Volume Input [veh/h]	0	25	0	0	22	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0300	1.0300	1.0300	1.0300	1.0300	1.0300	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	20	21	55	13	2	2	0	16	11	0	33
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	46	21	55	36	2	2	0	16	11	0	33
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	12	5	14	9	1	1	0	4	3	0	8
Total Analysis Volume [veh/h]	27	46	21	55	36	2	2	0	16	11	0	33
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.03
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	7.43	0.00	0.00	10.79	11.03	8.55	10.76	11.10	8.78
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.11	0.11	0.11	0.06	0.06	0.06	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	1.31	1.31	1.31	2.79	2.79	2.79	1.42	1.42	1.42	3.91	3.91	3.91
d_A, Approach Delay [s/veh]	2.11			4.40			8.80			9.27		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.71											
Intersection LOS	B											

Camden Tract TIA

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Scenario 3 PM 2026 Build
6/13/2023

Turning Movement Volume: Summary

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	14	4	9	139	2	152	248	1254	0	2	1137	188	3149

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Battleship Rd & 5 Bridge Rd	35	100	300	19	61	4	2	0	25	166	0	11	723

ID	Intersection Name	Northbound		Southbound		Eastbound		Total Volume
		Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	60	21	16	13	33	80	223

ID	Intersection Name	Southbound		Eastbound		Westbound		Total Volume
		Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	69	5	5	42	74	93	288

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	84	452	11	12	401	88	64	5	46	6	12	10	1191

ID	Intersection Name	Northbound			Southbound			Eastbound			Westbound			Total Volume
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Carter St & Access 2/3	27	46	21	55	36	2	2	0	16	11	0	33	249

Camden Tract TIA

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Scenario 3 PM 2026 Build
6/13/2023

Turning Movement Volume: Detail

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
1	W. Dekalb St & Battleship Rd	Final Base	14	2	9	35	2	54	59	1217	0	2	1104	21	2519
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	2	0	103	0	96	187	0	0	0	0	166	554
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**14**	**4**	**9**	**139**	**2**	**152**	**248**	**1254**	**0**	**2**	**1137**	**188**	**3149**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2	Battleship Rd & 5 Bridge Rd	Final Base	34	44	0	0	27	4	2	0	24	0	0	0	135
		Growth Factor	1.03	1.03	1.00	1.00	1.03	1.03	1.03	1.00	1.03	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	0	55	300	19	33	0	0	0	0	166	0	11	584
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**35**	**100**	**300**	**19**	**61**	**4**	**2**	**0**	**25**	**166**	**0**	**11**	**723**

ID	Intersection Name	Volume Type	Northbound		Southbound		Eastbound		Total Volume
			Left	Thru	Thru	Right	Left	Right	
3	Carter St & Battleship Rd	Final Base	8	17	12	13	32	14	96
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	52	3	4	0	0	66	125
		Other	0	0	0	0	0	0	0
		Future Total	**60**	**21**	**16**	**13**	**33**	**80**	**223**

ID	Intersection Name	Volume Type	Southbound		Eastbound		Westbound		Total Volume
			Left	Right	Left	Thru	Thru	Right	
4	Chesnut St & Carter St	Final Base	30	3	4	3	3	25	68
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0
		Net New Trips	38	2	1	39	71	67	218
		Other	0	0	0	0	0	0	0
		Future Total	**69**	**5**	**5**	**42**	**74**	**93**	**288**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	Broad St & Chestnut St	Final Base	13	439	11	12	389	22	23	2	13	6	11	10	951
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	71	0	0	0	0	65	40	3	33	0	1	0	213
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**84**	**452**	**11**	**12**	**401**	**88**	**64**	**5**	**46**	**6**	**12**	**10**	**1191**

ID	Intersection Name	Volume Type	Northbound			Southbound			Eastbound			Westbound			Total Volume
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6	Carter St & Access 2/3	Final Base	0	25	0	0	22	0	0	0	0	0	0	0	47
		Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.00	1.00	1.00	1.00	1.00	1.00	-
		In Process	0	0	0	0	0	0	0	0	0	0	0	0	0
		Net New Trips	27	20	21	55	13	2	2	0	16	11	0	33	200
		Other	0	0	0	0	0	0	0	0	0	0	0	0	0
		Future Total	**27**	**46**	**21**	**55**	**36**	**2**	**2**	**0**	**16**	**11**	**0**	**33**	**249**

Signal Warrants Report For Intersection 2: Battleship Rd & 5 Bridge Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	N, S
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	N	S	E	W
1	84	435	177	27
2	81	422	172	26
3	80	413	168	26
4	75	387	158	24
5	66	344	140	21
6	66	339	138	21
7	65	335	136	21
8	59	305	124	19
9	58	300	122	19
10	57	296	120	18
11	50	257	104	16
12	46	239	97	15
13	45	235	96	15
14	34	174	71	11
15	34	174	71	11
16	24	122	50	8
17	13	70	28	4
18	13	70	28	4
19	8	39	16	2
20	4	22	9	1
21	3	13	5	1
22	1	4	2	0
23	1	4	2	0
24	1	4	2	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	519	1	177	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No
2	1	503	1	172	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No
3	1	493	1	168	No	Yes	Yes	Yes	No	No	No	Yes	No	No
4	1	462	1	158	No	Yes	Yes	Yes	No	No	No	Yes	No	No
5	1	410	1	140	No	Yes	Yes	Yes	No	No	No	No	No	No
6	1	405	1	138	No	Yes	Yes	Yes	No	No	No	No	No	No
7	1	400	1	136	No	Yes	Yes	Yes	No	No	No	No	No	No
8	1	364	1	124	No	No	Yes	Yes	No	No	No	No	No	No
9	1	358	1	122	No	No	Yes	Yes	No	No	No	No	No	No
10	1	353	1	120	No	No	Yes	Yes	No	No	No	No	No	No
11	1	307	1	104	No	No	No	Yes	No	No	No	No	No	No
12	1	285	1	97	No	No	No	Yes	No	No	No	No	No	No
13	1	280	1	96	No	No	No	Yes	No	No	No	No	No	No
14	1	208	1	71	No	No	No	No	No	No	No	No	No	No
15	1	208	1	71	No	No	No	No	No	No	No	No	No	No
16	1	146	1	50	No	No	No	No	No	No	No	No	No	No
17	1	83	1	28	No	No	No	No	No	No	No	No	No	No
18	1	83	1	28	No	No	No	No	No	No	No	No	No	No
19	1	47	1	16	No	No	No	No	No	No	No	No	No	No
20	1	26	1	9	No	No	No	No	No	No	No	No	No	No
21	1	16	1	5	No	No	No	No	No	No	No	No	No	No
22	1	5	1	2	No	No	No	No	No	No	No	No	No	No
23	1	5	1	2	No	No	No	No	No	No	No	No	No	No
24	1	5	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					2	7	10	13	0	0	0	4	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	18.7	9.1
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:55	0:04
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	177	27
High Minor Volume Condition Met	Yes	No
Total Entering Volume on All Approaches During Same Hour	723	723
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Signal Warrants Report For Intersection 3: Carter St & Battleship Rd

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	S	N	W
1	81	29	113
2	79	28	110
3	77	28	107
4	72	26	101
5	64	23	89
6	63	23	88
7	62	22	87
8	57	20	79
9	56	20	78
10	55	20	77
11	48	17	67
12	45	16	62
13	44	16	61
14	32	12	45
15	32	12	45
16	23	8	32
17	13	5	18
18	13	5	18
19	7	3	10
20	4	1	6
21	2	1	3
22	1	0	1
23	1	0	1
24	1	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	110	1	113	No	No	No	No	No	No	No	No	No	No
2	1	107	1	110	No	No	No	No	No	No	No	No	No	No
3	1	105	1	107	No	No	No	No	No	No	No	No	No	No
4	1	98	1	101	No	No	No	No	No	No	No	No	No	No
5	1	87	1	89	No	No	No	No	No	No	No	No	No	No
6	1	86	1	88	No	No	No	No	No	No	No	No	No	No
7	1	84	1	87	No	No	No	No	No	No	No	No	No	No
8	1	77	1	79	No	No	No	No	No	No	No	No	No	No
9	1	76	1	78	No	No	No	No	No	No	No	No	No	No
10	1	75	1	77	No	No	No	No	No	No	No	No	No	No
11	1	65	1	67	No	No	No	No	No	No	No	No	No	No
12	1	61	1	62	No	No	No	No	No	No	No	No	No	No
13	1	60	1	61	No	No	No	No	No	No	No	No	No	No
14	1	44	1	45	No	No	No	No	No	No	No	No	No	No
15	1	44	1	45	No	No	No	No	No	No	No	No	No	No
16	1	31	1	32	No	No	No	No	No	No	No	No	No	No
17	1	18	1	18	No	No	No	No	No	No	No	No	No	No
18	1	18	1	18	No	No	No	No	No	No	No	No	No	No
19	1	10	1	10	No	No	No	No	No	No	No	No	No	No
20	1	5	1	6	No	No	No	No	No	No	No	No	No	No
21	1	3	1	3	No	No	No	No	No	No	No	No	No	No
22	1	1	1	1	No	No	No	No	No	No	No	No	No	No
23	1	1	1	1	No	No	No	No	No	No	No	No	No	No
24	1	1	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.6
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:18
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	113
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	223
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 4: Chesnut St & Carter St

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	167	47	74
2	162	46	72
3	159	45	70
4	149	42	66
5	132	37	58
6	130	37	58
7	129	36	57
8	117	33	52
9	115	32	51
10	114	32	50
11	99	28	44
12	92	26	41
13	90	25	40
14	67	19	30
15	67	19	30
16	47	13	21
17	27	8	12
18	27	8	12
19	15	4	7
20	8	2	4
21	5	1	2
22	2	0	1
23	2	0	1
24	2	0	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	214	1	74	No	No	No	No	No	No	No	No	No	No
2	1	208	1	72	No	No	No	No	No	No	No	No	No	No
3	1	204	1	70	No	No	No	No	No	No	No	No	No	No
4	1	191	1	66	No	No	No	No	No	No	No	No	No	No
5	1	169	1	58	No	No	No	No	No	No	No	No	No	No
6	1	167	1	58	No	No	No	No	No	No	No	No	No	No
7	1	165	1	57	No	No	No	No	No	No	No	No	No	No
8	1	150	1	52	No	No	No	No	No	No	No	No	No	No
9	1	147	1	51	No	No	No	No	No	No	No	No	No	No
10	1	146	1	50	No	No	No	No	No	No	No	No	No	No
11	1	127	1	44	No	No	No	No	No	No	No	No	No	No
12	1	118	1	41	No	No	No	No	No	No	No	No	No	No
13	1	115	1	40	No	No	No	No	No	No	No	No	No	No
14	1	86	1	30	No	No	No	No	No	No	No	No	No	No
15	1	86	1	30	No	No	No	No	No	No	No	No	No	No
16	1	60	1	21	No	No	No	No	No	No	No	No	No	No
17	1	35	1	12	No	No	No	No	No	No	No	No	No	No
18	1	35	1	12	No	No	No	No	No	No	No	No	No	No
19	1	19	1	7	No	No	No	No	No	No	No	No	No	No
20	1	10	1	4	No	No	No	No	No	No	No	No	No	No
21	1	6	1	2	No	No	No	No	No	No	No	No	No	No
22	1	2	1	1	No	No	No	No	No	No	No	No	No	No
23	1	2	1	1	No	No	No	No	No	No	No	No	No	No
24	1	2	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	10.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:12
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	74
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	288
Number of Approaches on Intersection	3
Total Volume Condition Met	No
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 6: Carter St & Access 2/3

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	S, N
Minor Approaches	E, W
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets	
	S	N	E	W
1	94	93	44	18
2	91	90	43	17
3	89	88	42	17
4	84	83	39	16
5	74	73	35	14
6	73	73	34	14
7	72	72	34	14
8	66	65	31	13
9	65	64	30	12
10	64	63	30	12
11	55	55	26	11
12	52	51	24	10
13	51	50	24	10
14	38	37	18	7
15	38	37	18	7
16	26	26	12	5
17	15	15	7	3
18	15	15	7	3
19	8	8	4	2
20	5	5	2	1
21	3	3	1	1
22	1	1	0	0
23	1	1	0	0
24	1	1	0	0

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	1	187	1	44	No	No	No	No	No	No	No	No	No	No
2	1	181	1	43	No	No	No	No	No	No	No	No	No	No
3	1	177	1	42	No	No	No	No	No	No	No	No	No	No
4	1	167	1	39	No	No	No	No	No	No	No	No	No	No
5	1	147	1	35	No	No	No	No	No	No	No	No	No	No
6	1	146	1	34	No	No	No	No	No	No	No	No	No	No
7	1	144	1	34	No	No	No	No	No	No	No	No	No	No
8	1	131	1	31	No	No	No	No	No	No	No	No	No	No
9	1	129	1	30	No	No	No	No	No	No	No	No	No	No
10	1	127	1	30	No	No	No	No	No	No	No	No	No	No
11	1	110	1	26	No	No	No	No	No	No	No	No	No	No
12	1	103	1	24	No	No	No	No	No	No	No	No	No	No
13	1	101	1	24	No	No	No	No	No	No	No	No	No	No
14	1	75	1	18	No	No	No	No	No	No	No	No	No	No
15	1	75	1	18	No	No	No	No	No	No	No	No	No	No
16	1	52	1	12	No	No	No	No	No	No	No	No	No	No
17	1	30	1	7	No	No	No	No	No	No	No	No	No	No
18	1	30	1	7	No	No	No	No	No	No	No	No	No	No
19	1	16	1	4	No	No	No	No	No	No	No	No	No	No
20	1	10	1	2	No	No	No	No	No	No	No	No	No	No
21	1	6	1	1	No	No	No	No	No	No	No	No	No	No
22	1	2	1	0	No	No	No	No	No	No	No	No	No	No
23	1	2	1	0	No	No	No	No	No	No	No	No	No	No
24	1	2	1	0	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	0	0	0	0	0

Warrant 3 Condition A

Orientation	E	W
Total Stopped Delay Per Vehicle on Minor Approach (s)	9.3	8.8
Number of Lanes on Minor Street Approach	1	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:06	0:02
Delay Condition Met	No	No
Volume on Minor Street Approach During Same Hour	44	18
High Minor Volume Condition Met	No	No
Total Entering Volume on All Approaches During Same Hour	249	249
Number of Approaches on Intersection	4	4
Total Volume Condition Met	No	No
Warrant Met for Approach	No	No
Warrant Met for Intersection	**No**	

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA PM.vistro
Report File: C:\...\213738 Vistro Report PM 2026 Build.pdf

Scenario 3 PM 2026 Build
6/13/2023

Trip Generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total Trips	% of Total Trips
1: 43' Wide Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	150.000	50.00	50.00	97	54	151	19.28
2: 53' Simply Ryan Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	135.000	50.00	50.00	88	49	137	17.50
3: 53' Lifestyle Lots	Single-Family Detached Housing	210	Dwelling Units	0.990	220.000	64.00	36.00	140	78	218	27.84
4: 53' Renaissance Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	154.000	50.00	50.00	99	56	155	19.80
5: 65' Wide Estate Lots	Single-Family Detached Housing	210	Dwelling Units	1.000	119.000	50.00	50.00	78	44	122	15.58
					Added Trips Total			**502**	**281**	**783**	**100.00**

Camden Tract TIA

Vistro File: C:\...\213738 Camden Tract TIA PM.vistro
Report File: C:\...\213738 Vistro Report PM 2026 Build.pdf

Scenario 3 PM 2026 Build
6/13/2023

Trip Distribution summary

Zone / Gate	Zone 1: 43' Wide Lots			
	To 43' Wide Lots:		From 43' Wide Lots:	
	Share %	Trips	Share %	Trips
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	13.00	13	14.00	8
7: Chesnut St East	1.00	1	1.00	1
8: Broad St South	14.00	14	12.00	6
9: W DeKalb St East	33.00	32	37.00	19
10: Battleship Rd South	1.00	1	0.00	0
11: W DeKalb St West	37.00	36	34.00	18
12: 5 Bridge Rd West	0.00	0	1.00	1
13: Carter St North	1.00	1	1.00	1
Total	**100.00**	**98**	**100.00**	**54**

Zone / Gate	Zone 2: 53' Simply Ryan Lots			
	To 53' Simply Ryan Lots:		From 53' Simply Ryan Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	13.00	11	14.00	7
7: Chesnut St East	1.00	1	1.00	0
8: Broad St South	14.00	12	12.00	6
9: W DeKalb St East	33.00	29	37.00	19
10: Battleship Rd South	1.00	1	0.00	0
11: W DeKalb St West	37.00	33	34.00	17
12: 5 Bridge Rd West	0.00	0	1.00	0
13: Carter St North	1.00	1	1.00	0
Total	**100.00**	**88**	**100.00**	**49**

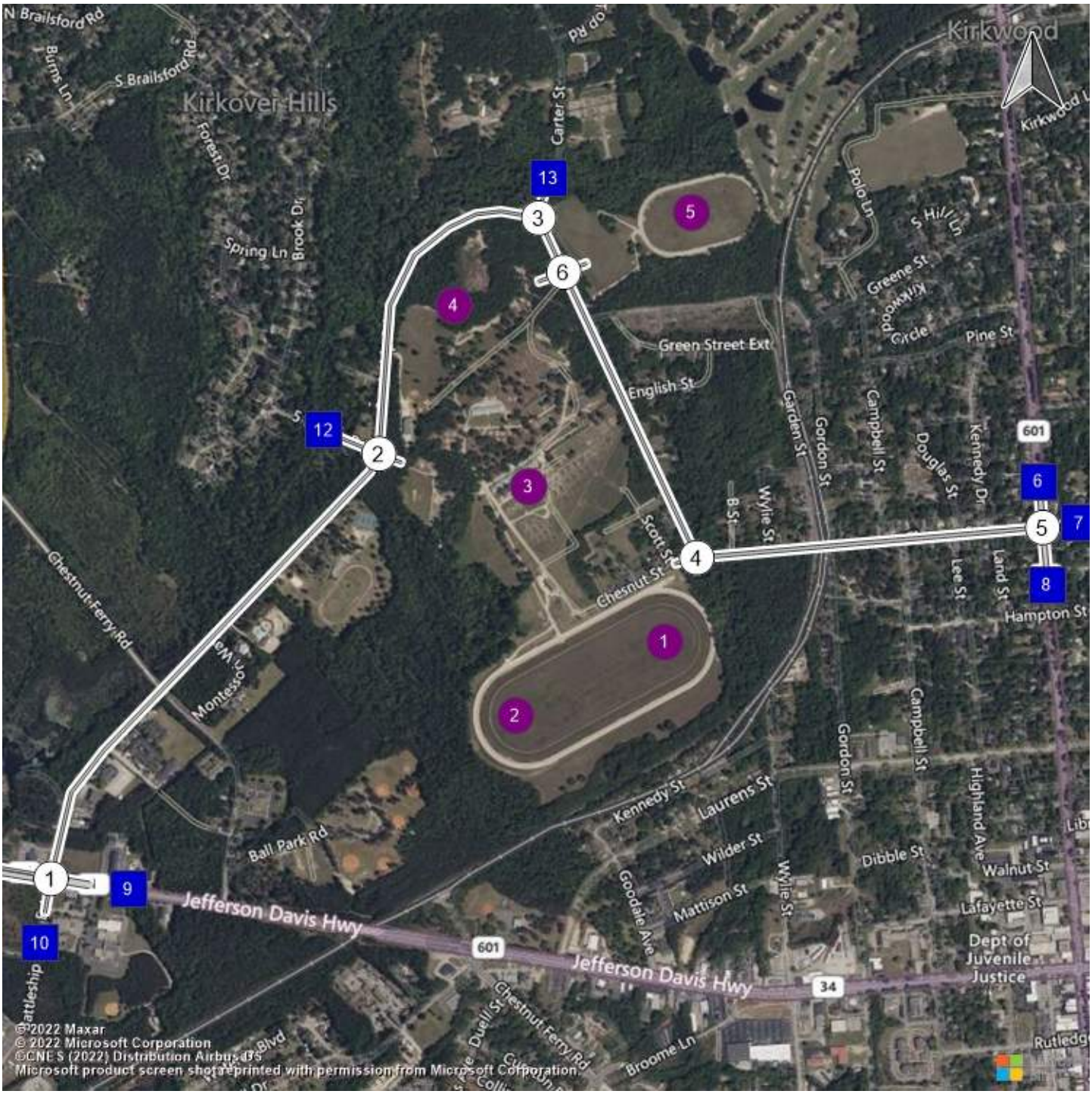
Zone / Gate	Zone 3: 53' Lifestyle Lots			
	To 53' Lifestyle Lots:		From 53' Lifestyle Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	13.00	18	14.00	11
7: Chesnut St East	1.00	1	1.00	1
8: Broad St South	14.00	20	12.00	9
9: W DeKalb St East	33.00	46	37.00	28
10: Battleship Rd South	1.00	1	0.00	0
11: W DeKalb St West	37.00	52	34.00	27
12: 5 Bridge Rd West	0.00	0	1.00	1
13: Carter St North	1.00	1	1.00	1
Total	**100.00**	**139**	**100.00**	**78**

Zone / Gate	Zone 4: 53' Renaissance Lots			
	To 53' Renaissance Lots:		From 53' Renaissance Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
5: 65' Wide Estate Lots	0.00	0	0.00	0
6: Broad St North	13.00	13	14.00	8
7: Chesnut St East	1.00	1	1.00	1
8: Broad St South	14.00	14	12.00	7
9: W DeKalb St East	33.00	33	37.00	19
10: Battleship Rd South	1.00	1	0.00	0
11: W DeKalb St West	37.00	37	34.00	19
12: 5 Bridge Rd West	0.00	0	1.00	1
13: Carter St North	1.00	1	1.00	1
Total	**100.00**	**100**	**100.00**	**56**

Zone / Gate	Zone 5: 65' Wide Estate Lots			
	To 65' Wide Estate Lots:		From 65' Wide Estate Lots:	
	Share %	Trips	Share %	Trips
1: 43' Wide Lots	0.00	0	0.00	0
2: 53' Simply Ryan Lots	0.00	0	0.00	0
3: 53' Lifestyle Lots	0.00	0	0.00	0
4: 53' Renaissance Lots	0.00	0	0.00	0
6: Broad St North	13.00	10	14.00	6
7: Chesnut St East	1.00	1	1.00	0
8: Broad St South	14.00	11	12.00	5
9: W DeKalb St East	33.00	26	37.00	18
10: Battleship Rd South	1.00	1	0.00	0
11: W DeKalb St West	37.00	29	34.00	15
12: 5 Bridge Rd West	0.00	0	1.00	0

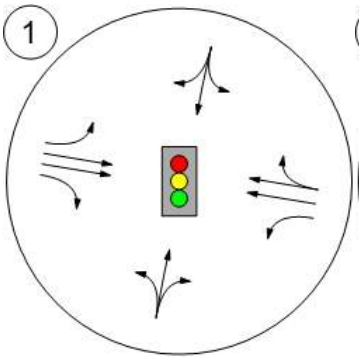
13: Carter St North	1.00	1	1.00	0
Total	**100.00**	**79**	**100.00**	**44**

Study Intersections

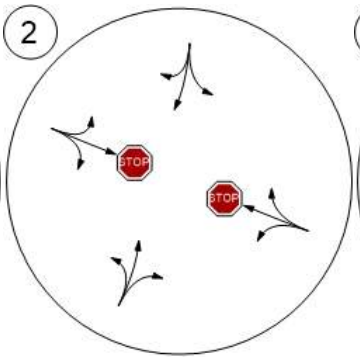


Lane Configuration and Traffic Control

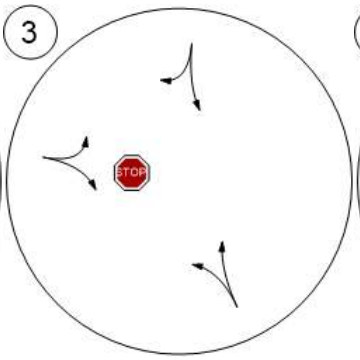
W. Dekalb St & Battleship Rd



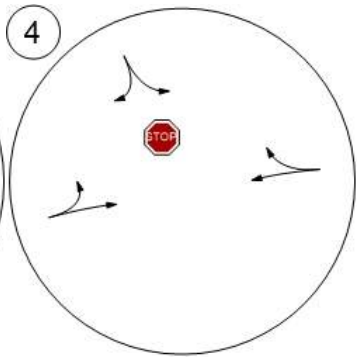
Battleship Rd & 5 Bridge Rd



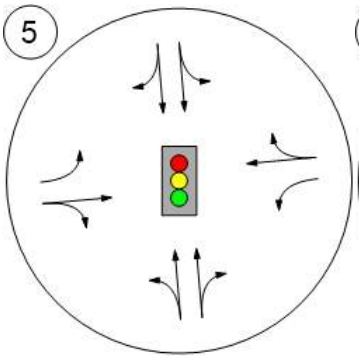
Carter St & Battleship Rd



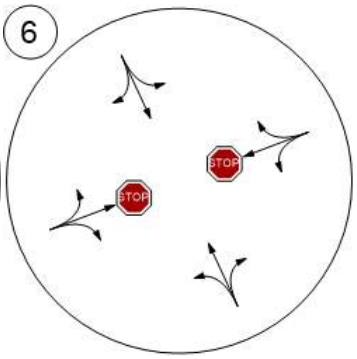
Chesnut St & Carter St



Broad St & Chestnut St

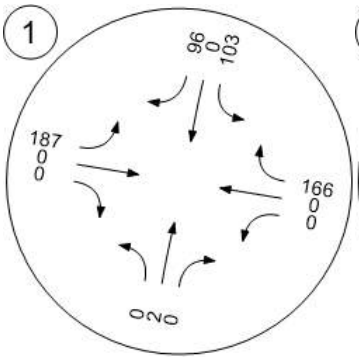


Carter St & Access 2/3

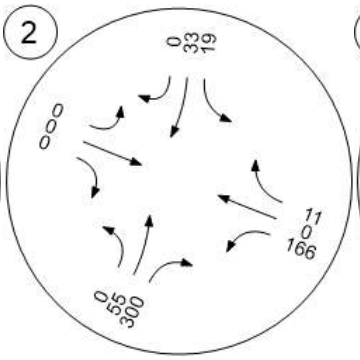


Traffic Volume - Net New Site Trips

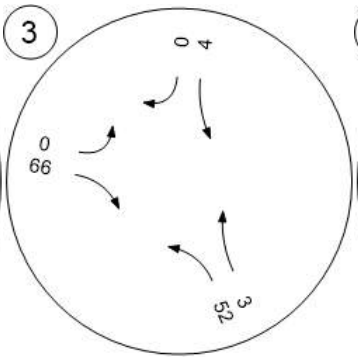
W. Dekalb St & Battleship Rd



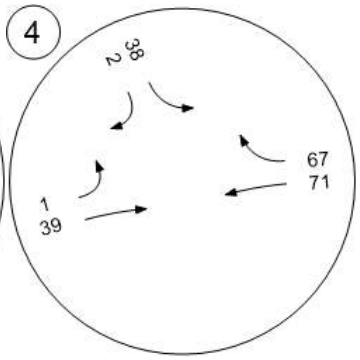
Battleship Rd & 5 Bridge Rd



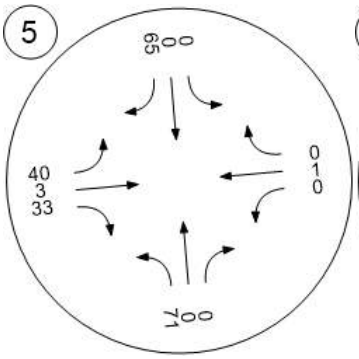
Carter St & Battleship Rd



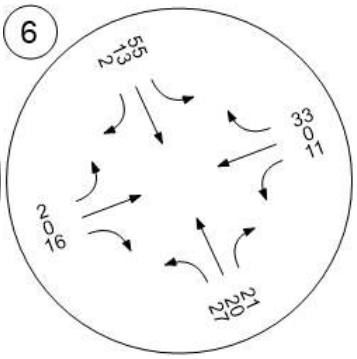
Chesnut St & Carter St



Broad St & Chestnut St

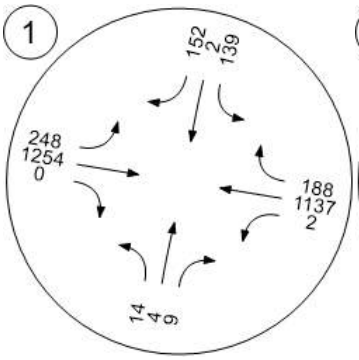


Carter St & Access 2/3

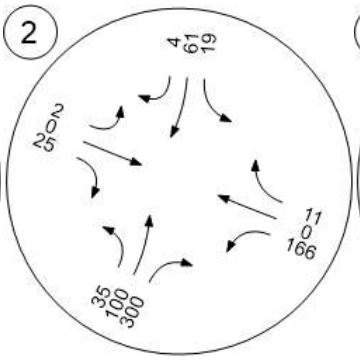


Traffic Volume - Future Total Volume

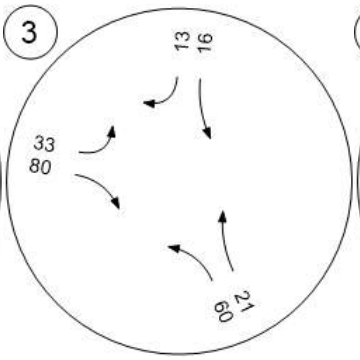
W. Dekalb St & Battleship Rd



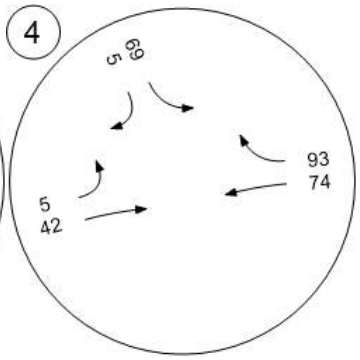
Battleship Rd & 5 Bridge Rd



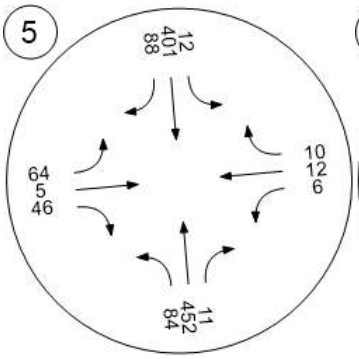
Carter St & Battleship Rd



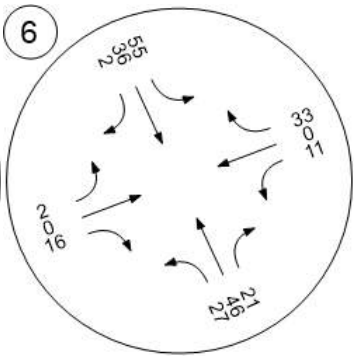
Chesnut St & Carter St



Broad St & Chestnut St

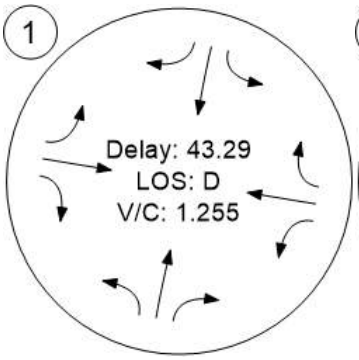


Carter St & Access 2/3

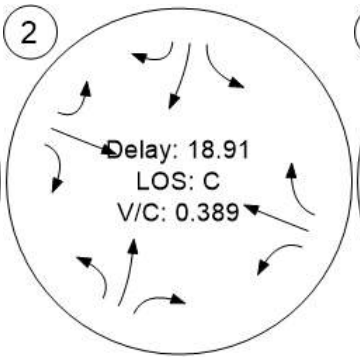


Traffic Conditions

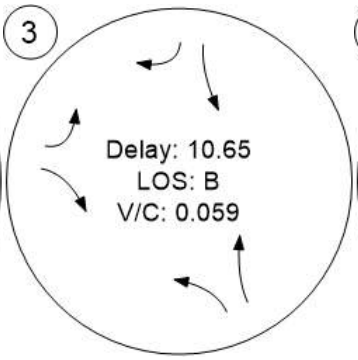
W. Dekalb St & Battleship Rd



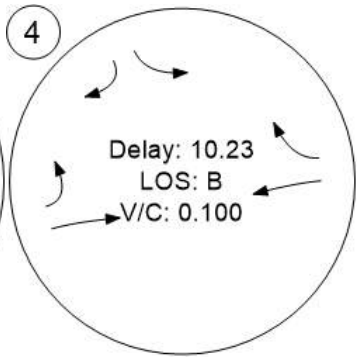
Battleship Rd & 5 Bridge Rd



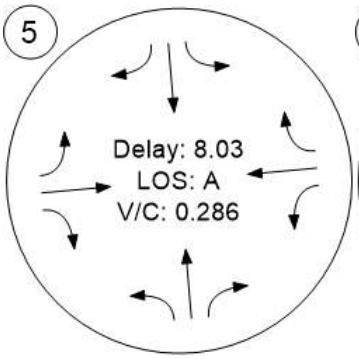
Carter St & Battleship Rd



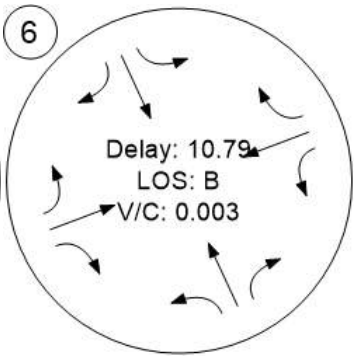
Chesnut St & Carter St



Broad St & Chestnut St



Carter St & Access 2/3



Appendix D Turn Lane Graphs

Battleship @ Acc 1 SB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

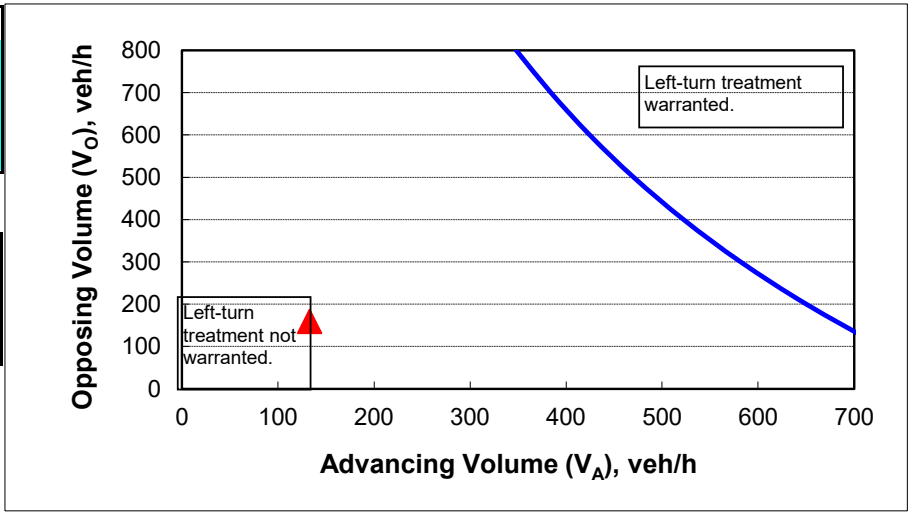
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	5%
Advancing volume (V_A), veh/h:	133
Opposing volume (V_O), veh/h:	159

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	681
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Battleship @ Acc 1 SB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

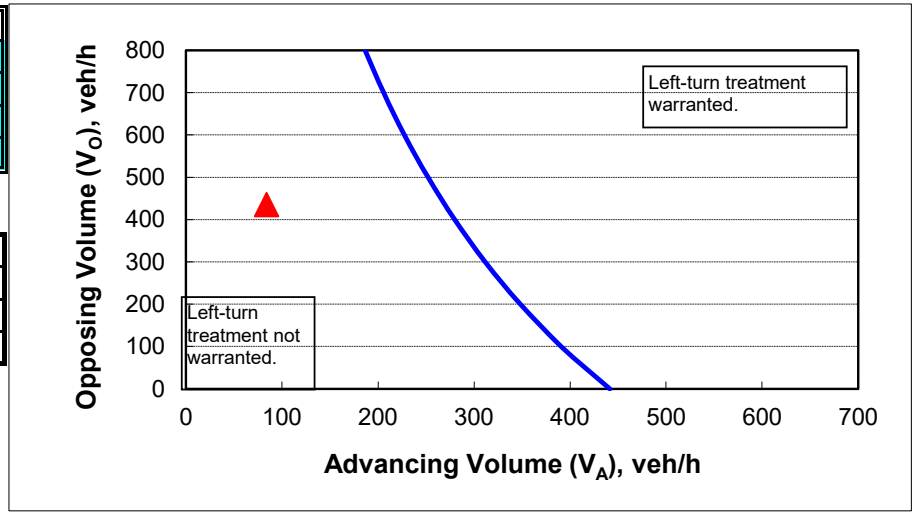
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	23%
Advancing volume (V_A), veh/h:	84
Opposing volume (V_O), veh/h:	435

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	270
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Battleship @ 5 Bridge Rd NB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

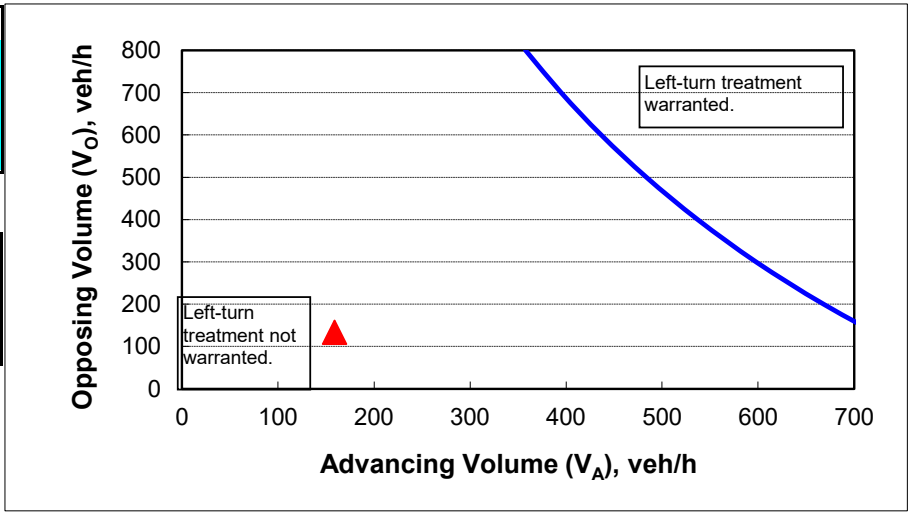
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	5%
Advancing volume (V_A), veh/h:	159
Opposing volume (V_O), veh/h:	133

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	722
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Battleship @ 5 Bridge Rd NB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

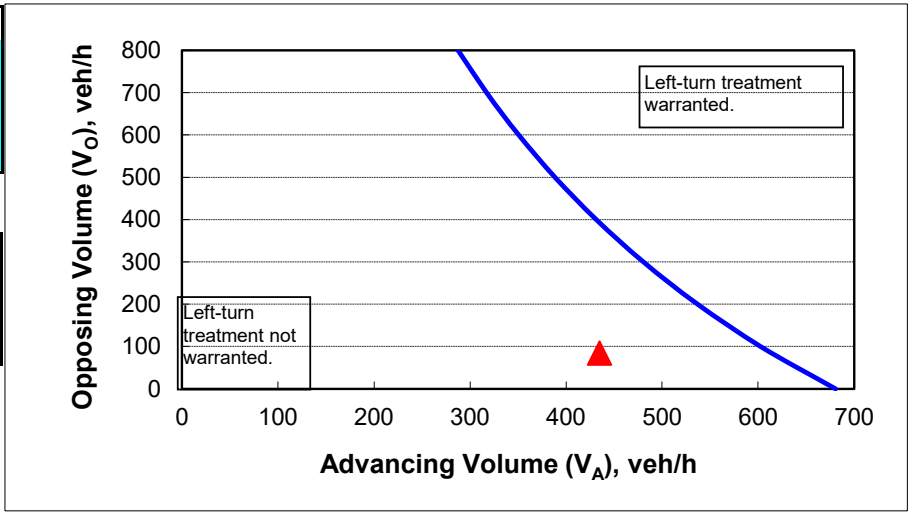
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	8%
Advancing volume (V_A), veh/h:	435
Opposing volume (V_O), veh/h:	84

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	614
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Battleship NB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

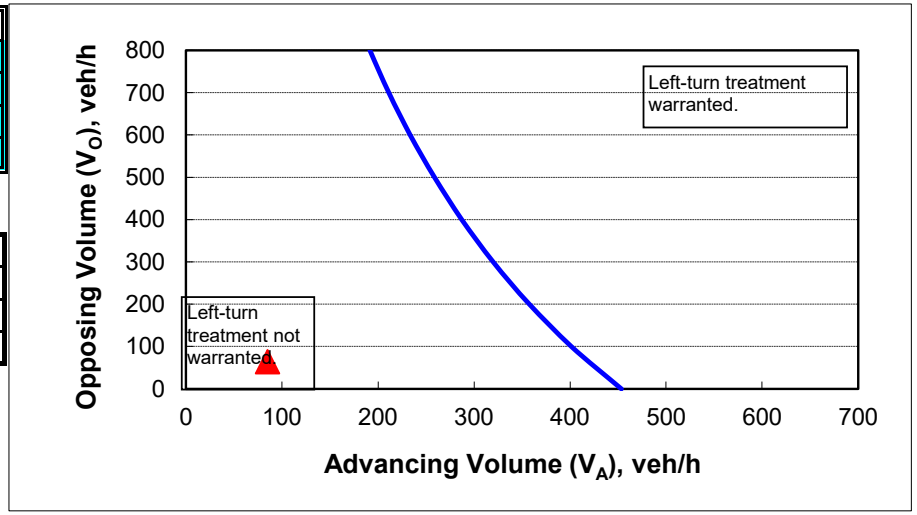
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	79%
Advancing volume (V_A), veh/h:	85
Opposing volume (V_O), veh/h:	64

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	419
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Battleship NB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

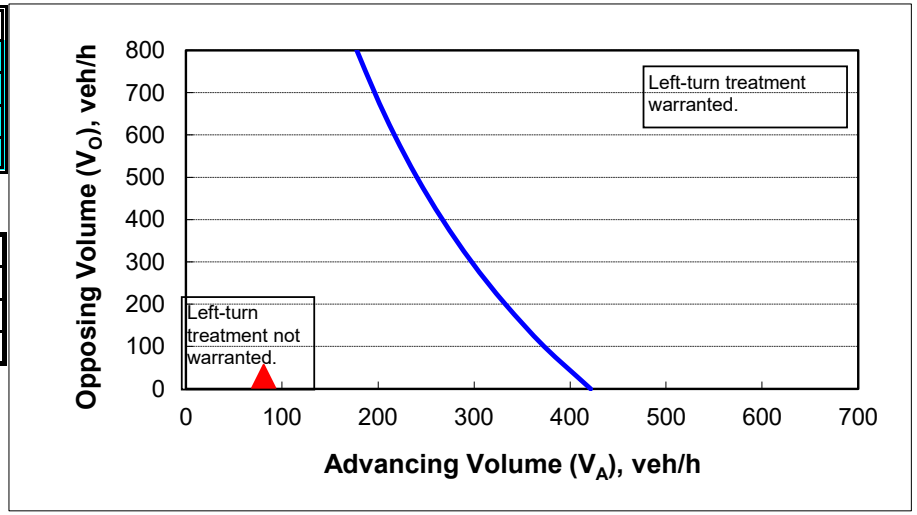
Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	74%
Advancing volume (V_A), veh/h:	81
Opposing volume (V_O), veh/h:	29

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	407
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



Chesnut @ Carter EB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

2-lane roadway (English)

INPUT

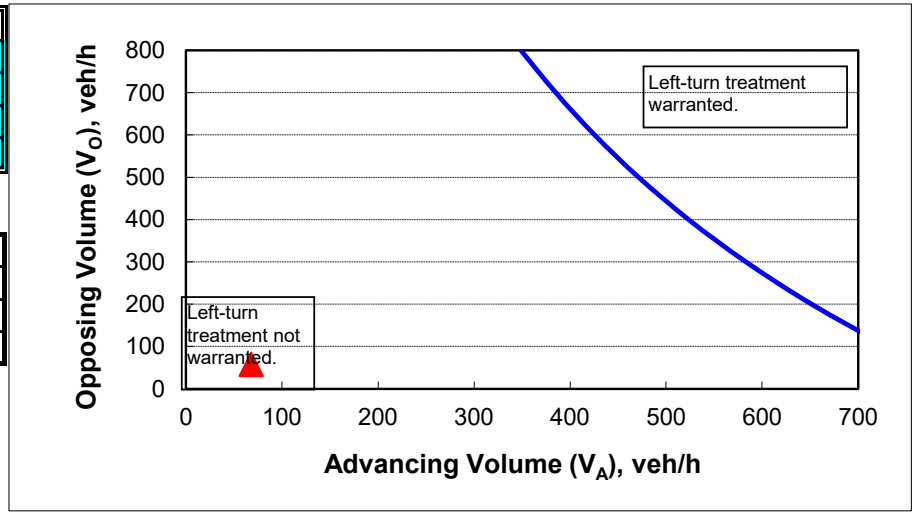
Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	68
Opposing volume (V_O), veh/h:	58

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	769
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



Chesnut @ Carter EB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

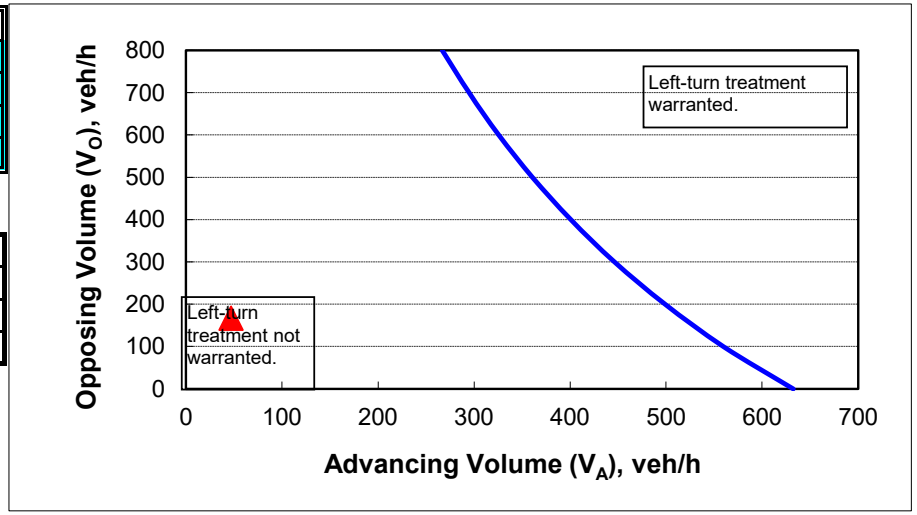
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	11%
Advancing volume (V_A), veh/h:	47
Opposing volume (V_O), veh/h:	167

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	518
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Acc 2 NB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

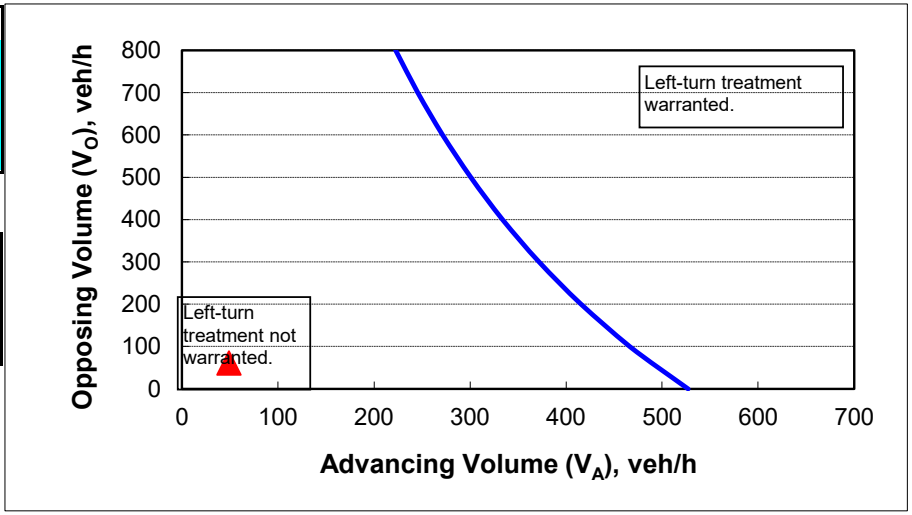
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	16%
Advancing volume (V_A), veh/h:	49
Opposing volume (V_O), veh/h:	61

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	489
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Acc 2 NB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

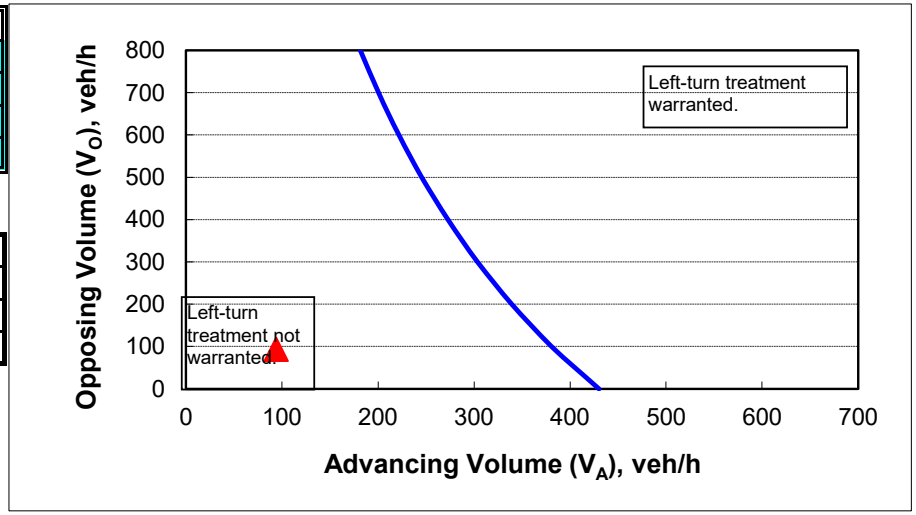
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	29%
Advancing volume (V_A), veh/h:	94
Opposing volume (V_O), veh/h:	93

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	384
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Acc 3 SB AM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

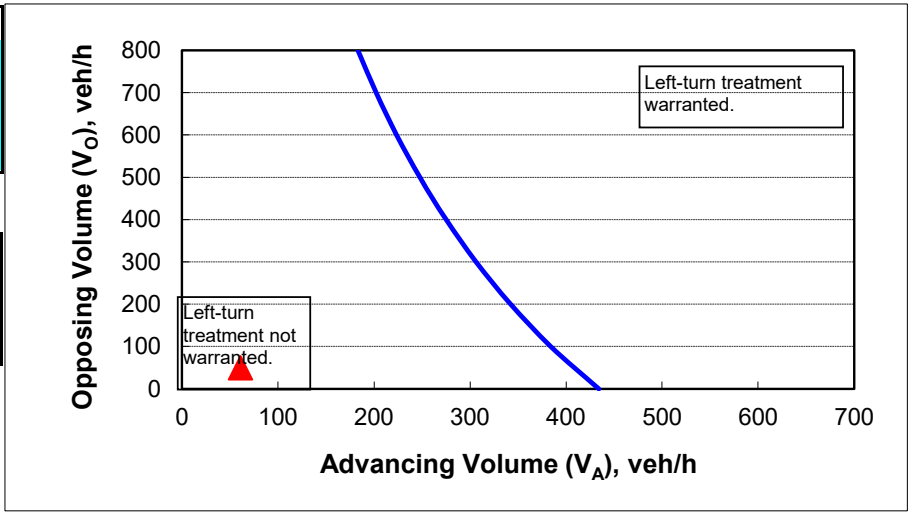
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	28%
Advancing volume (V_A), veh/h:	61
Opposing volume (V_O), veh/h:	49

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	409
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Carter @ Acc 3 SB PM

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

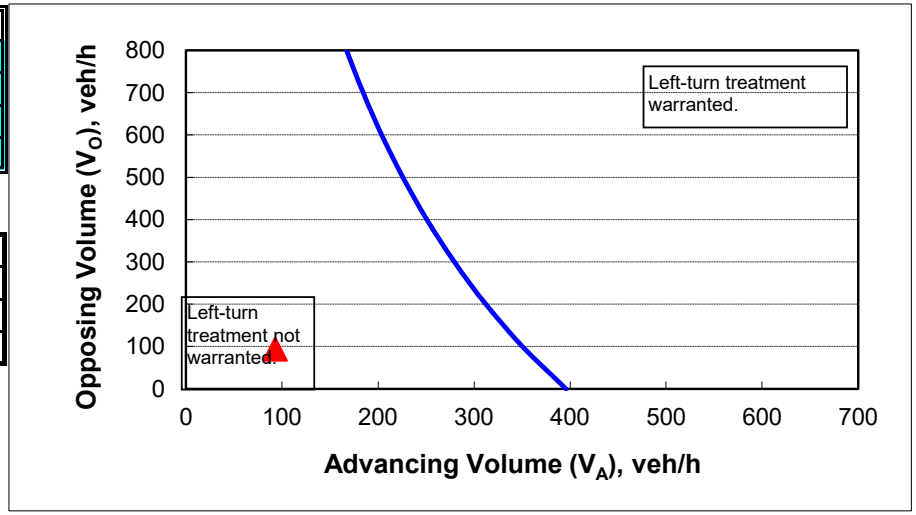
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	59%
Advancing volume (V_A), veh/h:	93
Opposing volume (V_O), veh/h:	94

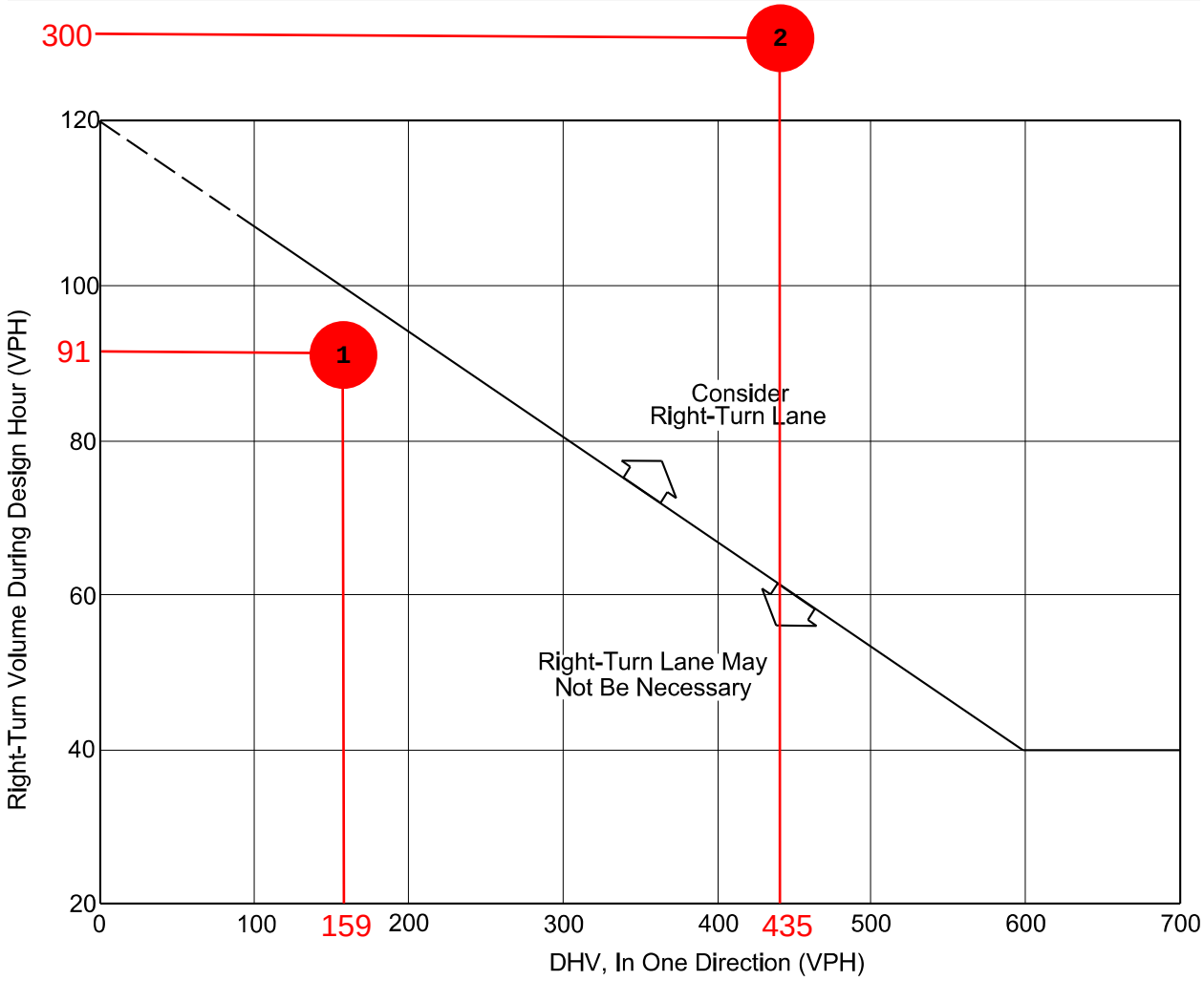
OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	353
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



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.

1 Battleship Road NB at Access 1, AM Build

2 Battleship Road NB at Access 1, PM Build

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